

Air is basic to life. All living things, from humans to animals to plants, need air to survive. Because we rely upon air for our existence, it is very important to keep the air clean by reducing or preventing air pollution.

Air pollution is any substance in the air that can cause harm to human health or welfare or the environment.

Pollutants may be natural or humanmade and may take the form of solid particles, liquid droplets, or gases. Natural sources of air pollution include smoke from wildfires, dust, and even volcanic ash. Humanmade sources of air pollution include emissions from vehicles and factories; dust from unpaved roads, agriculture, or construction sites; and smoke from human-caused fires.

Health Impacts of Air Pollution

Breathing elevated levels of air pollutants can adversely affect human health, especially in sensitive populations such as children, the elderly, and people with certain health conditions such as asthma. Potential health problems include lung damage, birth defects, nerve damage, reduced immunity, and an increased risk of developing cancer.

Pollutants of Concern

In Idaho, pollutants of concern include particulate emissions from vehicles and industrial sources that get trapped by wintertime inversions, chemicals and particulates from smoke from fires, and ground-level ozone that forms during hot summer days. As our state continues to grow, emissions from vehicles and new industrial sources will increase.

The good news is everyone can help protect Idaho's air! This brochure provides information on common air pollutants and steps you can take to help keep Idaho's air clean.

For more information

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DEQ Web Resources

Air Pollutants
www.deq.idaho.gov/air-pollutants

Air Quality in Idaho
www.deq.idaho.gov/air-quality-monitoring

Vehicle Emissions
www.deq.idaho.gov/vehicle-emissions



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Air Quality in Idaho

Protecting Idaho's Air

Why it matters and what you can do to help



Idaho Department of
Environmental Quality
www.deq.idaho.gov



Common Air Pollutants: What's in the Air?

Particulate Matter (PM) is the term for small particles found in the air including dust, soot, smoke, and liquid droplets. Sources of PM include vehicles, factories, dust from tilled fields and unpaved roads, and smoke from burning.

Carbon Monoxide (CO) is a colorless, odorless gas that forms when the carbon in fuels does not completely burn. Vehicle exhaust, industrial combustion processes, and natural combustion sources such as fires produce CO.

Ground-Level Ozone (O₃) is created by a chemical reaction between oxides of nitrogen and volatile organic compounds in the presence of sunlight. Ozone levels can be high during Idaho's hot summers.

Volatile Organic Compounds (VOCs) are common in household and industrial products, such as paints and varnishes, solvents, and fuels. VOCs combine with other pollutants to form ozone and fine particulate matter.

Hazardous Air Pollutants (HAPs) are pollutants that cause or may cause cancer or other serious health problems, such as birth defects, or adverse environmental and ecological effects. Examples of HAPs include benzene, mercury, and formaldehyde. HAPs come from many sources including industrial and vehicle emissions.

Nitrogen Dioxide (NO₂) is a highly reactive gas that contributes to the formation of both ozone and acid rain. The two major emission sources of nitrogen oxides are automobiles and industrial and utility boilers.

How You Can Help Prevent Air Pollution

- ✓ Tune your car. A poorly maintained car uses more gas per mile, polluting the air and costing you money. Common items to check are air and fuel filters, tire pressure, and spark plugs.
- ✓ Drive less. Try alternative forms of transportation including riding the bus, carpooling, or biking. Try to combine trips and limit idling time.
- ✓ Keep gas-powered lawn and garden equipment well maintained or replace with electric alternatives.
- ✓ Never burn humanmade garbage. It is both illegal and unhealthy to do so. Garbage such as plastics, metals, and even treated wood release harmful chemicals into the air.
- ✓ Avoid burning when possible and always comply with local burning ordinances.
- ✓ Limit use of products that contribute to the formation of ozone and fine particulate matter, such as paints and solvents, to days when air quality conditions are forecasted to be good.

How Clean Is the Air in My Community Today?

DEQ's monitoring network collects real-time measurements of air contaminants at more than a dozen sites statewide. DEQ uses these measurements to calculate the Air Quality Index (AQI), a guide for reporting daily air quality. The AQI indicates how clean or polluted the air is in a particular area and identifies potential health impacts. The AQI focuses on health effects that can happen within a few hours or days after breathing polluted air.

Air Quality Index

Air Quality	Actions to Protect Your Health	AQI
Good	None	0–50
Moderate	Sensitive people should consider limiting prolonged outdoor exertion.	51–100
Unhealthy for Sensitive Groups	Everyone should limit exertion outdoors.	101–150
Unhealthy	Everyone should limit exertion.	151–200
Very Unhealthy	Limit any exertion.	201–300
Hazardous	Stay indoors and avoid any exertion.	>300

Access daily measurements of air pollutants and air quality forecasts on DEQ's Website at www.deq.idaho.gov/daily-air-quality-reports-forecasts