



## Particulate pollution in Washington County

Oregon Department of Environmental Quality

Headquarters

811 SW Sixth Ave

Portland OR 97204

State of Oregon  
Department of  
Environmental  
Quality

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### Q: What is PM<sub>2.5</sub> and why is it of concern in Washington County?

A: Particulate matter is a mixture of extremely small particles and liquid droplets found in the air. PM<sub>2.5</sub> refers to particulate matter 2.5 microns in diameter and smaller. (The average strand of human hair is 70 microns in diameter.) Health studies over the past decade show that there are harmful effects from breathing particulate matter. Particulate matter can be inhaled deep into the lungs and can lodge there for weeks and months, aggravating asthma, heart disease, and other respiratory and heart conditions. PM<sub>2.5</sub> is also called fine particulate matter.

Recent PM<sub>2.5</sub> monitoring information shows that the monitor in Hillsboro, Washington County exceeded the federal fine particulate health standard in 2011 and 2013.

### Q: How does DEQ get the monitoring information?

A: DEQ has a particulate monitor at Hare Field in Hillsboro. DEQ has been monitoring at this location since 2005. The monitor helps DEQ measure air quality levels to ensure it meets federal health standards.

### Q: What does it mean if Hillsboro is violating the PM<sub>2.5</sub> standard?

A: It means the air is unhealthy, especially during poor air quality days in the winter. Poor air quality can particularly affect sensitive populations such as the young and elderly. When an area is violating the standard, EPA designates it as nonattainment if it has exceeded the PM<sub>2.5</sub> standard over a three year period. So, while Hillsboro exceeded the standard in 2011 and 2013, its three-year average was below the standard. Nevertheless, the area is at risk of exceeding the PM<sub>2.5</sub> standard and potentially being designated a nonattainment area. A nonattainment designation is serious for any community in that it means the air is unhealthy and could have significant economic impacts because it imposes stricter requirements on new industrial development and potentially on existing industry.

### Q: Where is the PM<sub>2.5</sub> pollution in Washington County coming from?

A: Most of the PM<sub>2.5</sub> pollution is primarily caused by woodstove smoke. Other sources of PM<sub>2.5</sub> in the area are backyard burning, industry, cars, and dust from roads and construction.

### Q: Why does DEQ think most of the emissions are coming from wood stoves?

A: High PM<sub>2.5</sub> levels in Washington County typically occur during the winter when air ventilation is limited and there is a weather inversion with air stagnation. During this time many people use woodstoves because of the cold weather conditions. The monitoring information shows a pattern of higher particulate pollution overnight, starting when people come home in the evening and light their woodstoves.

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### Q: What about emissions from industry, such as Intel?

**A:** Emissions from industry contribute a small amount of PM<sub>2.5</sub> pollution measured at the monitor. In Hillsboro, all of the PM<sub>2.5</sub> exceedances occurred during the winter when residents were using woodstoves.

Intel is seeking to emit 31 tons/year in the latest permit modification submitted to DEQ. However, its contribution to the overall PM<sub>2.5</sub> pollution is small relative to other sources, such as woodstoves whose contribution is estimated to be about 1,380 tons/year.

**Q: What about emissions from forestry burning?**

**A:** Prescribed forestry burning is managed by State Forestry through the Oregon Smoke Management Plan. Both private and public forest burners are required to follow smoke management instructions and avoid smoke intrusions into Hillsboro and parts of Washington County or other areas. Although Washington County residents may see prescribed burning smoke at a distance, it does not necessarily mean that the smoke is significantly impacting the area. Typically, prescribed burning occurs in the fall and spring and not during the winter when the Washington County area experiences PM<sub>2.5</sub> exceedances.

**Q: What is currently being done to address PM<sub>2.5</sub> pollution?**

**A:** DEQ is working with Washington County and the City of Hillsboro to address PM<sub>2.5</sub> pollution in the area. Washington County is conducting air quality advisories to spread awareness of the issue and ask people not to burn in their woodstove on poor air quality days. Both the city and county have been conducting education and outreach to the community and are looking to find additional solutions such as helping people replace old woodstoves with cleaner heating devices.

**Q: What do the current data results indicate?**

**A:** Recent monitoring data for 2014 indicates that the education and outreach efforts are working and have helped keep levels below the standard. However, continued efforts are underway to ensure air quality is not a concern in 2015 and future years.

**Q: Are there other areas besides Washington County dealing with PM<sub>2.5</sub> pollution?**

**A:** Yes, currently both Klamath Falls and Oakridge are designated nonattainment for the PM<sub>2.5</sub> standard. Other communities such as Lakeview and Prineville are currently violating the standard but have not yet been designated nonattainment. All of these areas are working hard to clean up PM<sub>2.5</sub> pollution levels and improve air quality for the health of their local residents.