



## 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.

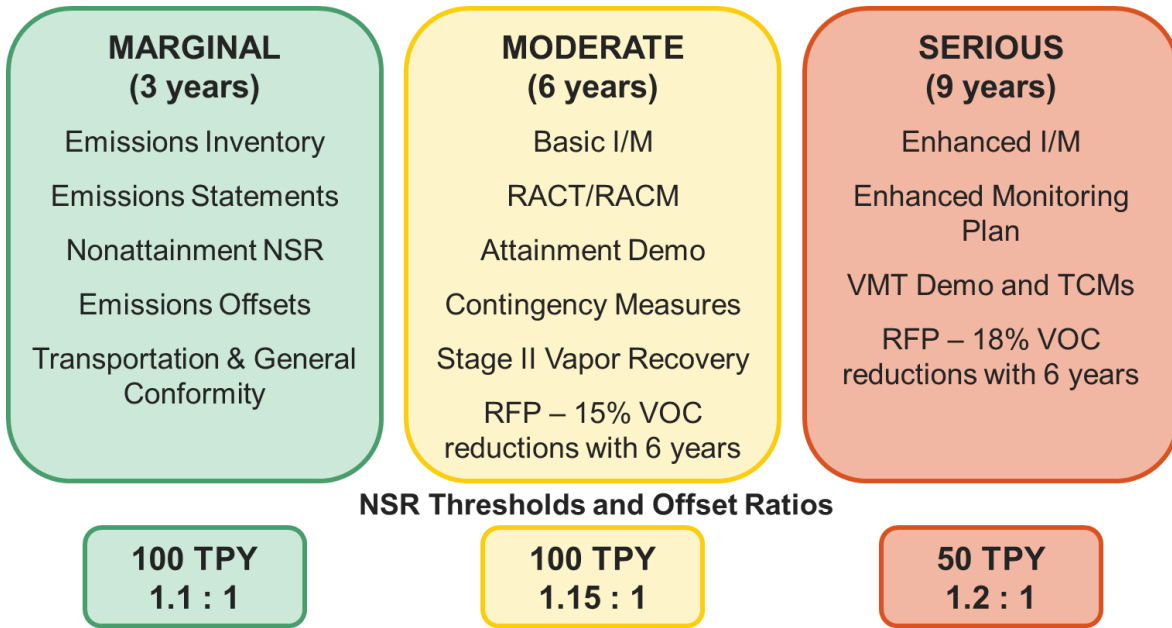
In July 2018, Bexar County was designated nonattainment under the 2015 ozone NAAQS by the EPA, with a marginal classification, based on a certified 2017 design value of 74 ppb. This designation became effective later that year on September 24, which triggered a three-year deadline to attain the NAAQS 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 a 2020 design value of 72 ppb (Table 1), and now faces reclassification to moderate nonattainment, which is expected to be made official no later than March 2022.

*Table 1: Fourth-Highest MDA8, Three-Year Averages, and Design Value (in blue) at Regulatory Monitors, 2018-2020*

Monitor	Fourth-Highest MDA8 (ppb)			Design Value
	2018	2019	2020	
San Antonio NW C23	72	75	69	72
Camp Bullis C58	73	69	74	72
Calaveras Lake C59	71	63	66	66

Failure to meet the ozone NAAQS by the attainment date triggered another three-year deadline of September 24, 2024, making the attainment year 2023. Failure to attain by this new deadline will result in another reclassification to serious nonattainment. The federal regulations required to be implemented under the Clean Air Act for marginal, moderate, and serious nonattainment classification levels are shown in Figure 1.

