

## Fine Particle Pollution in Ellensburg

The Department of Ecology (Ecology) monitors air quality in the greater Ellensburg area, as well as in other areas around the state. Over the past few years, fine particle air pollution in the Ellensburg area has reached unhealthy levels several times. This is a concern not only for health reasons, but also because higher levels of fine particles could cause the Ellensburg area to violate the federal health-based air quality standard.

Ecology is beginning to work with elected officials, local agencies, citizens, businesses, and civic leaders to reduce air pollution levels in the area.

### What is fine particle pollution?

Fine particle pollution is particles of soot, dust, and smoke that are 2.5 microns in diameter or smaller (smaller in diameter than a human hair). We call it PM<sub>2.5</sub> for short. When breathed in, these fine particles can cause or worsen respiratory problems, especially for children and the elderly.

### Where does PM<sub>2.5</sub> come from?

In Ellensburg, the main sources of PM<sub>2.5</sub> appear to be wood stoves and fireplaces, various forms of outdoor burning, and wildfires. Ecology needs to study the area more to get more information about all possible sources.

### How does Ecology measure PM<sub>2.5</sub> in Ellensburg?

Ecology uses a continuous PM<sub>2.5</sub> sampler located on the roof of the Hal Holmes Center in downtown Ellensburg to measure air quality. The data are shown online at <https://fortress.wa.gov/ecy/enviwa/>.

### What do the data show?

The monitoring data show that Ellensburg residents breathe unhealthy air two to three weeks each year, with some years having 30 or more days that don't meet Ecology's healthy air goal (see the graphic on page 2). This suggests the area may violate federal air quality standards in the future. In 2012, Ellensburg was ranked as one of the most polluted areas in Washington, compared to about 50 other communities where PM<sub>2.5</sub> is monitored.

#### WHY IT MATTERS

Fine particle pollution is a serious health concern. Many of these particles are toxic. Most are so small that, when you breathe them, they get past your body's defenses and go deep into your lungs. There, they can cause serious problems such as scarring of the lung tissue. Studies show that death rates in several U.S. cities increased when there were higher levels of fine particles in the air.

Fine particle pollution is most dangerous to the health of infants and children, pregnant women, the elderly, and people with lung or heart disease.

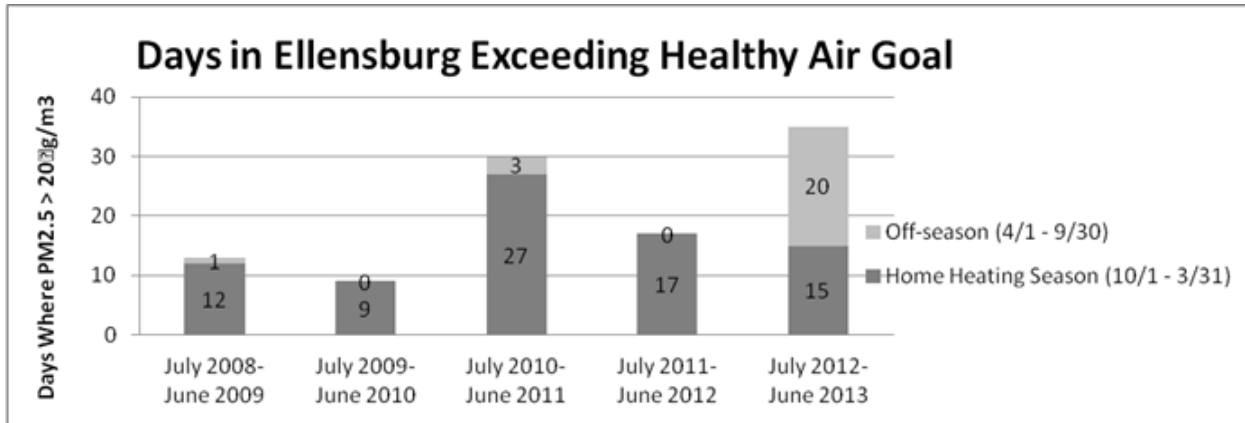
Ecology estimates that fine particle pollution in Kittitas County costs more than \$1 million each year in health effects and health care expenses (2009 dollars). In addition to disease, Ecology estimates that six people die each year in Kittitas County as a result of PM<sub>2.5</sub> pollution.

#### Contact information:

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#### Special accommodations:

For special accommodations or documents in alternate format, call 360-407-6800, 711 (relay service), or 877-833-6341 (TTY).



### What will happen if Ellensburg violates the air quality standard?

When an area does not meet a federal standard, the state must develop and enforce a plan to reduce air pollution and meet the standard. This is to protect public health and the environment. Often, these plans require costly and difficult actions to return dirty air communities to clean air status.

### What is Ecology doing about this problem?

**Data Analysis:** Ecology is studying and analyzing the area's PM<sub>2.5</sub> data. This will help us identify all the sources of PM<sub>2.5</sub> in the area, and how best to address them.

**Wood Smoke Programs:** Ecology is increasing wood stove replacements, wood stove bounty programs, and general education programs in the Ellensburg area. Replacing wood stoves with cleaner forms of heating, replacing older stoves with cleaner burning models, and educating people about how to burn wood more cleanly can greatly reduce PM<sub>2.5</sub> pollution.

**Local Partnerships:** Ecology is establishing and expanding partnerships with local agencies and nonprofits. This will help us continue to assess air quality, develop air pollution prevention education programs, and encourage community involvement. Ecology always prefers to work with local agencies to reduce pollution levels before an area violates a standard. By working together, before a violation occurs, we can find solutions that best fit community values.

### What can we do right now?

Even things that may seem minor can make a big difference, especially when it comes to heating with wood. If you heat your home with wood:

- Burn only dry wood. Split it, stack it, and store it for at least a year before you burn it.
- Burn small, hot fires. Putting too much wood in your stove or dampering down the fire reduces air flow. This wastes wood, creates a lot of smoke, and produces very little heat.
- Check your chimney smoke. You should see only heat waves coming from your chimney. If you see smoke, you're wasting fuel and your fire needs more air and/or drier wood.
- Always check for a burn ban before you start a fire. Burn bans for all Washington counties are listed online at [www.waburnbans.net](http://www.waburnbans.net).