AIR QUALITY IN CENTRAL TEXAS

OZONE, PARTICULATE MATTER,
AND THE AIR QUALITY INDEX (AQI)

Air quality in Central Texas is good for the majority of the year.
However, for 1/3 of the year, air quality can be considered not "good".
The pollutants that cause poor air quality in Central Texas
are ozone and particulate matter.

OZONE

Ozone is a colorless gas made up of three oxygen atoms. Ground-level ozone is not emitted directly into the air.
It is formed through chemical reactions in the troposphere between natural and man-made emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of sunlight.

Emissions from vehicles. power plants, and industries are the main sources of the pollutants that form ground-level ozone.

Weather plays a substantial role in the formation of ground-level ozone. Ground-level ozone concentrations typically are highest on hot days with low humidity when wind is light or stagnant.

Ozone concentrations in Central Texas get high enough to be considered "Unhealthy for Sensitive Groups" as early as March and as late as November.

PARTICULATE MATTER

Particulate matter or PM is a term for a mixture of solid particles and liquid droplets found in the air.
These particles can be made up of hundreds of different compounds.

PM is classified into two categories:
-PM10: coarse particles that are 10 micrometers and smaller
-PM2.5: fine particles that are 2.5 micrometers and smaller

PM can be emitted directly from a source, such as construction sites, quarries, unpaved roads, fields, or fires. Other particles form in the troposphere as a result of chemical reactions of pollutants emitted from power plants, industries, vehicles, and more.

PM2.5 is more prevalent in Central Texas than PM10.
Elevated PM pollution can occur all year.

AIR CENTRAL TEXAS

The Air Quality Index (AQI) reports air quality levels using colors and numbers.
The higher the AQI value, the greater the level of air pollution and the greater the health concern.

For each pollutant, an AQI value of 100 corresponds to an ambient air concentration that equals the level of the short-term National Ambient Air Quality Standard (NAAQS) for protection of public health.
AQI values at or below 100 are thought of as satisfactory.
When AQI values are above 100, air quality is unhealthy: at first for certain sensitive groups of people, then for everyone as AQI values get higher.

Check the current AQI and the AQI forecast at www.AirNow.gov.

Levels of Concern	Values of Index	Description of Air Quality
Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Sensitive groups to air pollution are children and teenagers, older adults, adults with respiratory and cardiovascular illness, and outdoor workers.

OZONE ACTION DAYS

When ozone levels are forecast to reach levels that are "Unhealthy for Sensitive Groups" or higher, the TX Commission on Environmental Quality (TCEQ) will issue an Ozone Action Day (OAD) for the metro area.
Notifications are usually distributed in the afternoon of the day before the expected OAD.

On OADs, the public is encouraged to reduce their exposure to air pollution and to reduce emissions that contribute to air pollution.
Actions that the public can do are drive less, avoid idling, reschedule discretionary errands and lawn care, and conserve energy in the home.

Sign up for OAD alerts at
https://www.tceq.texas.gov/airquality/monops/ozone_email.html