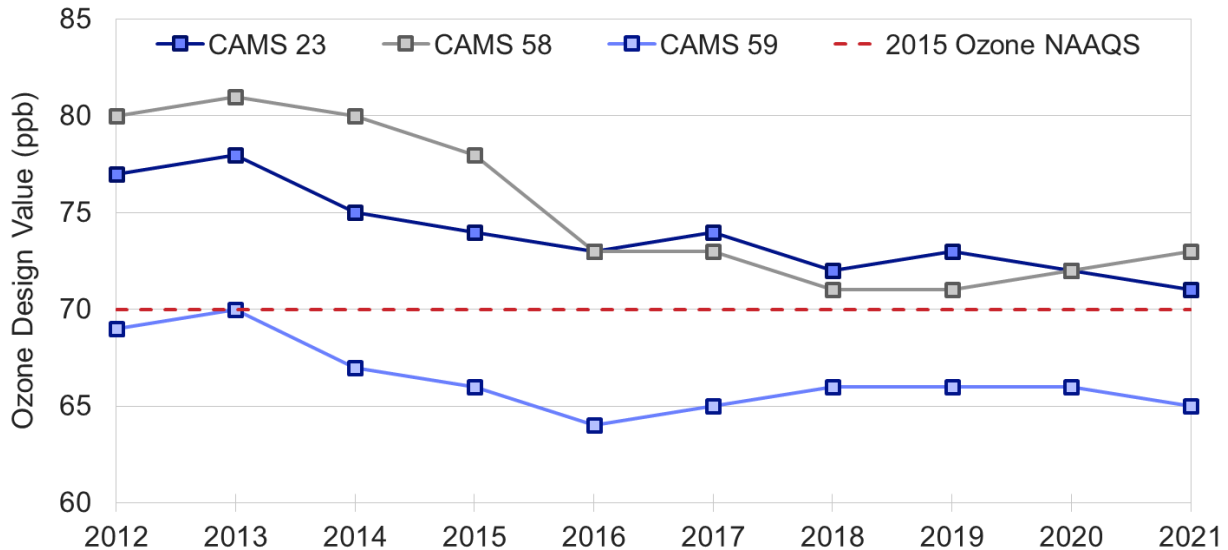
Figure 1: Marginal, Moderate, and Serious Nonattainment Federal Regulations



## 2021 Ozone Season Summary

The 2021 ozone season ended November 30, 2021. 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



Two regulatory monitors in Bexar County continue to show violations of the NAAQS through 2021: CAMS 23 at Marshall High School (San Antonio NW) and CAMS 58 at Camp Bullis (Table 2).

Table 2: 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 September 2021; Data will be certified by EPA no later than May 2022

The Air Quality Index for ozone defines “moderate” days as those having MDA8 between 54 and 70 ppb, and “unhealthy for sensitive groups” as those with MDA8 between 71 and 85 ppb. There were 63 moderate ozone days or higher in 2021, with 13 of those days having MDA8 > 70 ppb. The monthly frequency of actual and average days for both ozone thresholds is shown in Table 3. Most months had average or below average number of high ozone days. September and October were more severe than average, containing two-thirds of all days with MDA8 > 70 ppb. August was notably less severe than usual, with no days having MDA8 > 70 ppb, and fewer than half the expected number of moderate ozone days.

Table 3: 2021 Ozone Monthly Summary Statistics

Month	Actual Days MDA8 > 54	Average Days MDA8 > 54	Actual Days MDA8 > 70	Average Days MDA8 > 70
March	9	5.4	0	0.1
April	9	11.3	1	1.0
May	8	10.9	1	1.8
June	6	6.3	1	1.2
July	2	4.2	1	0.8
August	4	9.6	0	2.9
September	13	10.3	5	2.4
October	9	7.9	3	1.8
November	2	0.8	0	0.0
Total	62	66.7	12	12.0

The Texas Commission on Environmental Quality (TCEQ) issued 12 Ozone Action Day alerts in 2021. These alerts are issued 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 appropriate. Ozone Action Day alerts warn people 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. Table 4 lists Ozone Action Day alert verification statistics for 2021. Most of the alerts that verified occurred in September and October.

