

Implications of Nonattainment for the 2015 Eight-Hour Ozone Standard

1/12/16

The United States Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standard (NAAQS) for ozone to 70 parts per billion (ppb) over eight hours. This document explains the potential effects of the revised standard in Texas based on currently available information.

What is ozone?

Ozone high in the atmosphere protects the earth from potentially damaging solar radiation. Ground-level ozone can be harmful to breathe and damage vegetation. Ozone is not emitted directly from tailpipes or smokestacks, but is created through a complex chemical reaction between nitrogen oxides (NO_x) and volatile organic compounds (VOC) with heat and sunlight. NO_x is emitted primarily from fuel use. VOC emissions can come from gasoline, commercial and industrial activities, and plants.

What is the ozone standard?

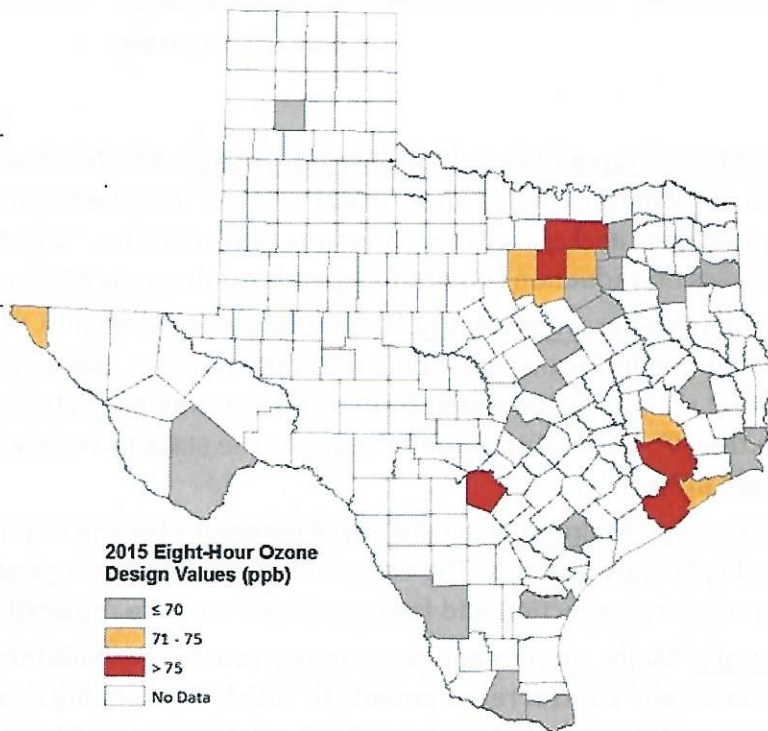
Federal law requires the EPA to set standards for ozone and certain other pollutants to protect the public and vegetation from potential harm and to designate areas with monitoring results that do not meet the NAAQS as nonattainment.

What parts of Texas could be designated as nonattainment?

Two areas are currently designated nonattainment: Dallas-Fort Worth and Houston-Galveston-Brazoria. With the newly revised standard, several additional areas could be designated nonattainment in 2017. The map below shows where counties with ozone monitors stand based on the monitoring data from 2013, 2014 and 2015. Several additional counties in each area could be designated nonattainment because the EPA may require designations to cover whole Core Based Statistical Areas (CBSAs) or Combined Statistical Areas (CSAs).

CSA/CBSA	County	2015 8Hr Ozone DV (ppb)
Dallas—Fort Worth	Denton	83
Dallas—Fort Worth	Tarrant	80
Houston—The Woodlands	Brazoria	80
Houston—The Woodlands	Harris	79
San Antonio—New Braunfels	Bexar	78
Dallas—Fort Worth	Collin	76
Dallas—Fort Worth	Dallas	75
Dallas—Fort Worth	Parker	75
Dallas—Fort Worth	Hood	74
Houston—The Woodlands	Montgomery	73
Dallas—Fort Worth	Johnson	73
Houston—The Woodlands	Galveston	72
El Paso—Las Cruces	El Paso	71
Dallas—Fort Worth	Rockwall	70
Killeen-Temple	Bell	69
Austin—Round Rock	Travis	68
Beaumont—Port Arthur	Jefferson	68
Dallas—Fort Worth	Ellis	68
Longview-Marshall	Gregg	68
Dallas—Fort Worth	Kaufman	67
Tyler-Jacksonville	Smith	67
Waco	McLennan	67
Amarillo-Borger	Randall	66
Beaumont—Port Arthur	Orange	66
Longview-Marshall	Harrison	66
Dallas—Fort Worth	Navarro	66
Corpus Christi—Kingsville—Alice	Nueces	65
Dallas—Fort Worth	Hunt	64
No CSA	Brewster	64
No CSA	Polk	64
Victoria—Port Lavaca	Victoria	64
Laredo	Webb	59
Brownsville-Harlingen	Cameron	58
McAllen-Edinburg	Hidalgo	54

