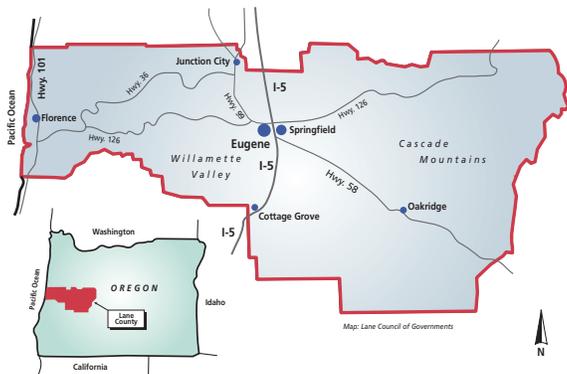


Fact Sheet

Lane County Air Toxics

From the 2005 National Air Toxics Assessment (NATA)



What did NATA conclude in Lane County?

While the data is best used as a regional tool, it is useful in obtaining a snap-shot view of risk concentrations in Lane County. The data suggests several pollutants have concentrations that exceed health-based benchmarks established by EPA (one-in-a-million cancer risk threshold). Eight air toxics exceeded the one-in-a-million cancer risk threshold in Lane County:

Pollutant	Cancer risk per million
Formaldehyde	17.8
Benzene (Including benzene from gasoline)	7.8
Acetaldehyde	3.1
Carbon Tetrachloride	2.8
1,3-Butadiene	1.7
Naphthalene	1.2
PAHPOM*	1.2
Perchloroethylene	1.0

What are air toxics?

Air toxics are generally defined as air pollutants known or suspected to cause serious health problems. These effects include cancer, birth defects, lung damage, and nerve damage. People can be exposed to air toxics via contaminated air, water, food, and soil.

What is NATA?

In March, 2011, the U.S. Environmental Protection Agency (EPA) released its latest National-Scale Air Toxics Assessment (NATA), which reports EPA's estimates of nationwide health risks caused by air toxics. The assessment uses National Emission Inventory data gathered during 2005 to calculate ambient concentrations, exposures, and risks related to air toxics.

NATA helps identify pollutants and source categories of greatest concern, and improve understanding of health risks posed by air toxics. The assessment is a useful tool to help agencies across the country develop more detailed information for air toxics reduction strategies. However, the information should not be used as the sole basis for developing risk reduction plans or regulations or as the sole basis to control specific sources or pollutants. More detailed information about NATA may be found at: www.epa.gov/ttn/atw/nata2005/index.html.

The Lane Regional Air Protection Agency (LRAPA) has monitored air toxics at Amazon Park since 2001. The modeled results from the 2005 NATA correlate very well with the actual concentrations of air toxics measured at Amazon Park during 2005.

The concentrations for most of the air toxics detected at the Amazon site have decreased since the first results were analyzed in 2002. For example, benzene concentrations have been reduced by 50% as a result of gasoline refined from oil with lower benzene content. However, although formaldehyde concentrations have gone down, there is a sharp increase in the risk from formaldehyde as the result of EPA using a higher toxicity or unit risk estimate (URE) for formaldehyde than was used in previous NATA studies.

What are the sources of air toxics?

Generally, the pollutants can be grouped by use in Lane County and can be attributed to everyday practices and processes commonplace to living in a metropolitan area.

Motor vehicles/Driving

As they are in most cities in the United States, vehicle exhaust (combustion of gasoline) and refueling are major sources of air toxics in Lane County. Diesel exhaust specifically has been identified as a significant source of air toxics. Acetaldehyde, formaldehyde, naphthalene, 1, 3-butadiene, and benzene are all by-products of fossil fuel combustion and associ-

* Polycyclic Aromatic Hydrocarbons/ Polycyclic Organic Matter



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NATA (continued)

ated with motor vehicle operation. Lane County residents can help reduce these toxics by driving less, not idling engines, keeping their vehicles tuned up, not topping off gas tanks at the pump, and switching to more fuel-efficient vehicles.

Woodburning

Whether the result of home heating, backyard burning, or forest slash burning, woodburning emits toxic emissions into the air and is a large contributor to toxics in Lane County. Incomplete wood combustion is a major source of acetaldehyde and PAHPOM emissions in Lane County. Benzene and formaldehyde emissions are also significant. Residents can help reduce toxics by following the home wood heating advisories, reducing the amount of backyard burning they do, and practicing clean burning techniques when using a woodstove or fireplace. Burning cleanly not only reduces the amount of smoke emitted into the air, it also results in more complete combustion which emits fewer toxics into the air.

Industry

While industries in Lane County emit toxics into the air, many have taken steps to reduce emissions that contribute to the problem. Several ways they have accomplished this are: switching to cleaner burning fuels; changing to less toxic or toxic-free solvents, dry cleaning solutions, paints and finishes; and switching operational processes that emit fewer toxics.

Background levels of toxics

Toxics with very long life-times (30 to 100 years or more) may remain in the environment for years after they have been used. Because of this, some chemicals used in the past, for example chemicals used for pesticides, industrial degreasing processes or for propelling aerosols, still remain in the air at measurable levels. As an example, NATA found 99% of carbon tetrachloride in Lane County is from background concentrations.

What is being done to reduce air toxics exposure in Lane County?

Lane Regional Air Protection Agency (LRAPA) has developed a number of programs to reduce air toxics. The Clean Lane Fuel program provided early

implementation of reasonably priced Ultra Low Sulfur Diesel and biodiesel to local government and private fleets. LRAPA administers grants for local schools to replace old school buses and help them retrofit buses with new technology that reduces diesel emissions. LRAPA also sponsors a school no-idling campaign to reduce emissions from motor vehicles dropping off and picking up children at schools. The Everybody Wins Program was developed to reduce idling emissions from long-haul trucks.

LRAPA was a partner in an effort to bring about reductions in the benzene levels in gasoline sold in the Pacific Northwest. The successful effort during 2007 EPA deliberations resulted in a more protective standard and benzene levels in gasoline sold in the Pacific Northwest will be greatly reduced starting in 2012.

The Warm Homes/Clean Air project in the City of Oakridge and other energy-related programs have been developed to replace inefficient home heating systems with cleaner and more efficient units. Lower emissions, improved air quality, and reduced fuel use have resulted from the program.

LRAPA's public education program recognizes the value of investing now to make long-term changes that result in cleaner air. The agency's outdoor school programs introduce students to the science of air pollution and help foster good habits that children carry into adulthood. LRAPA's comprehensive home wood heating and backyard burning advisory programs, along with wood stove change-outs, have helped reduce wood smoke emissions that impact air quality in areas of the county.

As new motor vehicles and fuels become progressively cleaner, additional reductions in air toxics will be realized. As older vehicles are replaced by new cars and trucks with better pollution control equipment, toxic emissions will be reduced. Newer gasoline and diesel fuels will also result in lower toxic emissions. Emissions from industry have also been reduced by implementing Maximum Attainable Control Technology Standards (MACT) on affected industrial facilities.

Where can I get more information?

For more information about National Air Toxics Assessment Data and past studies, please visit EPA's website: www.epa.gov/nata, or call LRAPA at 541-736-1056.

