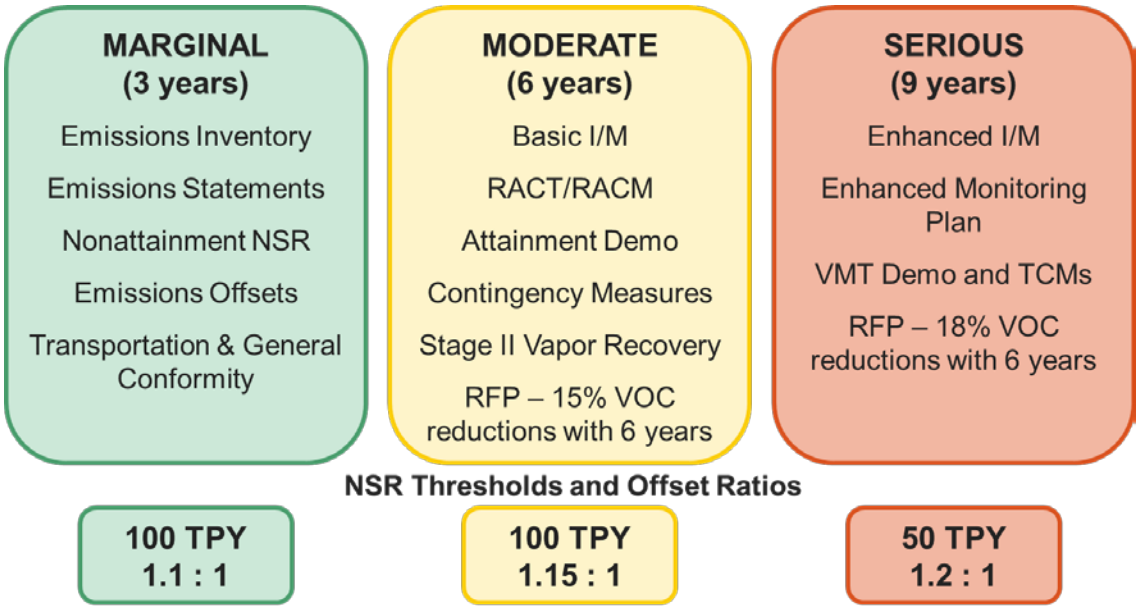
March 2022 Air Quality and Planning Update

San Antonio - New Braunfels MSA Ozone Status

In October 2015, the U.S. Environmental Protection Agency (EPA) promulgated its revised National Ambient Air Quality Standards (NAAQS) for ground-level ozone. The annual fourth-highest maximum daily average 8-hour (MDA8) ozone concentration, averaged over three years, measured at each regulatory monitor within an area must not exceed 70 parts per billion (ppb). The highest of these three-year averages is that area's design value, which is the metric used by the EPA to determine attainment of the ozone NAAQS. Failure to attain results in a nonattainment designation, with five classification levels of increasing severity based on an area's design value or length of time out of attainment. Each subsequent classification results in additional and more stringent federal air quality regulations intended to bring the area back into attainment.

Bexar County is designated nonattainment with a marginal classification under the 2015 ozone NAAQS. This designation became effective on September 24, 2018, which triggered a three-year deadline to attain the NAAQS by September 24, 2021 (attainment date), or effectively, the end of the 2020 ozone season (attainment year). Bexar County missed its attainment date based on having a 2020 design value of 72 ppb, and now faces reclassification to moderate nonattainment, which is expected to be announced this month.

Figure 1: Marginal, Moderate, and Serious Nonattainment Federal Regulations



Failure to meet the ozone NAAQS by the attainment date triggered another three-year deadline of September 24, 2024, making the new attainment year 2023. This means that 2021 ozone data will be used to calculate the design value (a rolling three-year average) that will be used for this deadline. Failure to attain by this new deadline will result in another reclassification to serious nonattainment. The federal regulations required to be implemented in marginal, moderate, and serious nonattainment areas are shown in Figure 1.

