



Houston skyscrapers © Lunamirna/Stock/Thinkstock

# TEXAS AIR QUALITY CONTINUES TO IMPROVE

## *2014 Ozone Levels Best Ever in Much of State*

**T**exas ozone levels in 2014 either equaled or were lower than the best levels ever measured in most areas of the state.

Texas' air quality has made huge strides in the past few decades. Not that long ago, Houston and Los Angeles duelled for the dubious honor of having the worst ozone in the country.

Now, using the EPA's latest figures, ozone levels in DFW and Houston are comfortably better than those of Los Angeles.

Ozone design values are the measurement used by the EPA to determine attainment or nonattainment for the federal ozone standard. The EPA calculates the ozone design values using a three-year rolling average.

Preliminary 2014 ozone design values, based on 2012, 2013, and 2014 measurement data, are much lower in many areas of the state because 2014 ozone levels were lower than in previous years and 2011 ozone data are no longer used in this calculation. The year 2011 had high ozone readings in many areas of the state, because it was a unique year

meteorologically—the extreme drought, plus significant wildfires in Texas and elsewhere in the U.S., coupled with plenty of sunshine and few cloudy or rainy days—all favored ozone formation.

In fact, Dallas–Fort Worth (81 parts per billion) and Houston (80 ppb) are now both measuring attainment of the 1997 eight-hour ozone standard (84 ppb). In addition, both areas are measuring

attainment for the older one-hour standard for peak levels of ozone.

Dallas is already designated as having attained that standard and the TCEQ has requested that the EPA change the classification for the Houston area given that the area has measured attainment of this standard in both 2013 and 2014.

In addition, the 2014 ozone levels show that many areas of Texas with

**Texas Air Quality Vastly Improved**

Los Angeles

Houston

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monitors are meeting the recently implemented, more stringent eight-hour standard of 75 ppb, with the exception of the Dallas–Fort Worth, Houston, and San Antonio areas. Even within these three areas, many of the monitors show compliance with the 2008 eight-hour standard as well. The nonattainment or near-nonattainment areas of the state have resumed their steady decrease in ozone, in the face of growing population, in almost every area of the state.

Houston-area eight-hour ozone levels have improved 29 percent between 2000 and 2014 while the population has increased over 34 percent.

In the Dallas–Fort Worth area eight-hour ozone levels have likewise improved 21 percent during the last 15 years while the population grew more than 29 percent.

The Corpus Christi and Tyler–Longview–Marshall areas have seen 20 and 30 percent reductions in ozone over the last 15 years.

The Austin–Round Rock and Beaumont–Port Arthur areas have seen ozone improvements of 22 percent and 20 percent during this same period, respectively.

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Nine of the state's 13 areas that have had at least 15 years of regulatory ozone monitoring recorded the lowest or tied the lowest ozone values in 2014. The two areas that don't have at least 15 years of monitoring data (Waco and Killeen–Temple–Ft. Hood) also recorded their lowest ozone values in 2014. The two Texas areas with the largest population, DFW and Houston, were the areas that improved the most, with reductions of 6 and 7 ppb, respectively, in 2013–14.

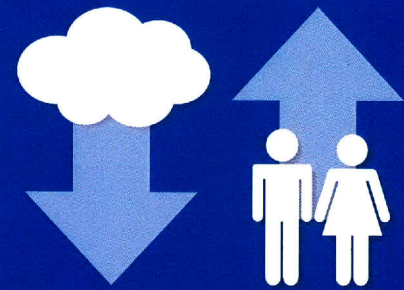
### **Cutting NO<sub>x</sub> Emissions**

Ground-level ozone is formed when nitrogen oxides (NO<sub>x</sub>) and certain VOCs combine in the presence of sunlight. Given the amount of VOCs emitted naturally from vegetation, most control strategies in Texas have focused on reducing emissions of NO<sub>x</sub>.

Better air quality has been achieved through targeted emission-reduction strategies. In Houston, industry has cut NO<sub>x</sub> production over 80 percent in the last 10 years. Tougher rules on compressor emissions in North and East Texas have helped, as well as tougher emissions rules on electricity-generating plants. Fleet turn-over of both passenger cars and heavy-duty trucks also played a substantial role.

Newer cars are much cleaner than old cars, and the same applies to new trucks. Lower emissions from these trucks and cars, as well as from off-road mobile sources, mean that emissions decreased while the number of miles driven in Texas increased significantly. New diesel-fuel standards also reduce ozone-precursor emissions.

The Texas Legislature funds the Texas Emissions Reduction Plan, which gives monetary incentives to enable individuals, businesses and other organizations to upgrade older equipment or buy newer equipment with lower emissions.



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Another state-funded program is Drive a Clean Machine, which gives incentives for qualifying Texans to buy newer, lower emitting vehicles.

Many citizens participate in cutting ozone on high ozone days by taking public transportation or bicycling to work, by fueling their cars late in the afternoon, and by keeping them tuned up and their tires properly inflated. With the majority of NO<sub>x</sub> emissions in the state coming from mobile sources and the state having limited jurisdiction over vehicle emission standards, it is important that Texans do their part to reasonably limit mobile-source emissions.

Oil and gas production has expanded rapidly near the San Antonio and DFW area, but the TCEQ's scientific studies have not to date seen significant contributions



of oil and gas activities to ozone levels in those metropolitan areas.

Point source emissions limits in Texas have been tightened during the last decade to address this growing sector of the state's economy. This includes the addition of several new regulations:

- a new Barnett Shale permit by rule and standard permit
- the new maintenance, startup, and shutdown PBR that applies statewide to the oil and gas sector
- a North Texas gas-compressor rule to control NO<sub>x</sub> emissions
- the EPA's New Source Performance Standard (Code of Federal Regulations, Part 60, Subpart OOOO) for which the TCEQ is the delegated authority

The TCEQ will continue studying and monitoring these activities to evaluate the impact from these sources and

will take necessary action to preserve air quality.

### **Achieving More Stringent Standards**

The TCEQ is currently focused on achieving the newer, more stringent 75 ppb EPA ozone standard. Achieving that goal will be challenging but, as shown by recent ozone readings, the state is heading in the right direction.

Recently, the EPA has proposed even lower ozone standards, in the 65–70 ppb range, and has requested comments on retaining the current standard or lowering the standard to 60 ppb. Studies say that, to reach 60 ppb, sources in these Texas areas would have to reduce NO<sub>x</sub> emissions by as much as 75 percent from the levels of 2008–10, depending on the final standard. It's difficult to see how that will be achieved, since NO<sub>x</sub> emissions have already been drastically reduced, and background levels

of ozone entering an area sometimes approach or exceed 60 ppb.

The TCEQ maintains a Web page on [detailed air quality successes](#). This page contains information on criteria pollutants, air toxics, and emission inventories in Texas.

The TCEQ also maintains a website devoted to [Take Care of Texas](#), the TCEQ's personal-responsibility program. This program gives Texans helpful information on the state's successes in environmental protection, as well as valuable tips on how they can do their part at home, at work, or at school to protect and preserve our state. ♻️

#### **Information Online**

Air Quality Successes

[www.tceq.texas.gov/airquality/airsuccess/air-success-criteria](http://www.tceq.texas.gov/airquality/airsuccess/air-success-criteria)

Take Care of Texas

[www.takecareoftexas.org](http://www.takecareoftexas.org)



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