Mapping toxics in Portland's air

The maps of Portland on these pages show where the air is potentially unsafe to breathe by indicating where individual air toxics exceed benchmarks. Air toxics from cars and trucks account for 77 percent of the toxic pollution in Portland's air.

The Columbia River Crossing would add 50,000 cars per day.

A benchmark is the concentration of a toxic chemical in the air that a person could breathe safely for a lifetime (70 years). Areas that exceed benchmarks are potentially unsafe. Areas in red exceed the benchmarks by more than 10 times, and are the most dangerous. Areas in blue are less dangerous.

It's important to note that the air in the red areas will not necessarily cause disease, but it has the potential to do so, according to the DEQ.

KEY

- 1/2 BENCHMARK
- 1 X BENCHMARK
- 2 X BENCHMARK
- 3 X BENCHMARK
- 5 X BENCHMARK
- 10 X BENCHMARK
- 10+X BENCHMARK

PORTLAND'S DIRTY 16

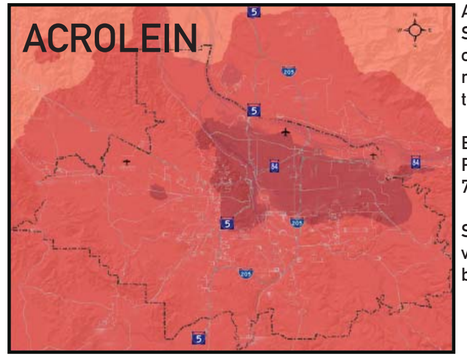
The 16 toxics in our air that pose the greatest danger to human health

KNOWN OR PROBABLE CARCINOGENS	SOURCE	ESTIMATED NUMBER OF EXTRA CANCERS OVER LIFETIME
1. Acetaldehyde	Secondary	>0
2. Arsenic	Industrial	>0
3. Benzene	Mobile	16
4. 1,3 Butadiene	Mobile	>0
5. Cadmium	Industrial	>0
6. Chromium 6	Industrial	>0
7. Dichlorobenzene	Solvent	<0
8. Diesel Particles	Mobile	7
9. Ethylbenzene	Mobile	>0
10. Formaldehyde	Secondary	165
11. Napthalene	Wood Burning	>0
12. Nickel	Industrial	<0
13. PAH	Wood Burning	85
14. Lead	Industrial	>0
NEUROTOXINS		
15. Manganese	Industrial	> 273: Total estimated number of extra cancers in Multnomah County
RESPIRATORY TOXINS		
16. Acrolein	Secondary	

NOTES; Based on Oregon Department of Environmental Quality modeling estimations for 2017. The DEQ's goal is to reduce the number of extra cancers to just 1 by 2017

Benzene, 1,3 Butadiene, Diesel Particulates, PAH, Napthalene, Cadmium, Formaldehyde and Acrolein were modeled at 10 or more times their benchmark. Lead was modeled at twice the benchmark at one location near the ESCO steel foundry in Northwest Portland.

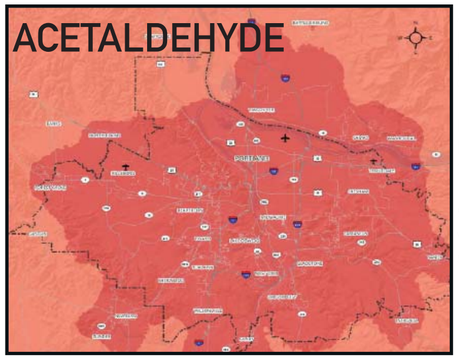
Secondary pollutants are those that form in reaction to other compounds in the atmosphere



ACROLEIN
Suspected carcinogen, respiratory toxin.

Emissions in Portland area: 78.8 tons/year.

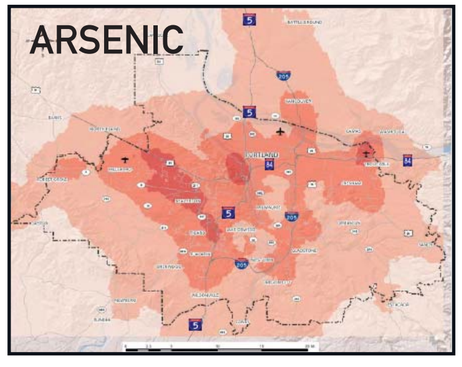
Sources: motor vehicles, wood burning.



ACETALDEHYDE
Probable human carcinogen.

Emissions in Portland area: 220.9 tons/year.

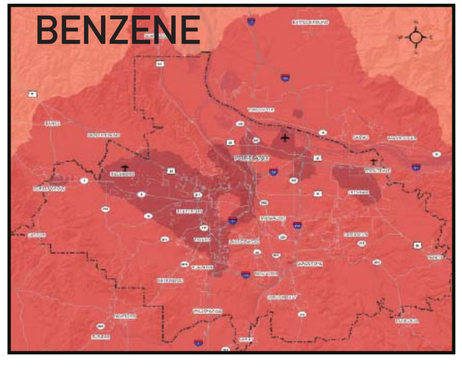
Sources: motor vehicles, wood stoves.



ARSENIC
Known human carcinogen and development toxicant.

Total emissions in Portland area: 0.22 tons/year.

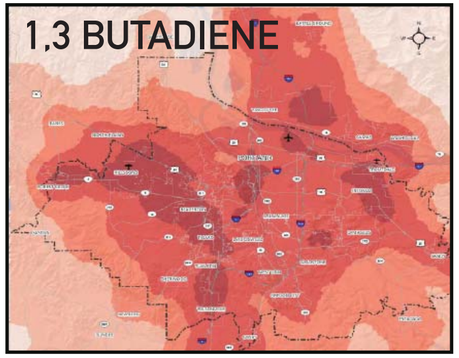
Sources: motor vehicles, wood stoves.



