

Overview of Regional Air Quality Planning Efforts in the Austin MSA

Clean Air Coalition Meeting
December 13, 2023



CAPCOG – Regional Planning Commission in Statute; more often called a COG.



- Emergency Communications 9-1-1
- Area Agency on Aging/Aging & Disability Resource Center
- Homeland Security Planning & Training
- Regional Law Enforcement Academy
- Air Quality Planning
- Solid Waste Planning
- Economic Development Analysis & Technical Assistance
- Transportation Planning

Ten – county service area; State of Texas planning region 12





CAPCOG'S AIR QUALITY PROGRAM

Local Government Voluntary Action



Central Texas Clean Air Coalition (CAC) is a national leader in pro-active, voluntary efforts to improve air quality and stay in attainment of the standards

Goal: Maintaining compliance with the NAAQS, improve air quality, provide guidance

- Inspection and maintenance program, vehicle replacement programs, point source controls
- CAPCOG's air quality program conducts air quality monitoring, technical work, planning, and outreach

Pollutants of Concerns are Ozone (O₃) and fine particulate matter (PM_{2.5})



Supporting Members

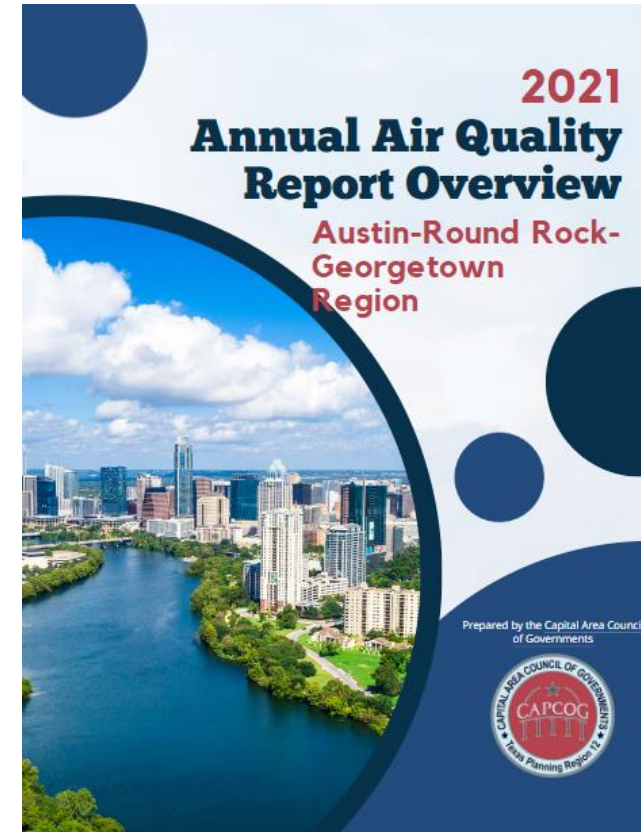


- Austin White Lime
- Capital Area Metropolitan Planning Organization
- Capital Metro
- City of Lago Vista
- City of Sunset Valley
- City of Taylor
- Clean Air Force of Central Texas
- Huston-Tillotson University
- Lower Colorado River Authority
- Lonestar Clean Fuels Alliance
- Public Citizen
- Sierra Club – Lonestar Chapter
- South-central Partnership for Energy Efficiency as a Resource
- St. Edward's University
- Texas Commission on Environmental Quality
- Texas Department of Transportation
- Texas Lehigh Cement Company
- Texas Parks & Wildlife Department
- US Environmental Protection Agency

CAPCOG's AQ program



- **Provide technical assistance to CAC members**
 - Monitor Pollution levels in the region
 - Technical reports (**Annual Report, Annual Data Analysis**)
- **Preform Studies and Planning Activities**
 - Emissions and Control Strategies (In partnership with **EPA** and **TCEQ**)
 - Modeling Analysis (2015-2020 Ozone conceptual Model, PM 2.5 Conceptual Model, **Cost of Non-Attainment**)



2019-
2026

Addendum to
Austin-
Round Rock-
Georgetown
MSA
Regional Air
Quality Plan

Outreach and Education



The **CAC** wants to educate everyone on **the dangers of air pollution!**

Air Central Texas (ACT) is an initiative to reduce exposure to air pollution in Central Texas through voluntary actions. Our partners include local governments, regional and state government agencies, non-profit groups, businesses, and institutions.

Our mission

- Provide the public with information about Central Texas Air Quality
- Support existing air quality programs
- Motivate everyone to make decisions that are Air Aware.

Visit our [website](#) to learn more about air pollution in our region!



