Fact Sheet

National Assessment of Air Toxics in Oregon

State of Oregon
Department of
Environmental
Quality

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Background

The Environmental Protection Agency maintains two types of data to assess air quality, sources of toxic air pollution and associated health risks. These are the National Air Toxics Assessment and the Toxics Release Inventory. Toxic air pollutants, or air toxics, are pollutants that can cause cancer, nerve damage and other serious health effects.

The National Air Toxics Assessment

EPA developed this assessment as a tool for state, local and tribal agencies and others to prioritize pollutants, emissions sources and locations of interest for further investigation.

The assessment examines air toxics from many sources. These include industrial emissions, emissions from vehicles, emissions from commercial and residential activities, and background sources such as air toxics from natural sources or pollutants persisting in the air from previous years.

The most recent assessment is based on 2002 emissions. (EPA plans to release 2005 data by Summer 2010). This assessment provides a snapshot of air quality and the risks that would result if emissions levels remained unchanged. The assessment includes estimates of cancer and non-cancer health effects for 133 air toxics (those with health data based on long-term exposure).

This assessment gives DEQ a starting point to understand the scope of Oregon's air toxics and how to manage them to protect public health and the environment.

Where do selected counties rank for cancer risk and non-cancer hazard relative to all counties in Oregon?

Multnomah County ranks the highest state-wide in terms of both cancer and non-cancer health threats. **Jackson County** is closest to the state wide average for cancer and **Josephine County** comes closest to the state wide average for non-cancer threats. **Wheeler County** is the lowest in Oregon for both types of health threats.

Which counties have the highest and lowest cancer risk and non-cancer respiratory hazard?

Multnomah County has the highest levels of air toxics and **Wheeler County** has the lowest level of air toxics. The risk in **Multnomah County** is about one and a half to two times greater for both cancer and non-cancer threats; **Wheeler County** is approximately 60 times lower than average Oregon levels for both cancer and non-cancer threats.

What are the principal sources of air toxics in Oregon?

Air toxics come from a variety of sources including cars and trucks, all types of burning (including fireplaces and woodstoves), businesses, and consumer products such as paints.

The Toxics Release Inventory

The Toxics Release Inventory is an EPA database that is part of a larger community right-to-know system, which includes the following information about industrial chemicals:

Emergency Planning and Hazardous Chemical Inventory: Locations and quantities of chemicals stored on-site in order to help communities prepare to respond to chemical spills and similar emergencies;

Toxic Release Inventory:

- Annual data on releases and transfers of certain toxic chemicals from industrial facilities (including releases to air, water and land); and
- Waste management data and pollution reduction activities.

EPA uses a risk screening environmental indicators model to rank industrial emission sources of concern using Toxics Release Inventory data. Because the Toxics Release Inventory only includes industrial data, this model cannot rank total risk from air toxics in the community. Nevertheless, this model is helpful in identifying the most significant industrial sources of air toxics.

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The goal of the community right-to-know laws is to empower citizens, through information, to hold companies and local governments accountable in terms of how toxic chemicals are managed. The data often spurs companies to focus on their chemical management practices since these practices are being measured and made public. In addition, the data serves as a rough indicator of environmental progress over time. Companies self-report and EPA requires them to use the best information they have readily available. EPA ensures that businesses report and does a cursory review of the data, but does not verify the accuracy of the reports.

The Toxics Release Inventory is a much narrower type of information than the National Air Toxics Assessment because it only contains data about industrial pollution. For DEQ, the Toxics Release Inventory is a very useful tool to catalog and screen these emissions. Toxics Release Inventory information often leads to further inquiry and better understanding of the chemicals used and released by different industrial processes. This data is often relevant to DEQ permitting and emissions tracking statewide.

Other tools to measure air toxics

For analysis of air toxics in smaller areas, EPA and DEQ rely on other tools such as monitoring and local-scale assessments using more refined and localized data.

What progress has been made to reduce air toxics in Oregon?

Both federal and state officials are working to reduce air toxics. Regulations on large and small manufacturers, as well as engines and fuels, have resulted in considerable reductions of air toxics coming from many types of sources. DEQ permits and inspects industrial facilities to make sure that rules are followed.

In 2008, DEQ selected the Portland region as the state's first geographic area for development of an area-wide air toxics risk reduction plan. This project is called the Portland Air Toxics Solutions. While the public health risk from air toxics in Portland is similar to the risk in other major urban areas throughout the nation, the Portland area has the greatest risk from air toxics in Oregon. Portland Air Toxics Solutions will allow DEQ to focus new emission reduction efforts in the Portland area in a more comprehensive and science-based way.

DEQ will identify other at-risk communities after the Portland Air Toxics Solutions project is complete.

How can DEQ reduce air toxics?

Though much more information and action is needed to address air toxics, DEQ has several long-standing programs that reduce air pollution and have contributed to reductions in toxic air pollutants. These include:

- Vehicle inspection programs in the Portland and Medford areas
- Permitting of industrial sources
- Providing assistance to small businesses to adopt best management practices
- Public outreach and education efforts to reduce idling in school zones, encourage alternatives to vehicle driving and reduce the use of household chemicals and sprays
- Encouraging the use of "clean diesel" fuels and offering incentives to update diesel fleets

Learn more about DEQ's air toxics reduction efforts at:
www.deq.state.or.us/aq/toxics/index.htm