The 2021 ozone season ended with two regulatory monitors in Bexar County continuing to show violations of the NAAQS through 2021: CAMS 23 San Antonio NW at Marshall High School and CAMS 58 Camp Bullis (Table 1).

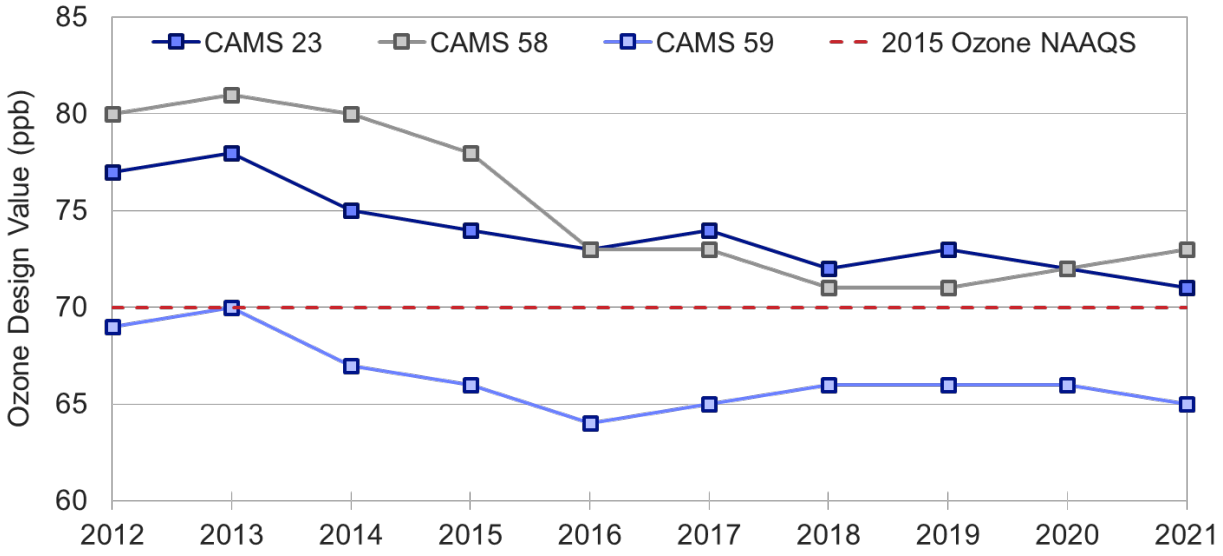
Table 1: Four Highest MDA8 at Bexar County Regulatory Monitors, 2021

Monitor	Fourth-Highest MDA8 (ppb)			Preliminary Three-Year Average
	2019	2020	2021*	
San Antonio NW C23	75	69	70	71
Camp Bullis C58	69	74	78	73
Calaveras Lake C59	63	66	66	65

*Ozone data validated through October 2021; Data will be certified by EPA no later than May 2022

The design value trend from 2012 - 2021 at each regulatory monitor is shown in Figure 2. Although a downward trend was noted through 2016, design values have remained relatively steady since then.

Figure 2: Design Value Trend at Bexar County Regulatory Monitors, 2012 - 2021



2022 Ozone Season

The 2022 ozone season began on March 1. In order to attain the ozone NAAQS by the end of this year, the maximum allowable fourth-highest MDA8 must not exceed the values presented in Table 2. While it is possible that CAMS 23 could attain the NAAQS by the end of 2022, it appears less likely for CAMS 58 to attain the NAAQS by that time. CAMS 59 continues to report the lowest ozone of the three regulatory monitors.