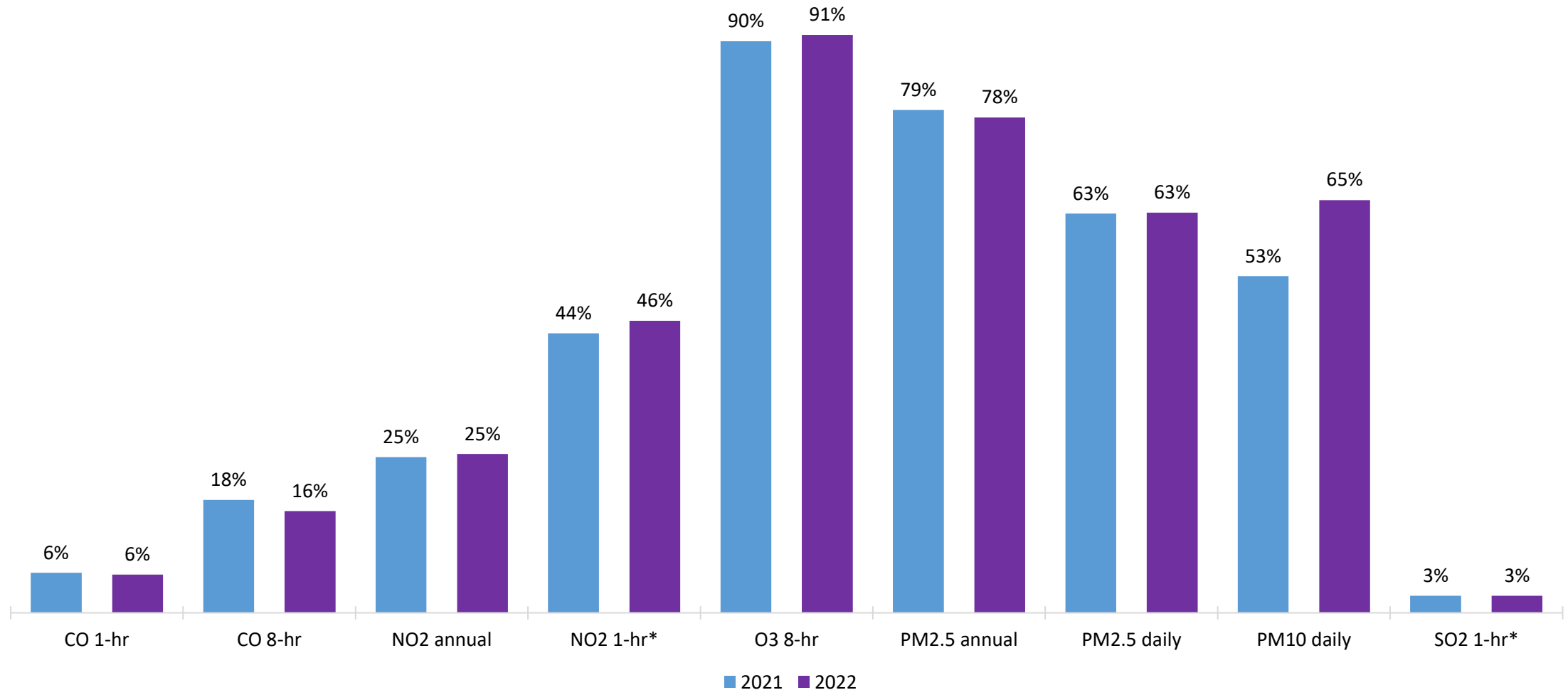
@AirCentralTexas





NAAQS UPDATES

NAAQS Compliance



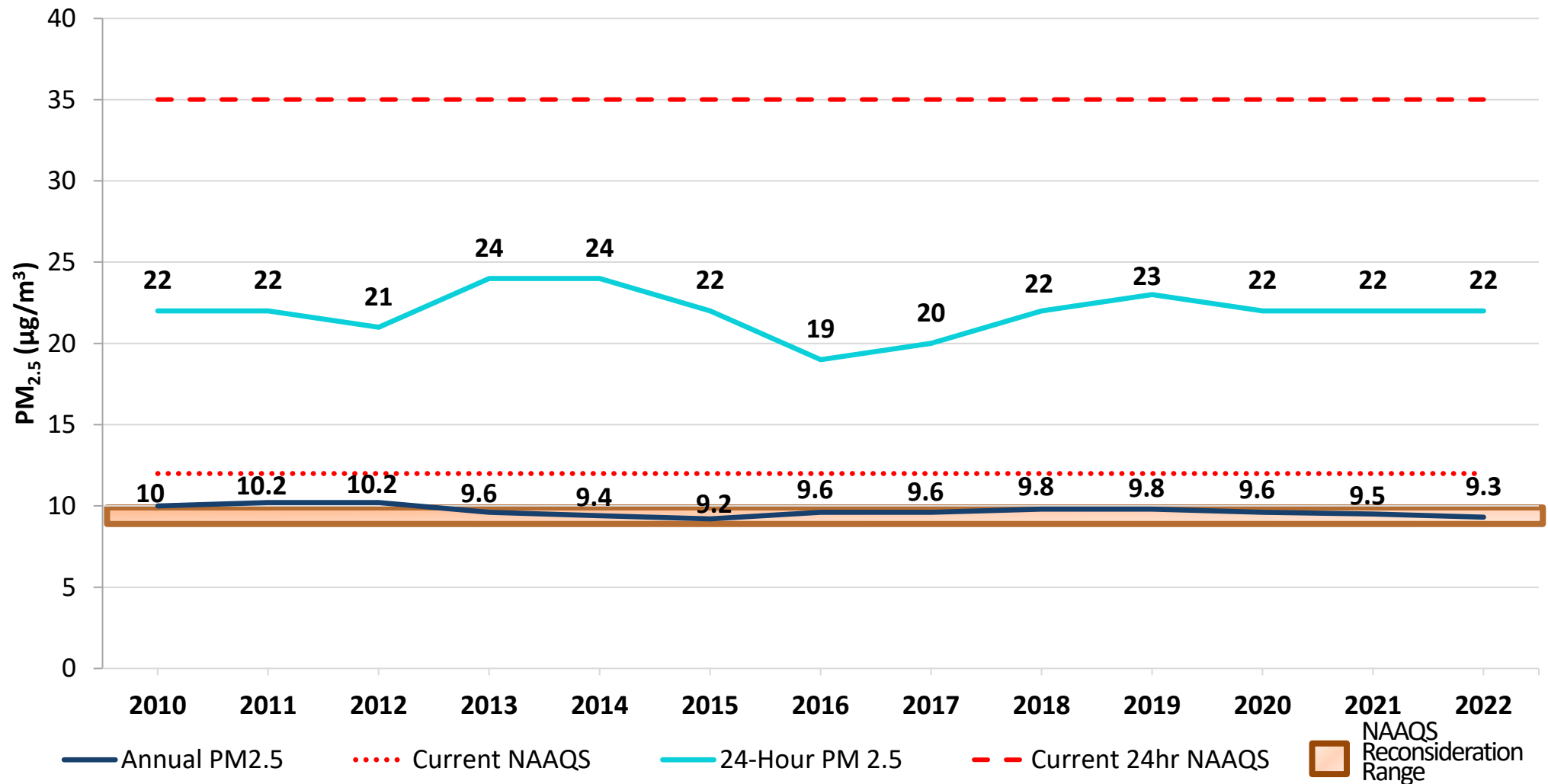
2023 PM NAAQS Proposal – Key Details



- On Jan. 5, 2023, EPA released its proposal for **new Particulate Matter (PM) standards**
- Proposal
 - Annual $\text{PM}_{2.5}$ - a revision as low as 8 $\mu\text{g}/\text{m}^3$ and as high as 11 $\mu\text{g}/\text{m}^3$
 - 24-hr $\text{PM}_{2.5}$ - asked for comment on a revision as low as 25 $\mu\text{g}/\text{m}^3$
- OMB is reviewing the final rule now and the reviews typically take 60 – 90 days.
 - The review started 9/22/2023
 - EPA asked for an expedited review

	Current Standard	Proposed Standard	2022 Austin MSA Levels
Annual $\text{PM}_{2.5}$	12.0 $\mu\text{g}/\text{m}^3$	Within the range of 9.0 to 10.0 $\mu\text{g}/\text{m}^3$	9.3 $\mu\text{g}/\text{m}^3$
24-hr $\text{PM}_{2.5}$	35 $\mu\text{g}/\text{m}^3$	No Change Proposed	22 $\mu\text{g}/\text{m}^3$
24-hr PM_{10}	150 $\mu\text{g}/\text{m}^3$	No Change Proposed	63 $\mu\text{g}/\text{m}^3$

Annual PM_{2.5} Design Value Trend by Year

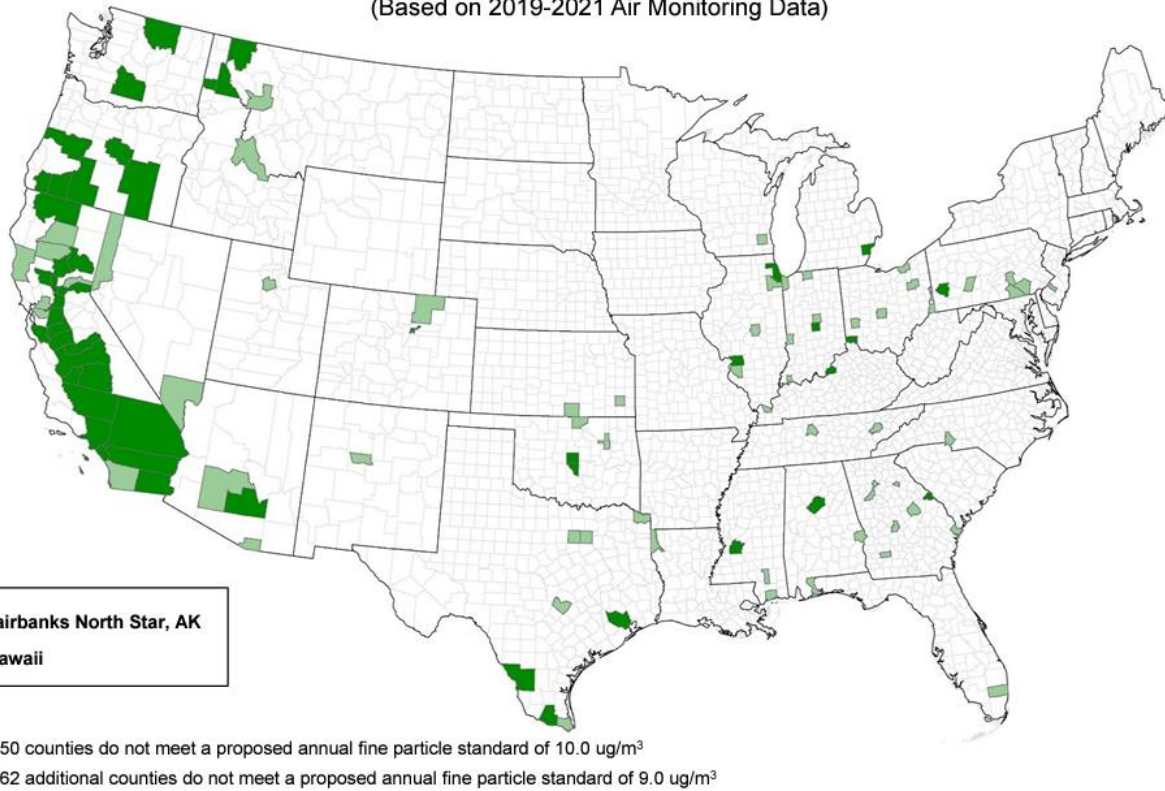


Counties Not Meeting the PM_{2.5} Proposal



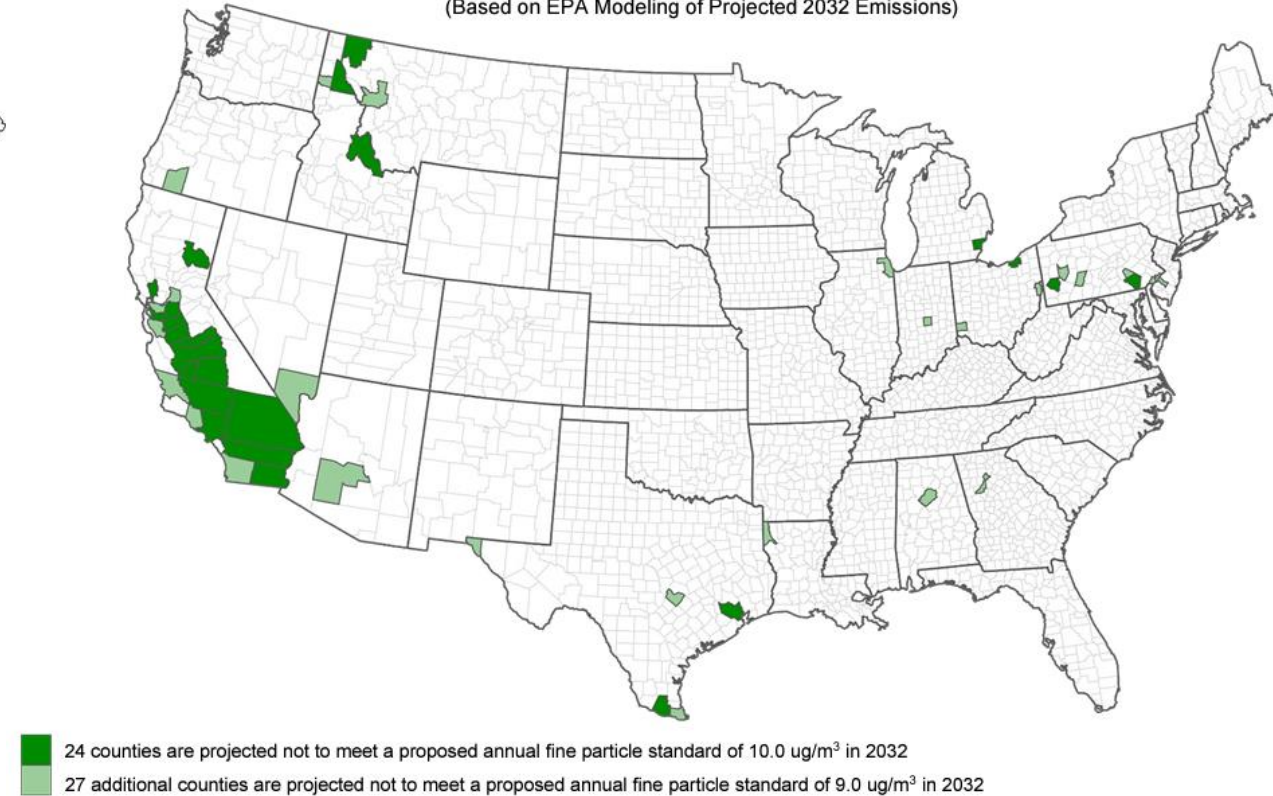
Current Air Monitoring Data Show Some Counties Would Not Meet Proposed Primary Fine Particle Standards