BENZENE
Known human carcinogen, Deveopmental snd reproductive toxicant.

Total emissions in Portland area: 559.9 tons/year.

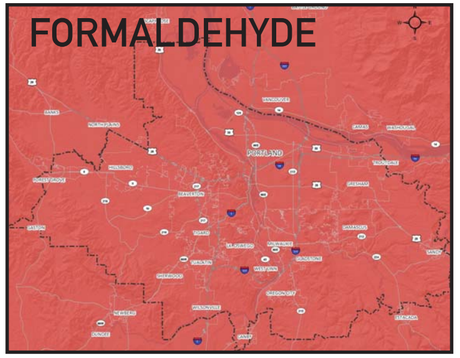
Sources: motor vehicles,



1,3 BUTADIENE
Probable human carcinogen.

Total emissions in Portland area: 74.07 tons/year.

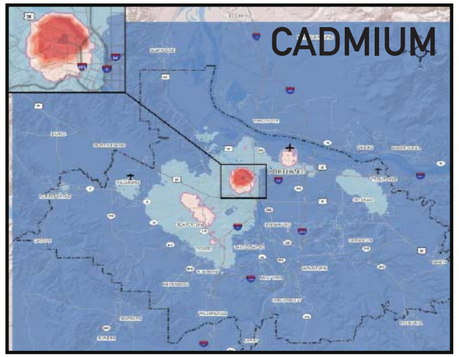
Sources: motor vehicles, wood stoves.



FORMALDEHYDE
Known human carcinogen.

Total emissions in Portland area: 426.1 tons/year.

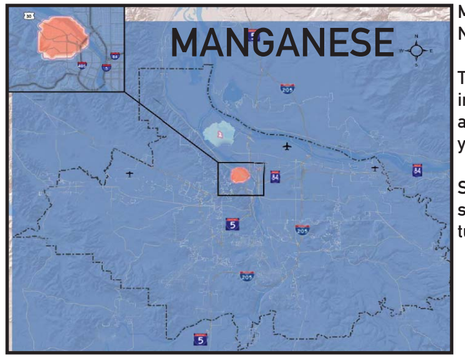
Sources: motor vehicles, wood burning.



CADMIUM
Probable human carcinogen.

Total emissions in Portland area: 0.187 tons/year.

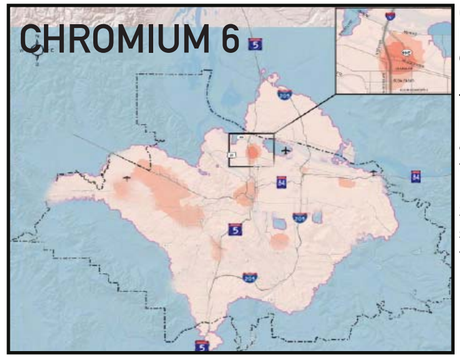
Sources: ESCO Steel manufacturing.



MANGANESE
Neurotoxin.

Total emissions in Portland area: 4.36 tons/year.

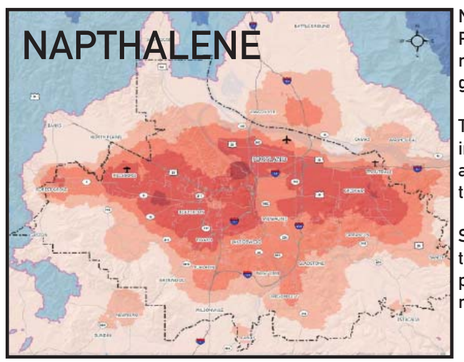
Sources: ESCO, steel manufacturing.



CHROMIUM 6
Known human carcinogen.

Total emissions in Portland area: 0.047 tons/year.

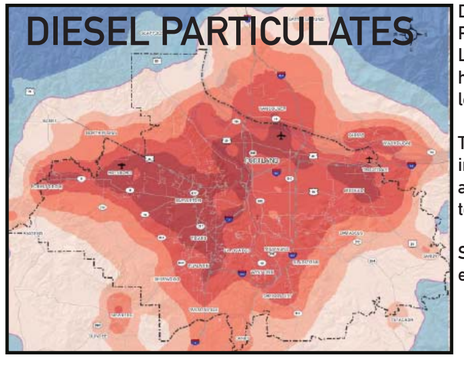
Sources: ESCO, steel manufacturing.



NAPTHALENE
Possible human carcinogen.

Total emissions in Portland area: 111.3 tons/year.

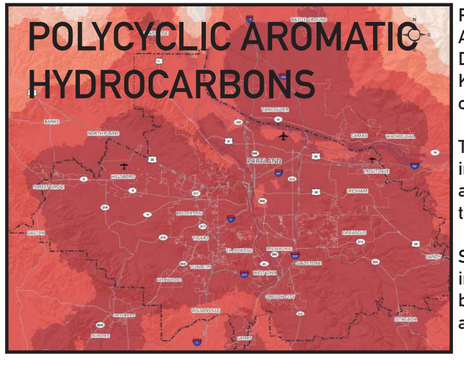
Sources: motor vehicles, plastics manufacturing.



DIESEL PARTICULATES
Lung cancer, heart problems.

Total emissions in Portland area: 528.7 tons/year.

Sources: diesel engines.



POLYCYCLIC AROMATIC HYDROCARBONS
Known carcinogen.

Total emissions in Portland area: 16.68 tons/year.

Sources: incomplete burning of oil and gas.