

## Oregon's Geographic Approach to Reducing Air Toxics

### Background

Established in 2003, Oregon's Air Toxics program uses a geographic approach to reducing toxic pollutants in the air we breathe. Air toxics are pollutants suspected or known to cause serious health problems including cancer, birth defects, organ damage and respiratory irritation. Young children, older adults or people with asthma, lung or heart disease may be more sensitive to the effects of air toxics. A geographic approach deals with an "airshed" - a defined area that shares topography and weather patterns - basically, the same air.

Forming individual airsheds based on geography allows DEQ to define problem areas for air toxics in Oregon. It also allows DEQ to prioritize and focus efforts to reduce air toxics. The geographic approach relies on community members working with DEQ to identify air toxics problems and their sources, and to develop strategies that will improve public health through cleaner air.

### Prioritizing Oregon's geographic areas

Using currently available information, DEQ has identified four priority areas for air toxics reduction in Oregon: Portland, Salem, Eugene and Medford.

To determine these priority areas DEQ uses data on air toxics from EPA's National Air Toxics Assessment sampling data and computer modeling estimates based on knowledge of all emissions within the state. Additionally, the following criteria are used to determine Oregon's priority areas:

- The number of pollutants above health-based benchmarks and the level at which they exceed the benchmarks;
- The potency or toxicity of pollutants that exceed the benchmarks;
- The number of people exposed to air toxics, and the levels of exposure;
- The presence of potentially sensitive populations (elderly, children, asthma or lung disease sufferers, etc.);
- The effectiveness of local control strategies and,
- If known, the risk posed by multiple pollutants and pollutant mixtures.

### The Portland Region: Oregon's highest priority airshed for toxics

In Oregon, the Portland metropolitan area has the highest risk from toxic air pollution. A 1999-2000 monitoring study measured concentrations of toxic air pollutants at five sites in the Portland area. An additional monitoring study in 2005 was also conducted. These studies helped confirm the federal modeling data that indicates high levels of air toxics in the Portland area. Air toxics in Portland are comparable to those in other similarly sized cities.

DEQ conducted a modeling study called the Portland Air Toxics Assessment which included the influences of local topography, weather and emission patterns. This local scale model, coupled with better detail about the location of emissions, including traffic data, gave DEQ the capability to predict problem areas within the Portland region. For each pollutant, DEQ plotted model estimates as maps that DEQ shared with community members and other stakeholders to provide more detail about air toxics concentrations across the city.

For more information see the PATA Report at [www.deq.state.or.us/aq/toxics/pata.htm](http://www.deq.state.or.us/aq/toxics/pata.htm).

### The Portland air toxics geographic area

See the back of this fact sheet for a map of the *Portland Air Toxics Geographic Area*.

### Next steps

DEQ will continue to work to reduce toxic air pollution across Oregon; however by identifying the Portland area as the highest priority we can begin to focus reduction efforts in a region with the most risk to the population.

Working with the local community and an advisory committee DEQ will help develop a comprehensive ten year plan to reduce air toxics. Once the strategy is in place, DEQ can then focus this type of planning effort on the next priority airshed.

Throughout the process air quality will continue to be monitored and compared to National Air Toxics Assessment and other study results to ensure that the current rankings for toxic air pollution are still valid.



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**Alternative formats**

Alternative formats (Braille, large type) of this document can be made available. Contact DEQ's Office of Communications & Outreach, Portland, at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696.

**Figure 1**  
**Map of the Portland Air Toxics Geographic Area**