(Based on 2019-2021 Air Monitoring Data)



EPA Projections Show Most Counties Would Meet the Proposed Primary Fine Particle Standards in 2032

(Based on EPA Modeling of Projected 2032 Emissions)



PM_{2.5} NAAQS Reconsideration Timeline

https://casac.epa.gov/ords/sab/f?p=113:19:14538376097957:::19:P19_ID:961



Key Milestones in the PM NAAQS Reconsideration		
Date	EPA	CASAC and Public Review
June 2021	Announcement of Reconsideration	
September 30, 2021	Release of Draft PM ISA Supplement	Comment period closes November 29
October 8, 2021	Release of Draft PA	Comment period closes December 14
October 14, 2021		CASAC Public Meeting: Overview of Reconsideration and Draft PM ISA Supplement and Draft PA
November 17-19 and December 1-2, 2021		CASAC Meeting to Review the Draft PM ISA Supplement and Draft PA
Winter 2022		CASAC Follow-up Meeting Final CASAC Letters
Spring 2022	Final PM ISA Supplement	
	Final PA	
Early 2023	Proposed decision	Public comment period and public hearings
2023/24	Final decision	



PM Nonattainment Regulations



- Once a final decision on the PM standard is made, EPA will have no more than **2 years to make designation determination**
- States must develop and **submit attainment plans no later than 18 months** after EPA finalizes nonattainment designations.
 - Plans must meet attainment as expeditiously as practicable but no later than the end of the **6th calendar year after nonattainment designations**.
 - Conformity reviews are required.
 - The Clean Air Act specifies that cost, technical feasibility and the time needed to meet the standards are all factors that should be taken into account at this phase

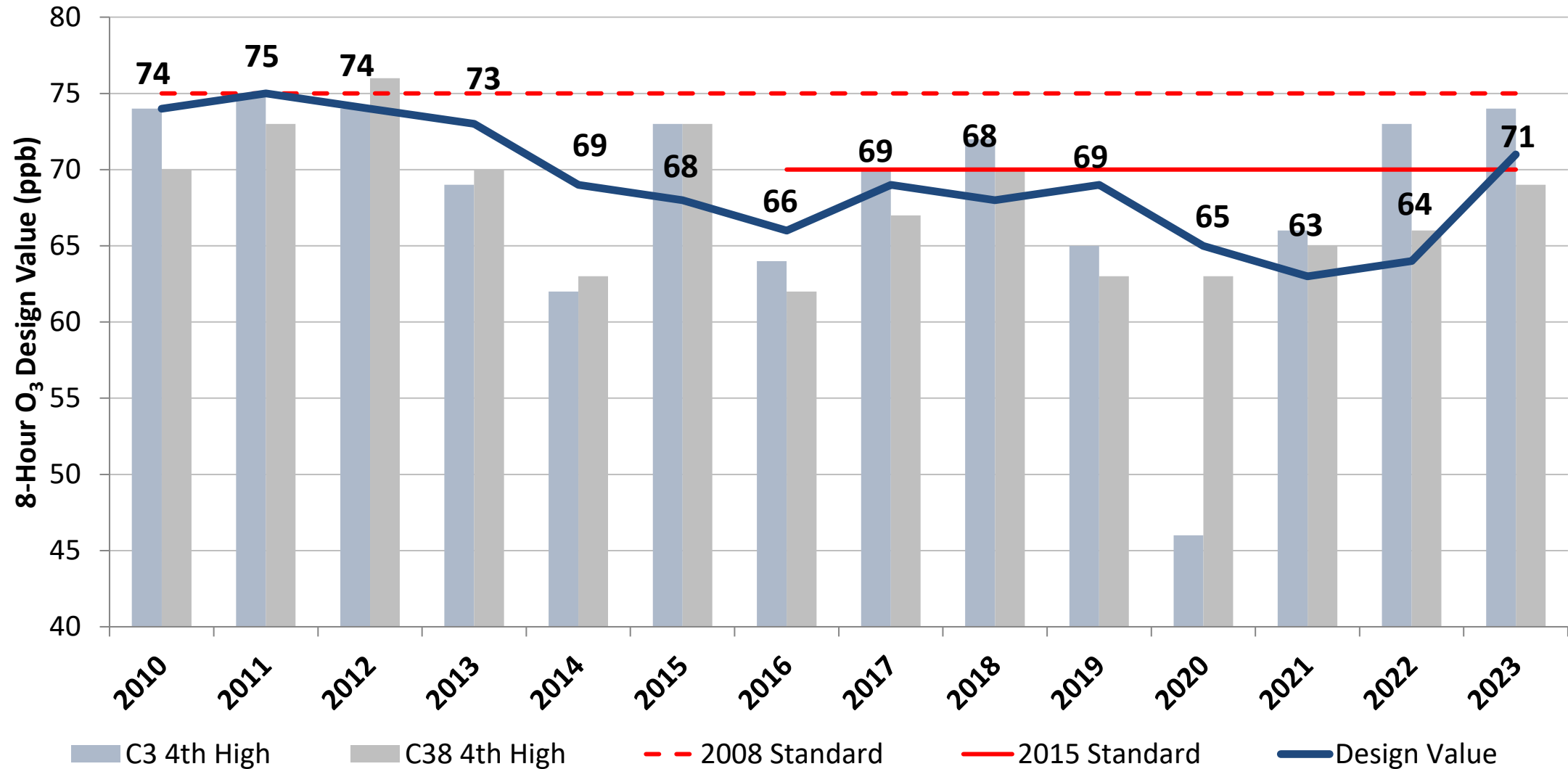
O₃ NAAQS Reconsideration



- On Nov. 1st, 2021, EPA announced its decision to reconsider the previous administration's decision to retain 2015 O₃ NAAQS
 - On April 29, 2022, EPA released their [draft policy assessment](#) for reconsideration of the 2020 O₃ NAAQS. In this document they concluded that the **2015 primary standard was adequate to protect public health**
 - In November 2022, the Clean Air Scientific Advisory Committee (CASAC) reviewing the O₃ NAAQS submitted its recommendation on the 2020 O₃ NAAQS – stating that it “**not recommending that the 2020 ISA, which is a final document, be reopened and revised.**”
- On Aug. 21st, 2023, EPA announced its decision to **cancel the review** of the previous administration's decision to retain 2015 O₃ NAAQS
 - This likely means that the 2015 O₃ NAAQS will be in place until 2025 or later when the EPA is scheduled to complete its five-year review of the NAAQS.



8-hr Ozone Design Value and 4th High Trend



2023 Ozone Design Values (DV)



	4 th - highest value					
Monitor	2021	2022	2023*		DV (3-year Average)*	2024 Exceedance Level
CAMS 3 (Austin N Hills)	66	73	74		71	66
CAMS 38 (Austin Audubon)	65	66	70		67	77
CAMS 614 (Dripping Springs)	69	81	78		76	54
CAMS 690 (Lake Georgetown)	65	74	74		71	65
CAMS 1604 (Lockhart)	63	69	70		67	74
CAMS 1605 (St. Edward's)	57	69	67		64	77
CAMS 1612 (Bastrop)	64	67	69		66	77
CAMS 1613 (Elgin)	63	69	68		66	76
CAMS 1619 (East Austin)	62	74	75		70	64
CAMS 1620 (Round Rock)	59	77	71		69	65
CAMS 1629 (Taylor Murphy Park)	n/a	n/a	70		n/a	n/a
CAMS 1630 (Lake Kyle Park)	n/a	n/a	71		n/a	n/a
CAMS 1675 (San Marcos)	63	78	69		70	66