*Table 4: Ozone Action Day Alert Verification Summary Statistics, 2021*

Days Alert Issued	12
Days Alert Verified	7
Days with MDA8 > 70 ppb	13
Days with MDA8 > 70 ppb without Alert	6

## 2022 Ozone Season Outlook

The 2022 ozone season will begin 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 5.

*Table 5: 2022 Maximum Allowable 4<sup>th</sup>-Highest MDA8 to Attain Ozone NAAQS*

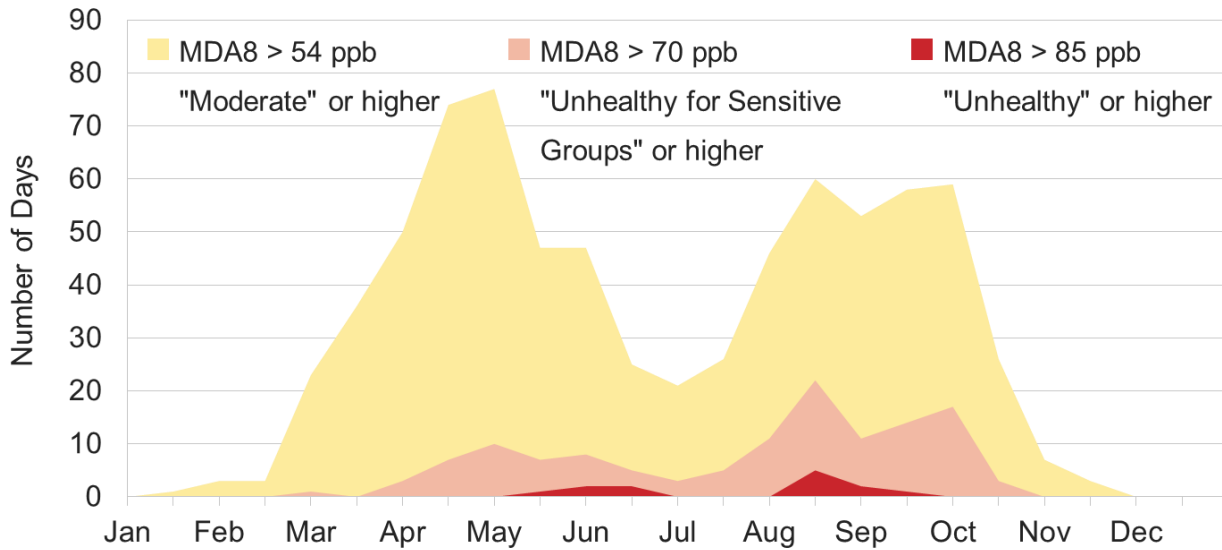
Monitor	4 <sup>th</sup> -Highest MDA8 (ppb)		Maximum Allowable 4 <sup>th</sup> -Highest MDA8 to Attain NAAQS in 2022
	2020	2021*	
San Antonio NW C23	69	70	73
Camp Bullis C58	74	78	60
Calaveras Lake C59	66	66	80

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

Given the fourth-highest MDA8 for 2020 and 2021, 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.

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



## Volkswagen Settlement and Other Grant Opportunities

The TCEQ opened its Light Duty Vehicle Purchase and Lease Incentive Program (LDPLIP) on October 29. The LDPLIP is part of the Texas Emission Reduction Plan (TERP), and offers up to \$2,500 in rebates for light duty electric vehicle purchases. There are 5,000 rebates available statewide for EVs under this round of LDPLIP. Some exclusions apply, including restrictions on rebates for Teslas. The deadline to apply for this grant program is January 7, 2023.

A second TERP program, the Seaport and Rail Yard Emissions Reduction (SPRY) Program, opened on December 9, 2021. The SPRY Program provides financial incentives for the replacement of older drayage and cargo handling equipment operating at the Union Pacific San Antonio Intermodal Terminal in southwestern Bexar County. Grant amounts vary based on the type of vehicle or equipment being replaced, its horsepower, ignition type, and emission rate, as well as the ignition type and expected usage rate of the replacement vehicle or equipment. This program ends November 22, 2022.