Table 2: 2022 Maximum Allowable 4th-Highest MDA8 to Attain Ozone NAAQS

Monitor	4th-Highest MDA8 (ppb)		Maximum Allowable 4th-Highest MDA8 to Attain NAAQS in 2022
	2020	2021*	
San Antonio NW C23	69	70	73
Camp Bullis C58	74	78	60
Calaveras Lake C59	66	66	80

*Ozone data has been validated by TCEQ and will be certified by EPA no later than May 2022

The EPA's Air Quality Index for ozone defines "moderate" days as those having MDA8 between 54 and 70 ppb, and "unhealthy for sensitive groups" days as those with MDA8 between 71 and 85 ppb. So far this year there have been six moderate ozone days, with one of those days occurring in February. The current four highest MDA8 values for 2022 are shown in Table 3.

Table 3: Four Highest MDA8 at Bexar County Regulatory Monitors, 2022

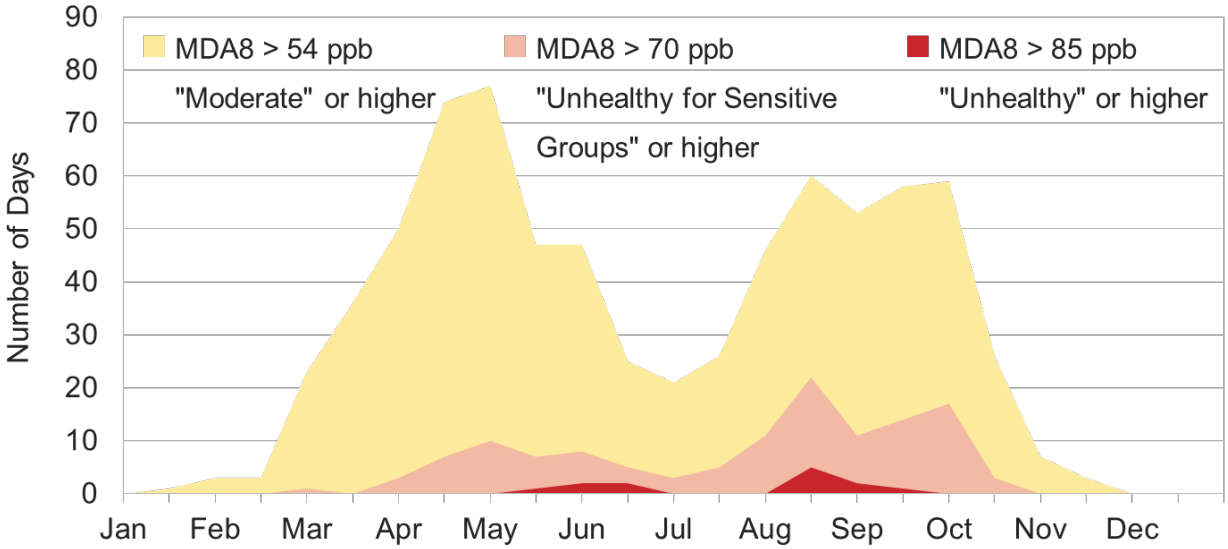
Monitor Site	Date	PPB	Date	PPB	Date	PPB	Date	PPB
San Antonio NW C23	3/1/2022	57	2/10/2022	56	3/2/2022	54	3/3/2022	53
Camp Bullis C58	2/10/2022	58	3/10/2022	57	3/3/2022	57	3/1/2022	57
Calaveras Lake C59	3/1/2022	58	3/2/2022	54	2/10/2022	53	2/28/2022	52

* As of 3/15/2022; Ozone data not yet validated

The Texas Commission on Environmental Quality (TCEQ) issues Ozone Action Day alerts when air quality is expected to be unhealthy for sensitive groups the following day. AACOG offers to forward these alerts to people who sign up to receive them at http://www.aacog.com/list.aspx. In addition, AACOG offers complimentary Ozone Action Day alert flags for area schools to display when high ozone levels are expected. Ozone Action Day alerts warn people, especially those sensitive to pollution (older people, children, and those with underlying respiratory conditions, like asthma) to limit their exposure outdoors. It is also an opportunity for the public to take measures to mitigate their contribution to pollution by reducing energy consumption at home and driving less. Ozone Action Day alert verification statistics for 2022 will be listed and updated as they are issued, or on days when MDA8 exceeds 70 ppb and no alert is issued.