Noncompliance vs Nonattainment

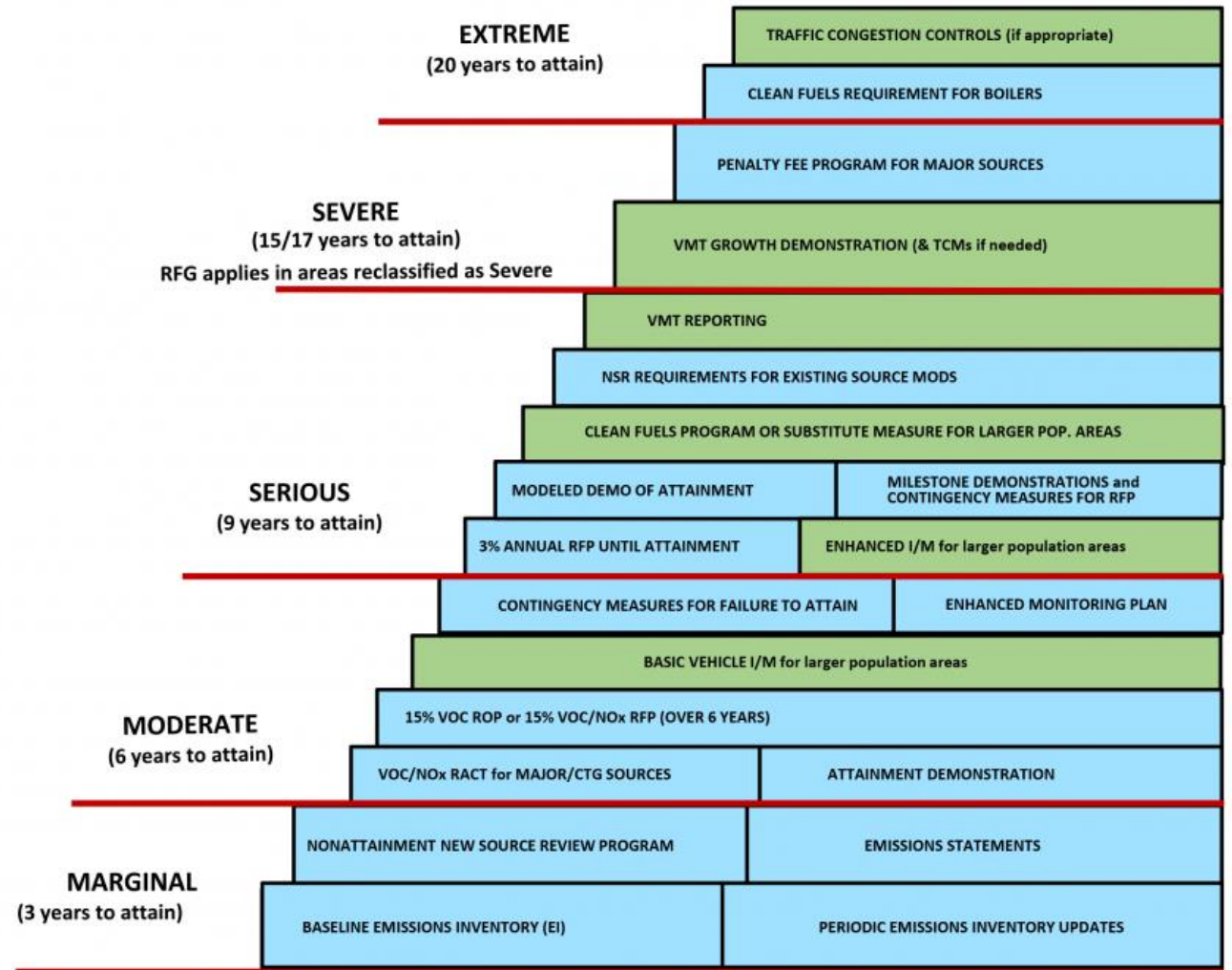


- An area can be out of compliance with the NAAQS but not designated nonattainment
 - Nonattainment is a formal designation made by the EPA
 - The EPA will select what counties met the NAAQS
 - Typically, if applicable, an entire MSA will be selected as the nonattainment area however that is not guaranteed.
 - Ex. In San Antonio, only Bexar County is designated nonattainment
- It is within EPA's powers to make designations whenever it chooses, however, EPA is required to make designations when a NAAQS is revised
 - Ex. In 2020 the EPA retain all NAAQS and did not apply any new designations even though there were areas out of compliance.
 - The previous administration wanted to raise some of the standards but doing so would require EPA to make new designations while retaining the standards does not.

Ozone Nonattainment Regulations



- CAA requires nonattainment areas to implement emissions reductions to meet the NAAQS as quick as possible.
- CAPCOG's 2016 Cost of Nonattainment Study which found that nonattainment would cost the region \$24.4 - \$39.0 billion over the next 30 years
 - This does not include new projects that we unknowns in 2016
 - Tesla – Giga Texas, Samsung Taylor Fab

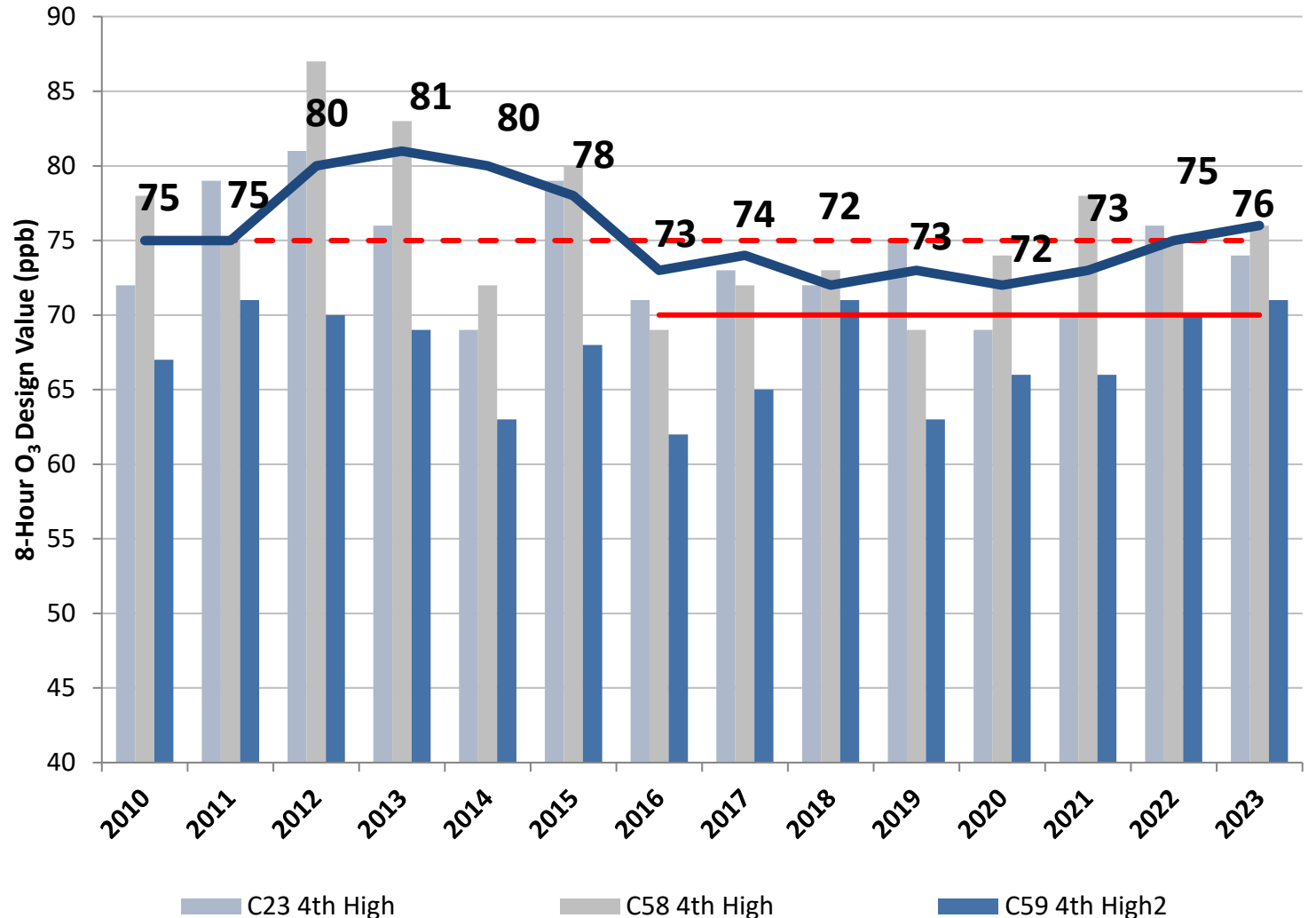


NOTE: Transportation and General Conformity apply in all ozone nonattainment areas.

