



AIR POLLUTANT: Ozone



What is ozone?

Ozone is a colorless, odorless gas that can be good or bad, depending on where it is located in the atmosphere. Ozone in the stratosphere high above the Earth is good because it shields us from the sun's ultraviolet rays. Ozone at ground level, where we breathe, is bad because it can harm human health.

Ground level ozone forms when two types of pollutants—volatile organic compounds (VOCs) and nitrogen oxides (NOx)—react in sunlight. These pollutants come primarily from automobiles, but also from other sources including industries, power plants and products such as solvents and paints.

Is ozone the same as the “Brown Cloud”?

No. Ozone is colorless and cannot be seen. The Brown Cloud, or haze, that appears in the air over urban areas, such as Phoenix, is made of small particles of soot and dust. Even when visibility is good, there may be high levels of ozone present.

Why is ozone a problem?

Ozone can cause a number of health problems, including:

- Coughing
- Breathing difficulty
- Lung damage

Exposure to ozone can make the lungs more susceptible to:

- Infection
- Aggravate lung diseases
- Increase the frequency of asthma attacks and increase the risk of early death from heart or lung disease

Prolonged exposure to ground-level ozone concentrations is as harmful to human health as exposure to higher levels for shorter durations

Do I need to be concerned?

Even healthy adults can experience harmful effects from breathing ozone, but some people may be at greater risk. This includes:

- People with lung disease, such as asthma
- Children, including teenagers, because their lungs are still developing and they breathe more air per pound of body weight than adults
- Older adults
- People who are active outdoors, including outdoor workers

How can I protect myself?

For Phoenix, Tucson and Yuma, the ADEQ Forecast Team issues an air quality forecast for ozone. These provide an hour-by-hour outlook; helping people plan for outdoor activities through the day

to minimize the impacts of air pollution. This forecast is based on the Environmental Protection Agency's Air Quality Index (AQI).

When you see that the air quality forecast predicts an AQI indicating potentially harmful pollutant levels, take simple steps to reduce your exposure, including:

- Choosing a less-strenuous activity
- Taking more breaks during outdoor activity
- Rescheduling activities to the morning or to another day as ozone levels are generally highest in the afternoon
- Moving your activity inside where ozone levels are usually lower

It's also important to stay healthy—exercise, eat a balanced diet and keep asthma under control with your asthma action plan.

(See next page)

Can I help to reduce ozone?

Yes! You can:

- Drive less—carpool, use public transportation, bike, walk, tele-commute
- Keep your engine tuned and don't let your engine idle
- Refuel your vehicle in the evening or at night
- When refueling, stop when the pump shuts off, avoid spilling fuel and fully tighten your gas cap
- Inflate tires to the recommended pressure
- Don't use gas-powered lawn or garden equipment
- Use low-VOC paint and cleaning products; seal and store them so they can't evaporate
- Choose ENERGY STAR appliances

Visit the ADEQ Air Forecasting webpage at www.azdeq.gov/forecasting for air quality forecasts. There you can find more information, plus ways to access the forecasts online or through text, e-mail and mobile apps.

Contact the Forecast Team directly at:

ForecastTeam@azdeq.gov

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