2015 Ozone Design Values by County



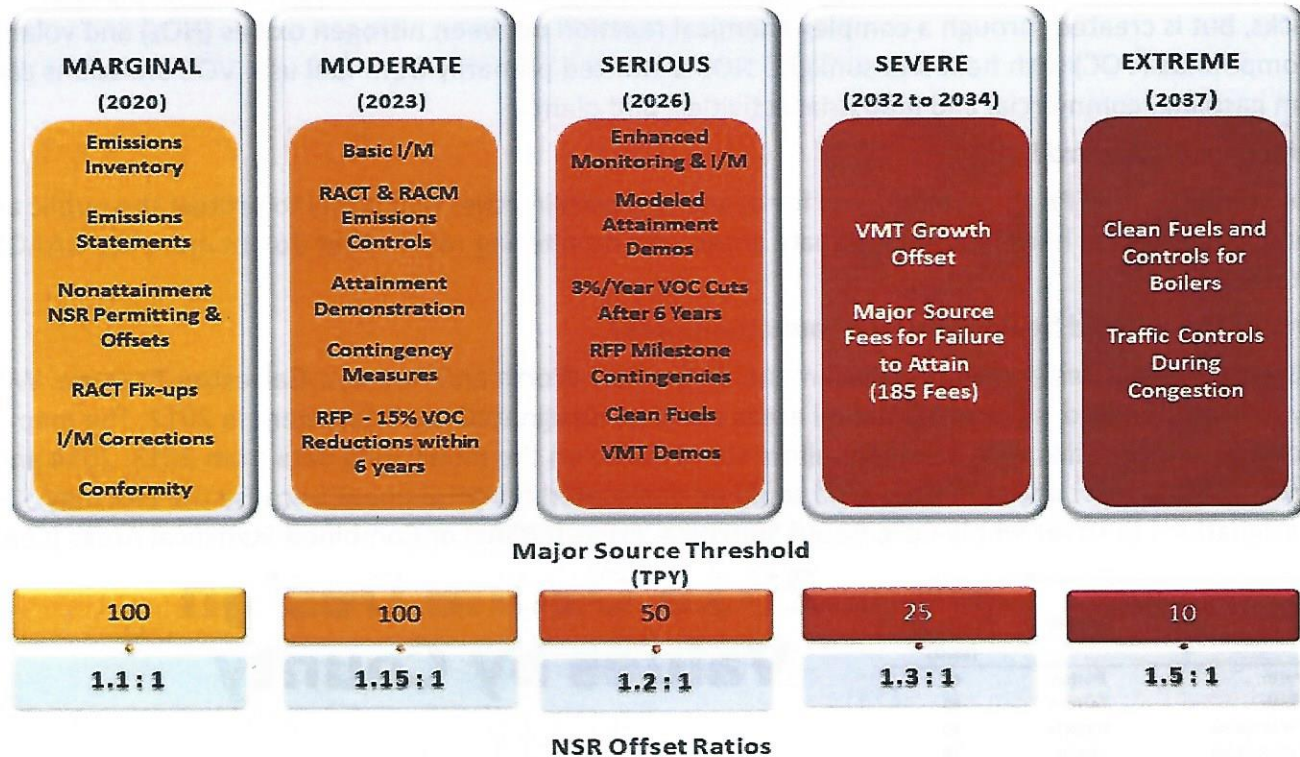
*2015 design values are calculated as of 9/29/2015 and subject to change

***The Brewster County, Randall County, and Polk County monitors are part of the Clean Air Status and Trends Network (CASTNET) of monitors and report data directly to the EPA.

What does an ozone nonattainment designation mean?

The law requires the EPA to classify each ozone nonattainment area as a marginal, moderate, serious, severe, or extreme area based on monitored ozone levels. Requirements for nonattainment areas become more stringent and compound as the classification increases. The key requirements and attainment deadlines for each classification level are shown on the figure below. The requirements with the greatest anticipated potential impact are briefly summarized below. For more information about these requirements go to http://www.tceq.texas.gov/agency/air_main.html.

Requirements for Ozone Nonattainment Areas



Nonattainment New Source Review (NSR) Permit Offsets: All sites that emit air contaminants need a permit from the TCEQ. In nonattainment areas, “major sources” may be required to install the most stringent emissions technologies and also obtain emissions reductions (or “offsets”) in the region. The NSR offset ratio, and thus the emission reduction required, depends on the nonattainment classification as shown above.

Transportation and General Conformity: Conformity reviews ensure that transportation and federal projects do not worsen air quality. Transportation conformity requires metropolitan planning organizations to demonstrate that emissions generated from transportation projects do not exceed the emissions limits established in the SIP. General conformity requires the state to review and approve estimated emissions from federally funded projects.

Vehicle Inspection and Maintenance (I/M): I/M emissions testing requirements apply to 2 through 24 year old gasoline-fueled light-duty vehicles. The emissions inspection fee is generally an incremental \$14 to \$27, on top of the cost for a safety inspection and failing vehicles must be repaired and re-tested to be registered.

Emission Controls: Major sources and some minor sources in nonattainment areas may be required to meet emission standards and control requirements to satisfy Reasonably Available Control Technology (RACT) requirements. In addition to RACT, Reasonably Available Control Measures (RACM) may be required to help a region attain the NAAQS and may apply to large industry or small businesses with stationary sources as well as on-road and non-road emissions sources.