Recent Example – San Antonio



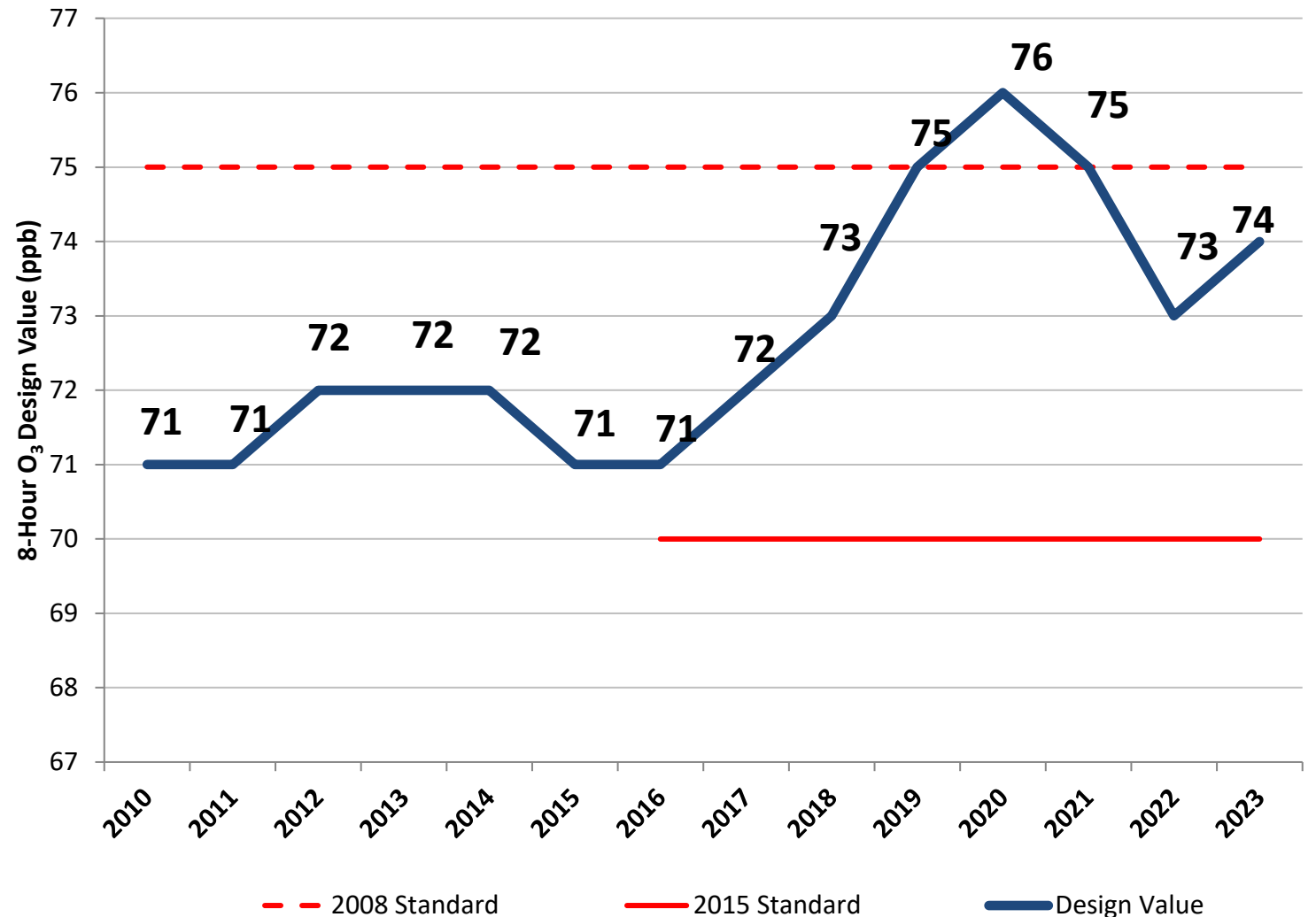
- San Antonio has exceeded the standard since 2012.
- San Antonio was not designated as a nonattainment area until July 2018.
- This was due to:
 - Texas with other states sued the EPA over the 2015 O₃ standard; and
 - EPA chose not to designate the region until it was required to make designations in 2015 when the standard was lowered
 - If the standard is retained like it was in 2020, the EPA is not required to make designations



Recent Example – El Paso



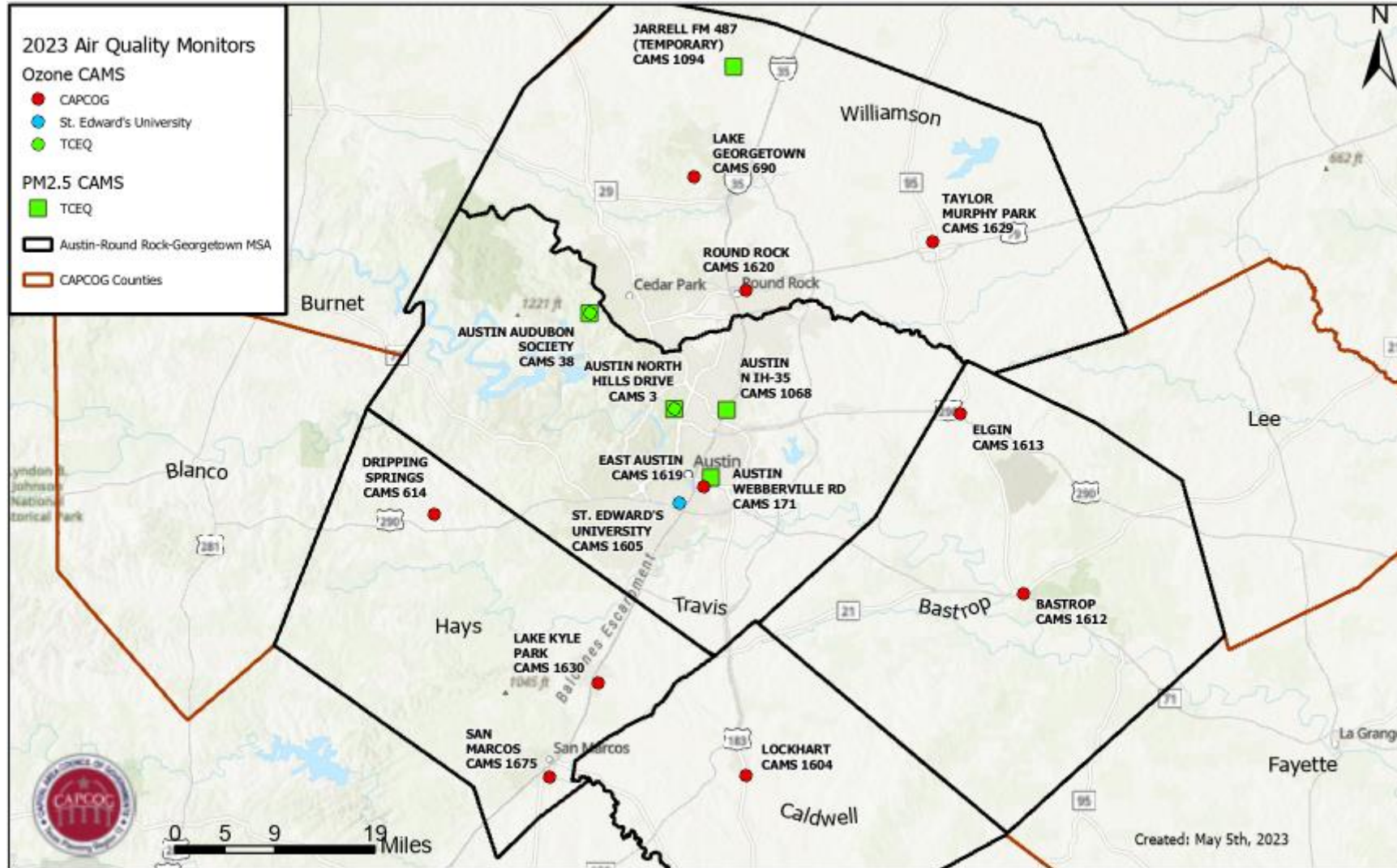
- El Paso has exceeded the standard since 2015 and the area continues to be designated attainment/unclassifiable.
- EPA designated El Paso attainment/unclassifiable in 2018
 - Sunland Park, New Mexico and other groups sued EPA that same year asking for a nonattainment designation
- In 2021, EPA announce it would reverse this decision and classify the area nonattainment
- In summer 2023, this decision was reversed by the Court of Appeals