Figure 3 shows the seasonal distribution of high ozone days at selected thresholds using data from 2010-2021. There are two clear peaks during the ozone season where the frequency of elevated ozone days increases sharply. The first of these peaks is in the spring, generally from April through June, and the second peak is in the fall, from August through October. These months have weather patterns that are most favorable for ozone formation. High ozone events in July are less common, a phenomenon known as the “mid-summer minimum,” usually a result of persistent southeasterly winds from the Gulf of Mexico transporting cleaner air into the region.

Figure 3: Ozone Exceedances of Selected Thresholds at Regulatory Monitors by Semi-Monthly Period, 2010-2021



Mobile Source Replacement Grants and IIJA EV Programs

Table 4 is a list of active state grants for mobile source upgrades to reduce air pollution. These grants may be part of the Texas Emission Reduction Plan (TERP) program or the Texas Volkswagen Emissions Mitigation Program (TxVEMP), both administered by the TCEQ.

Table 4: List of Active State Grants for On-Road Mobile Source Replacement

Program	Description	Deadline
TERP: Light-Duty Vehicle Purchase and Lease Incentive Program (LDPLIP)	Statewide; first-come, first-served (FCFS); $2,500 for electric, $5,000 for natural gas (CNG, LNG, LPG); eligible makes/models listed on terpgrants.org	1/7/2023
TERP: Seaport and Rail Yard Emissions Reduction Program (SPRY)	Drayage and cargo handling equipment operating at UP Intermodal in Von Ormy; FCFS; amounts vary based on vehicle type, fuel, specs, usage, and emission rate	11/22/2022
TERP: Texas Clean School Bus Program (TCSB)	Statewide; FCFS; up to 80% for replacements based on fuel, year, and type of bus; older and electric will receive the most; 100% for retrofits	10/20/2022

The Joint Office of Energy and Transportation, created under the 2021 Infrastructure Investment and Jobs Act (IIJA), continues to develop guidance for the National Electric Vehicle Infrastructure (NEVI) Formula Grant to expand the national electric vehicle (EV) charging network. Five billion will be allocated to strategically deploy direct current (DC) fast chargers and establish an interconnected network to facilitate data collection, access, and reliability. Texas is expected to receive around $408 million over five years for this program, under the condition that the State develops and executes a statewide EV charging plan, which is currently under development. The Federal cost share for this program is 80 percent.

The NEVI program requires that EV chargers be located along EV corridors designated by the Federal Highway Administration (FHWA). The FHWA is accepting EV corridor nominations from state and local officials through May 13, 2022. Corridor-ready segments currently contain a sufficient number of fueling facilities to allow for corridor travel with the designated alternative fuel. Corridors that do not have sufficient alternative fuel facilities to support alternative fuel vehicle travel are designated as corridor-pending. Both types are eligible for NEVI funding. For more information and specific program guidance, visit www.driveelectric.gov.

A second program will consist of competitive grants to install publicly accessible EV chargers and other alternative fuel infrastructure along designated alternative fuel corridors. Annual funding will begin at $300 million and increase by $100 million each of the following four years, for a total of $2.5 billion. Half of funding must be reserved each year to provide community grants to eligible entities not located along designated corridors. The Federal cost share for this program is also 80 percent.

The EPA is preparing to open its first round of funding for its Clean School Bus Program under the IIJA. The IIJA allocates $5 billion over five years for the replacement of existing school buses with clean school buses and zero-emission school buses. This will be a rebate program open to state and local governments; certain contractors; nonprofit school transportation associations; and Tribal governments and organizations. For more information about this program, please visit https://www.epa.gov/cleanschoolbus.