

# Environmental problems

Business



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Ground Level Ozone is the type of ozone that is not released into the air directly but rather results from chemical reactions of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) under the influence of sunlight.

Some common sources of NO<sub>x</sub> and VOC are chemical solvents, emissions from electric and industrial utilities, gasoline vapors, and motor vehicle exhaust. Photochemical Smog is a certain type of pollution resulting from a chemical reaction between sunlight and pollutants such as nitrogen oxides and volatile organic compounds. Causes of Photochemical Smog: Smog forms when particles of material become suspended in the air as a result of inversion which makes the air become stationary. Photochemical smog is formed when the particulate matter suspended in the air is oxidized by ultraviolet rays from the sun. The particulate matter that is suspended is composed of NO<sub>x</sub> and VOC which are broken down chemically by ultraviolet rays to form pollutants such as ozone and Peroxyacetyl nitrate. 3A: Since sunlight is a necessary factor in the chemical process of the formation of ozone, ozone is more pronounced during the summer months when days are long and there is a lot of sunlight.

During the day, ozone levels are usually the lowest in the mornings; then they start to rise as the day progresses and sunlight becomes more pronounced to peak in about mid-afternoon; then they taper off during the evening and into the night. 3B: The best site to monitor if you need to know of an ozone alert that may be of interest to you is the Texas Commission on Environmental Quality (TCEQ); Air Quality Division. 3C: Fort Bend currently does not have a monitoring station to observe air pollution, whereas Greater Houston has nearly 50 monitors. 3D: Fort Bend receives a double dose of

dirty air even though it has no major industrial air polluters, since it receives a lot of this pollution from commuters' tailpipes and from what is blown inland from the Gulf of Mexico. Fort Bend gets a double dose of pollution from commuters' tailpipes as it has the largest population among all the counties, and it also acts as a major transit point for most routes in Houston. The Gulf of Mexico has many large cities and large populations, which leads to high rates of pollution.

The pollution is however blown inland by winds from the ocean and blown inland to Fort Bend in Texas. 5A: During the time period covered in the article, there were only two times when ozone went up to unhealthy levels as compared with the same period in 2007 when unhealthy levels exceeded twenty-nine times. 5B: There are several factors that The Texas Commission on Environmental Quality cites as being responsible for healthier air quality this summer. This season has had strong, sustained winds which are twice as fast as they were two years ago; this has prevented the formation of smog. The winds have also brought less pollution from the Gulf of Mexico into Houston.

There have been developments in regulation, new technologies, and industry clean-up efforts which have resulted in cleaner air. Rising gas prices in the United States are also partly responsible for the cleaner air. This is because high gas prices have resulted in people travelling fewer miles and using ingenious methods to cut on costs such as carpooling, using mass transit and trading in their trucks and SUV's for vehicles that are more fuel efficient.