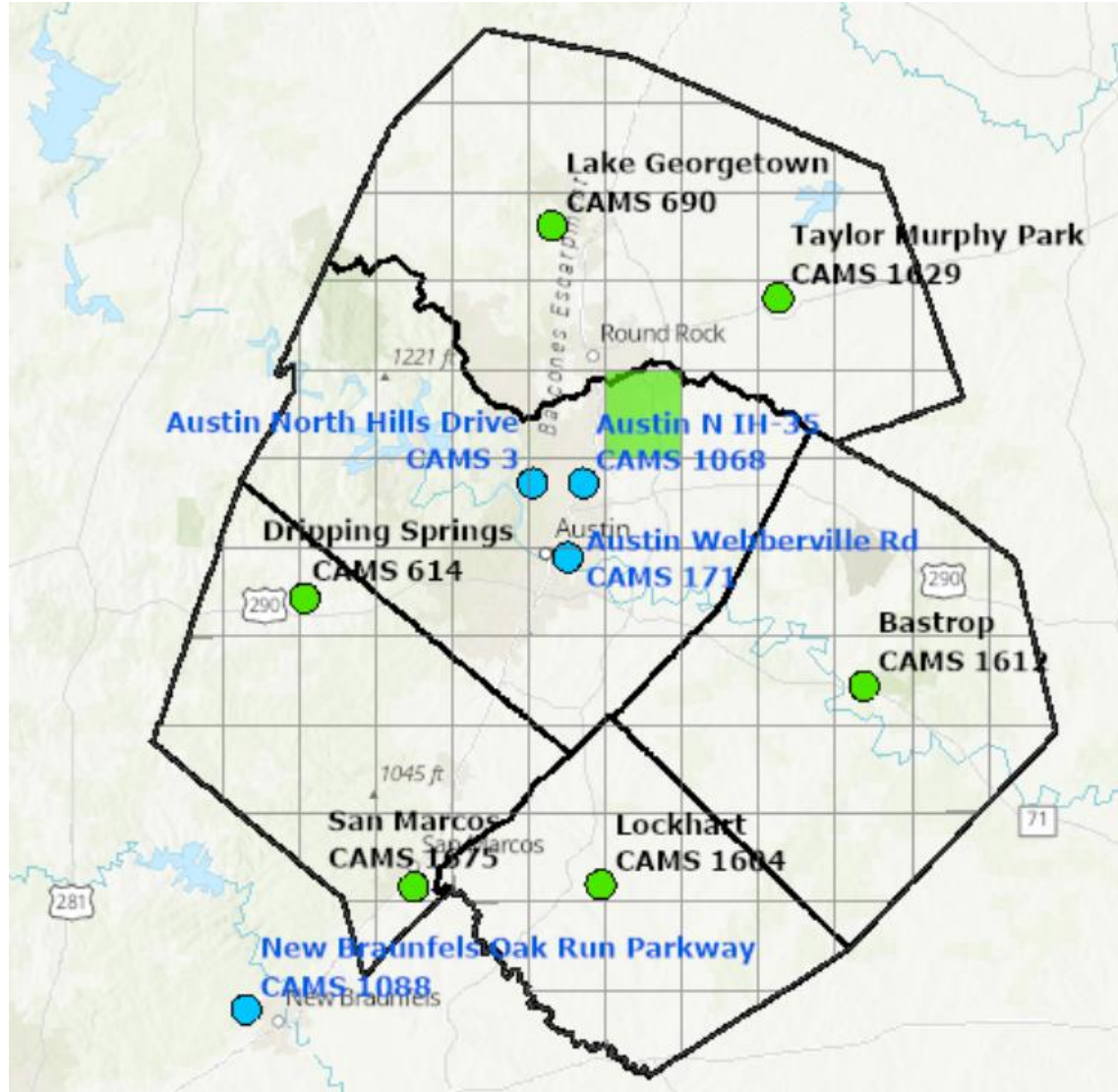


MONITORING UPDATES

O₃ and PM_{2.5} 2023 Monitoring Locations



Upcoming PM_{2.5} Monitoring Locations

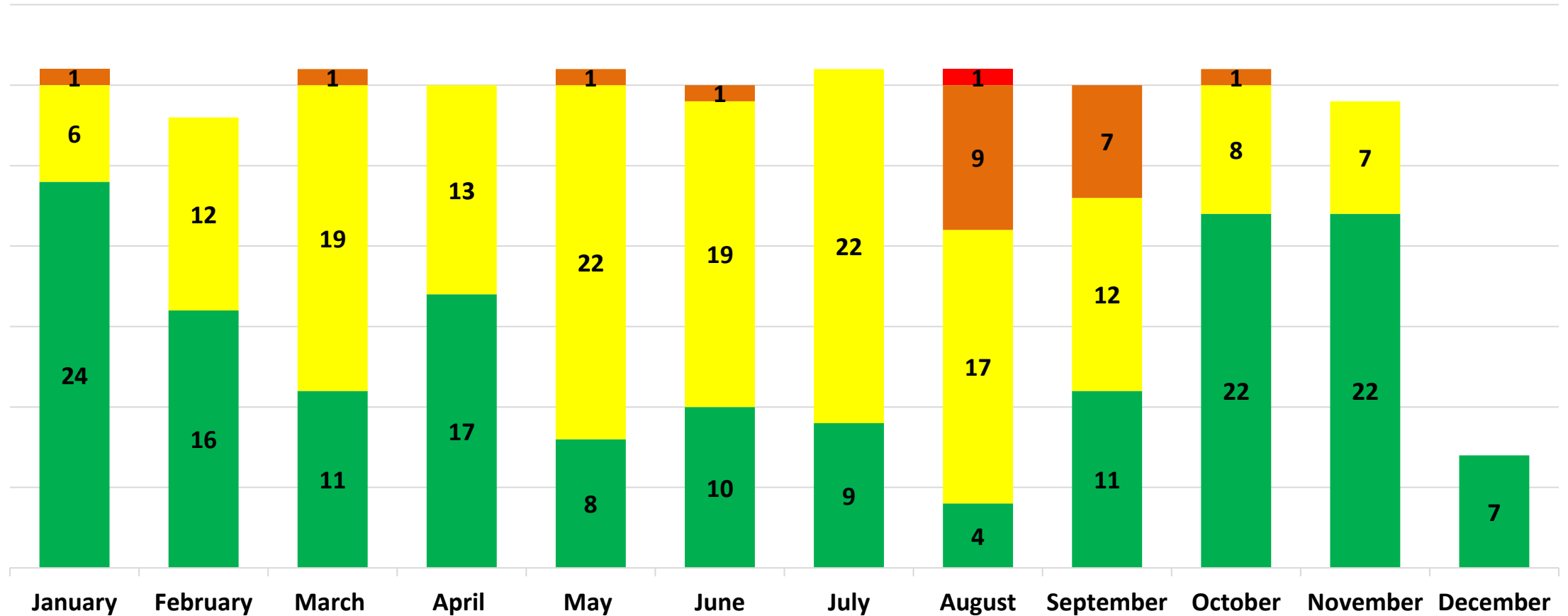


- New PM Monitoring Locations -
- New PM Monitoring Area - Hea
- Current PM Monitor Locations

2023 AQI Days by Month



■ Good ■ Moderate ■ Unhealthy for Sensitive Groups ■ Unhealthy

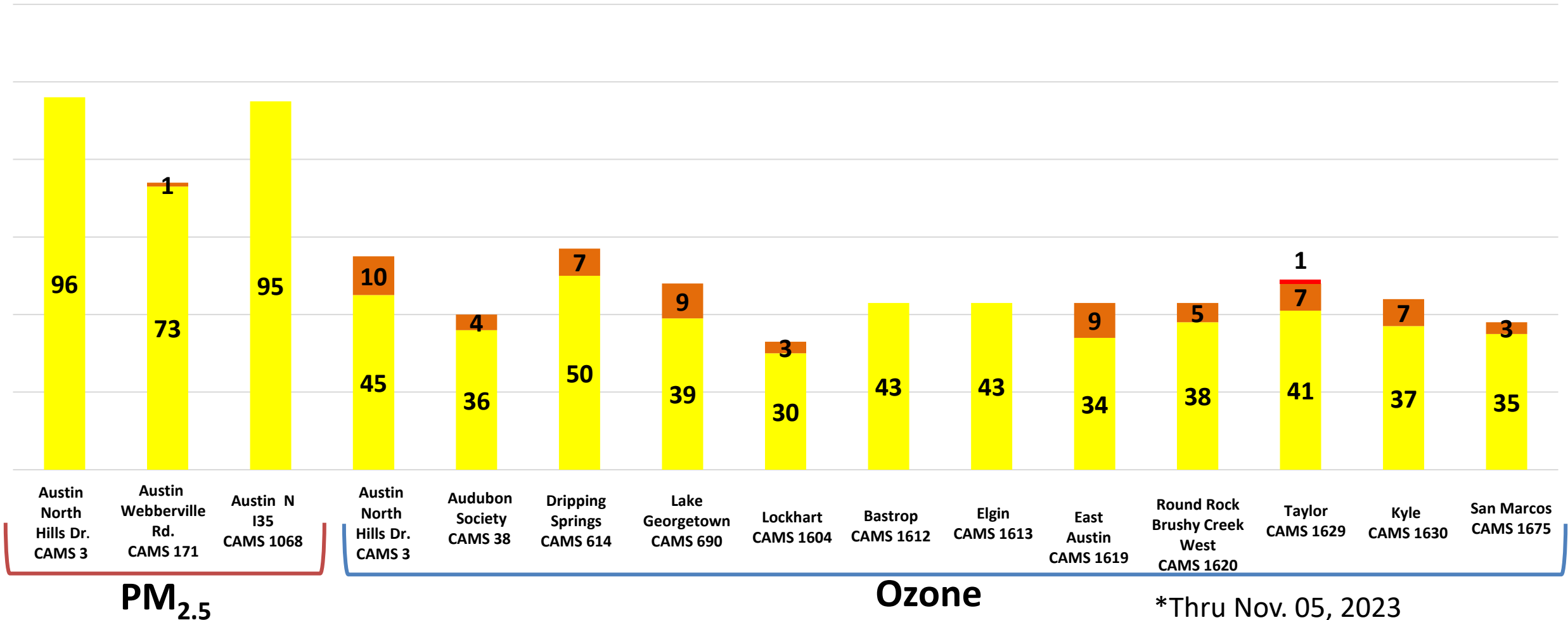


*Thru Dec. 7, 2023

2023 Moderate or Worse AQI Days by Monitor*



■ Moderate ■ Unhealthy for Sensitive Groups ■ Unhealthy



PM_{2.5}
12/13/2023

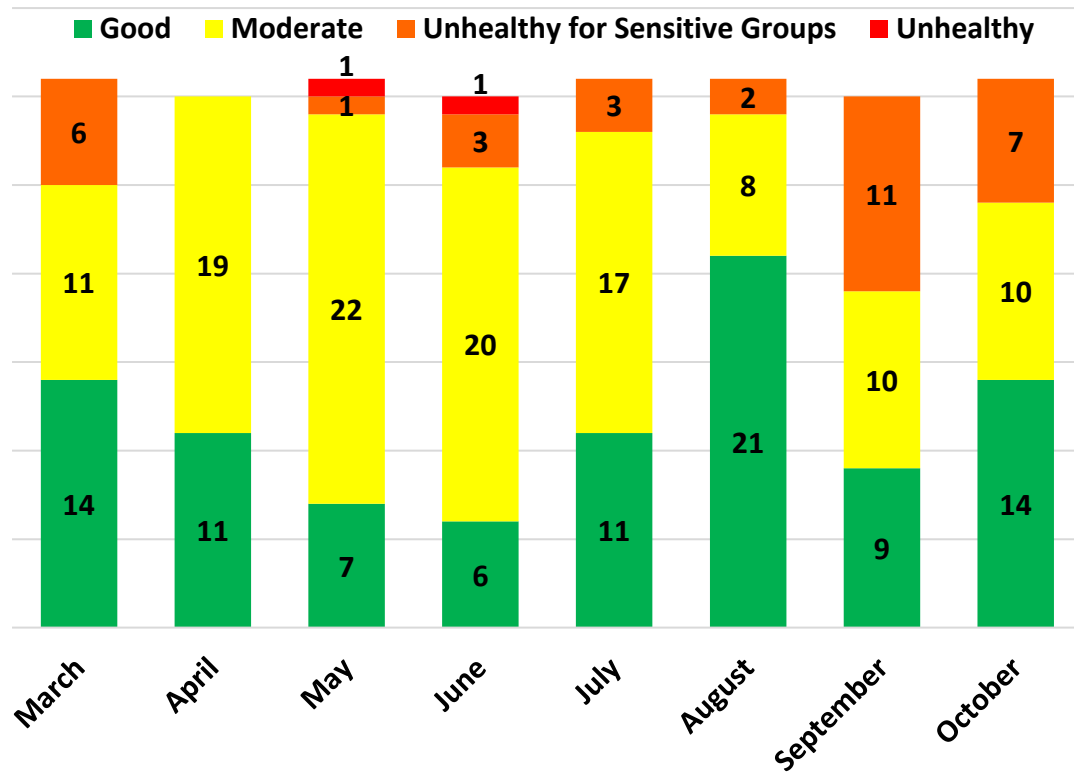
Ozone

*Thru Nov. 05, 2023

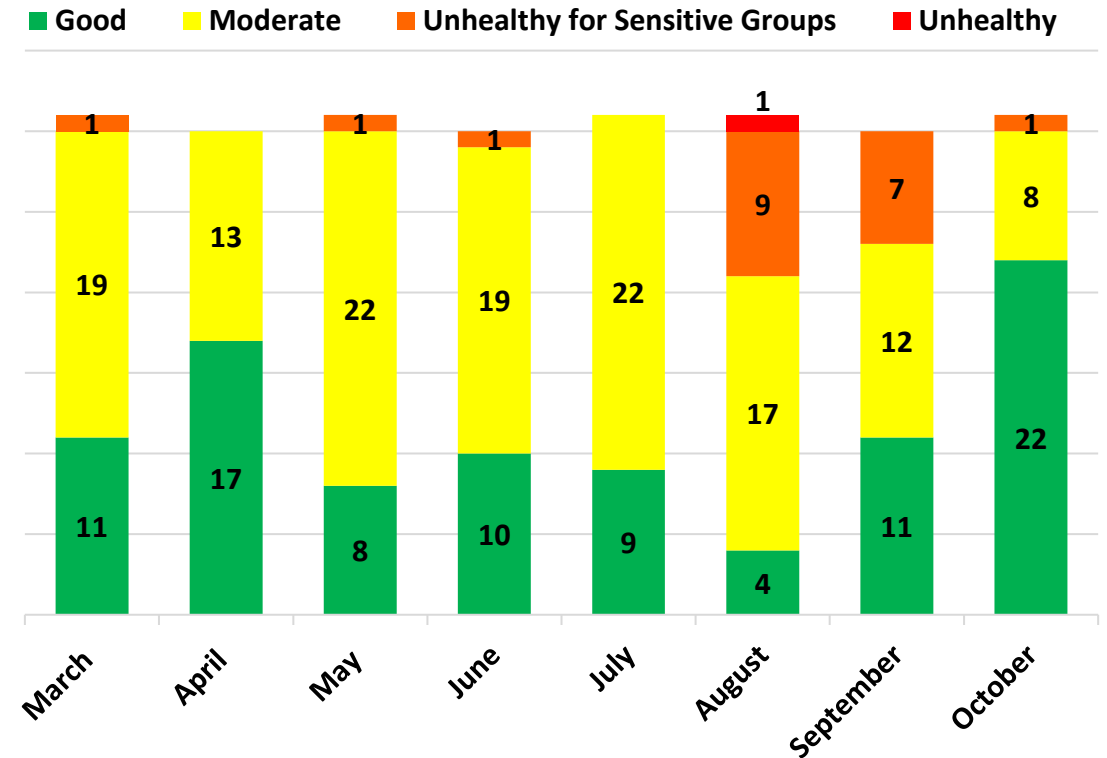
2022 vs 2023 Ozone Season - AQI



2022 Ozone Season, AQI



2023 Ozone Season, AQI



2022 vs 2023 Ozone Season - Regulatory



4th High O₃ Trend





REGIONAL PLANNING ACTIVITIES

2022 CAC Member Measures



Measures Implemented by CAC Members

Total 25 Organizations Submitted Reports

- Bastrop County
- CAPCOG
- City of Austin
- City of Bastrop
- City of Bee Cave
- City of Buda
- City of Cedar Park
- City of Elgin
- City of Kyle
- City of Lakeway
- City of Pflugerville
- City of Round Rock
- City of San Marcos
- City of Taylor
- Clean Air Force
- Hays County
- Movability
- Lone Star Clean Fuels Alliance
- Lower Colorado River Authority
- St. Edwards University
- TCEQ
- TxDOT
- Texas Lehigh Cement Co.
- Travis County
- Williamson County

O₃ Emission Reduction Measures



Tier 1 (24)

- Bastrop County
- City of Austin
- City of Bastrop
- City of Bee Cave
- City of Buda
- City of Cedar Park
- City of Elgin
- City of Kyle
- City of Lakeway
- City of Pflugerville
- City of Round Rock
- City of San Marcos
- City of Taylor
- CLEAN Air Force
- CAPCOG
- Hays County
- LCRA
- Lone Star Clean Fuels Alliance
- Movability
- St. Edwards University
- TCEQ
- TxDOT
- Travis County
- Williamson County

Tier 2 (21)

- Bastrop County
- City of Austin
- City of Bastrop
- City of Bee Cave
- City of Buda
- City of Cedar Park
- City of Elgin
- City of Lakeway
- City of Pflugerville
- City of Round Rock
- City of San Marcos
- City of Taylor
- CLEAN Air Force
- CAPCOG
- Hays County
- Lone Star Clean Fuels Alliance
- Movability
- St. Edwards University
- Texas Lehigh Cement Co.
- Travis County
- Williamson County

PM_{2.5} Emission Reductions



Implement within Own Organization's Operations (19)

- Bastrop County
- CAPCOG
- City of Austin
- City of Bastrop
- City of Bee Cave
- City of Buda
- City of Cedar Park
- City of Elgin
- City of Kyle
- City of Pflugerville
- City of San Marcos
- City of Taylor
- CLEAN Air Force
- LCRA
- Lone Star Clean Fuels Alliance
- Movability
- St. Edwards University
- Travis County
- Williamson County

Encourage or Require 3rd Party Organization's to Implement (14)

- Bastrop County
- City of Austin
- City of Bee Cave
- City of Buda
- City of Cedar Park
- City of Elgin
- City of Kyle
- City of San Marcos
- City of Taylor
- CLEAN Air Force
- Movability
- St. Edwards University
- Travis County
- Williamson County

Educate and Encourage the Public at Large to Implement (13)

- Bastrop County
- City of Austin
- City of Bee Cave
- City of San Marcos
- City of Taylor
- CAPCOG
- CLEAN Air Force
- Lone Star Clean Fuels Alliance
- Movability
- St. Edwards University
- TCEQ
- Travis County
- Williamson County

2022 Complaints Tracking



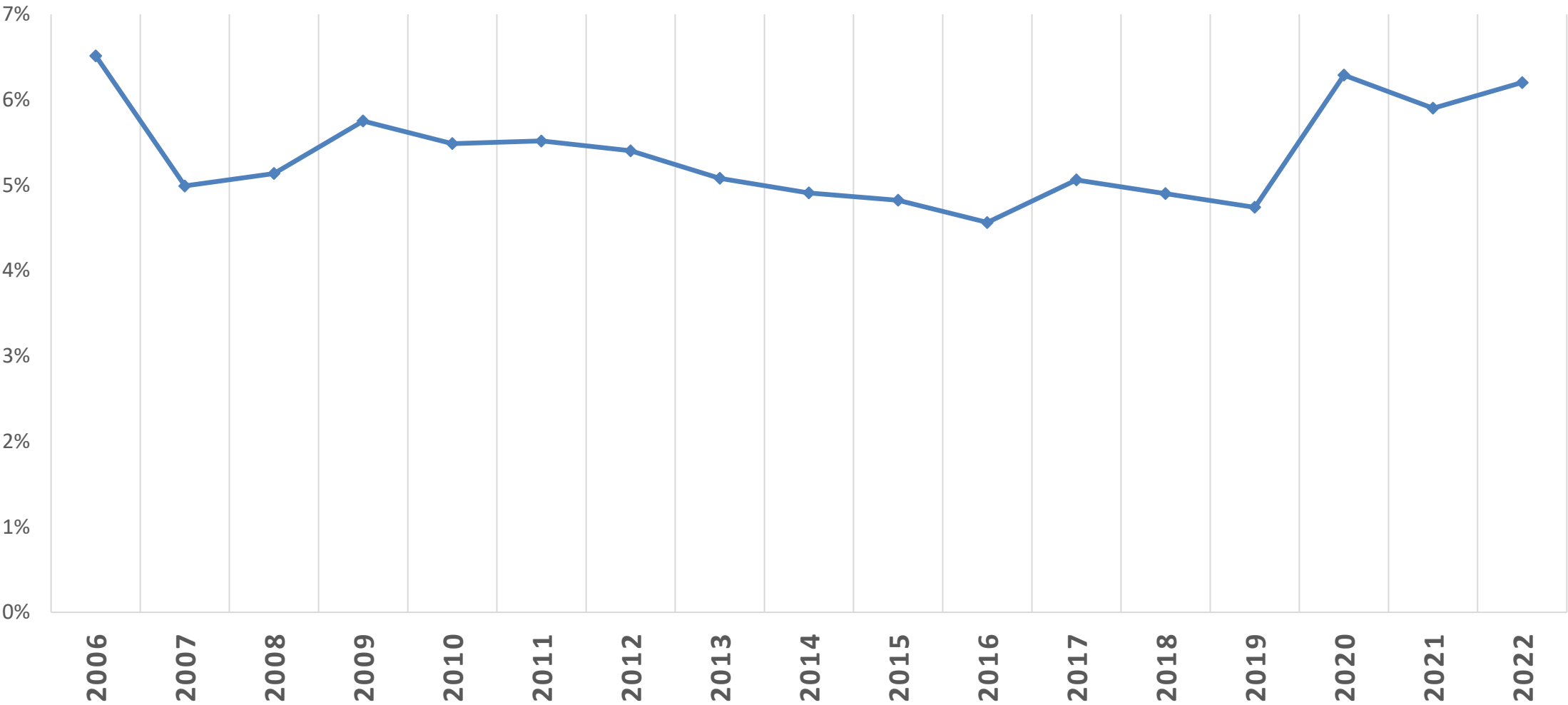
189 Total Complaints

County	Bastrop	Caldwell	Hays	Travis	Williamson	Total
Burning Complaints	4	2	2	4	1	13
Odor Complaints	3	3	1	78	4	89
Dust Complaints	4	0	6	12	34	56
Smoke Complaints	1	0	0	11	0	12
Other Complaints	3	6	3	3	4	19
Complaints/ 10,000 Residents	1.41	2.30	0.45	0.81	0.64	0.78

^[1] Other Complaints include those categorized by TCEQ as Wastewater, Municipal (non-industrial), Construction, and undefined.

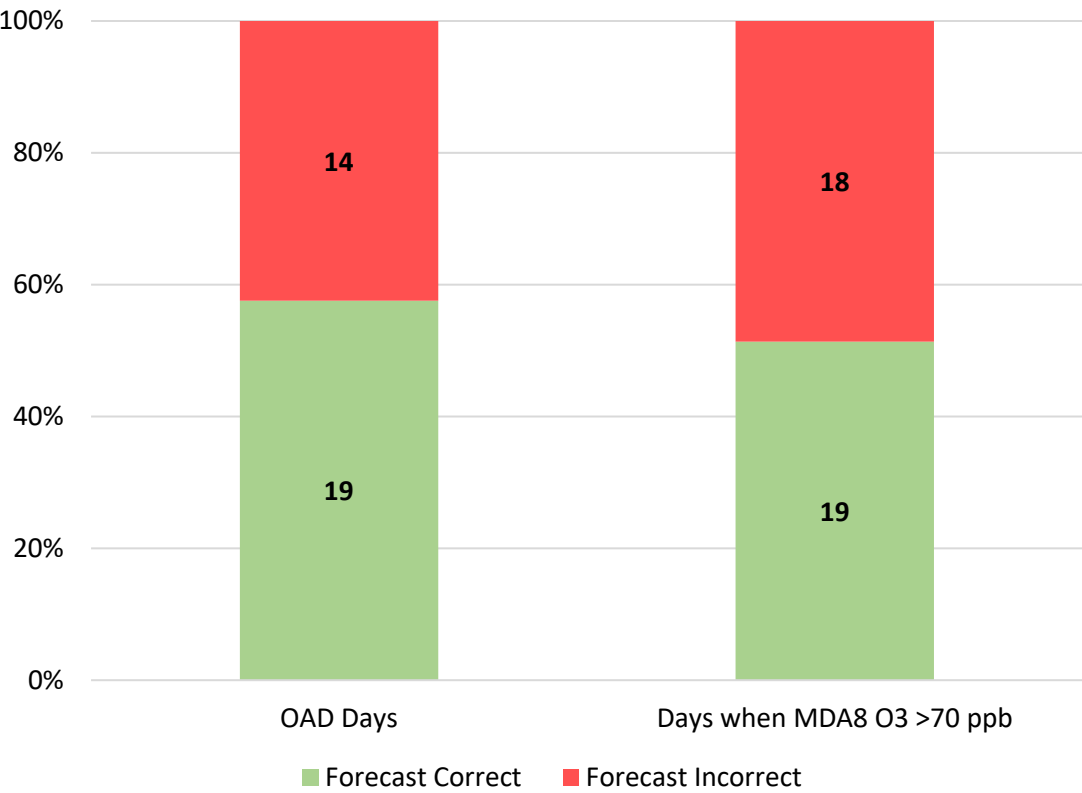


Emissions Inspection Failure Rate Trend 2006-2022

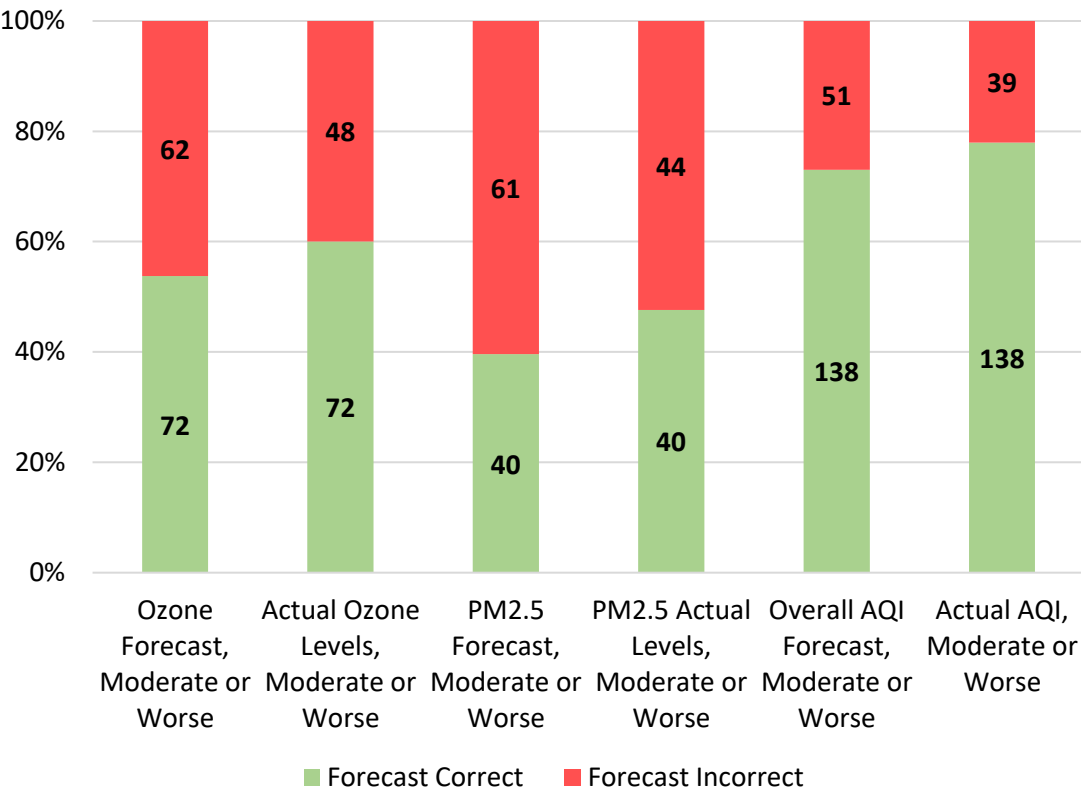


Air Quality Forecasting Accuracy and Success

OAD Forecast Accuracy and Success, 2020-2022



Accuracy and Success of AQI Forecasts for 2022



Next Steps



- In 2024, CAPCOG will complete a study of potential emission reduction measures that the region can implement.
- CAPCOG will discuss with the CAC potential updates to CAPCOG's 2019-2016 Scope of Work.
- Will ask CAC members to review voluntary actions they can implement.
- The CAC-Outreach & Education committee will help us message AQ to the public.

Thank You



Capital Area Council of Governments

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