



Air Quality Updates

Kimberly Butler

Planning and Analysis Division Manager

October 13, 2022

Agenda

- Rule and State Implementation Plan (SIP) Revision Update
- Periodic Emission Inventory Summary
- National Ambient Air Quality Standards (NAAQS) Update
- Emission Reduction Credits (ERCs) Update



Rule and State Implementation Plan Revision Update



Recent EPA Actions

July 15, 2022 – EPA published a final action in the Federal Register regarding the SIP Recodification Project. The following rules have been **rescinded**:

- **Rule 27** (Performance Tests)
- **Rule 32** (Odors and Gaseous Emissions)
 - Sections A, B, C, D, E, and F

Recent EPA Actions

July 15, 2022 –The following rules have been **rescinded** (continued):

- **Rule 34**
 - Section A (Organic Solvents – VOCs)
 - Section D.1 (Dry Cleaning)
 - Sections E.1 and E.3 (Spray Paint and Other Surface Coating Operations)
 - Section L (Cutback Asphalt)
- **Rule 81** (Operation)
- **Rule 340** (Cutback and Emulsified Asphalt)

Recent EPA Actions

August 4, 2022 – EPA published four actions in the Federal Register

– Proposed approval of the following rules into the State Implementation Plan:

- **Rule 323** (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources)
- **Rule 324** (Stationary Reciprocating Internal Combustion Engines (RICE))
- **Rule 336** (Surface Coating Operations and Industrial Adhesive Application Processes)

Recent EPA Actions

August 4, 2022 – EPA published four actions in the Federal Register (continued)

- Proposed approval of the **Rule 348** (Aerospace Manufacturing And Rework Operations) Reasonably Available Control Technology (RACT) Certification
- Proposed approval of negative declarations for three coating categories listed in Control Techniques Guidelines (CTGs) for Miscellaneous Metal and Plastic Parts

Recent EPA Actions

August 4, 2022 – EPA published four actions in the Federal Register (continued)

- Made final interim determinations deferring the imposition of sanctions that were triggered by previous EPA disapprovals.
 - Based on the proposed approvals of Rules 323, 324, 336, the Rule 348 RACT Certification and the negative declarations
 - If the EPA finalizes the proposed approvals of MCAQD's submissions, relief from these sanctions will become permanent.

MCAQD Recent Rule Actions

- **Rule 270** (Performance Tests) – Adopted on August 17, 2022
- **Rule 321** (Municipal Solid Waste Landfills) – Adopted on September 28, 2022
 - Also approved the submission of the Clean Air Act (CAA) 111(d) plan to enforce federal emission guidelines for TV landfills locally.

Recent Rule Workshops

Rule 311 (Particulate Matter from Process Industries)

- Proposing to rescind as it is no longer used

Appendix B (Standard Permit Application Form and Filing Instructions)

- Proposing to remove application and instructions from the appendix so they can be more easily revised and updated in the future

Recent Rule Workshops

Rule 245 (Continuous Source Emission Monitoring)

- Last updated in 1993
- Proposing to:
 - Remove duplication with Rule 322 (Power Plants)
 - Update CAA required regulations
 - Maricopa County does not have any of the other facilities required to have a CEMS rule by the CAA
 - Substantive Policy Statement regarding minimum quality assurance requirements for sources required to install a CEMS for which there are no QA requirements
 - Will replace Rule 41 (Monitoring) in the SIP.

Upcoming Rule Workshops

Rule 205 (Emission Offsets Generated by Voluntary Mobile Emission Reduction Credits)

- Working with EPA on the draft language
- Notice of the workshop will be 2 weeks prior with an attached copy of the draft
- Workshop will likely to be in the first week of November

SIP Submittal RACT Rules

Currently discussing with the EPA the RACT requirements for the 2015 Ozone Moderate Plan. Likely to include:

- **Rule 331** (Solvent Cleaning)
 - Update to meet RACT as listed in the CTG
- **Rule 338** (Semiconductor Manufacturing)
 - Update to include RACT due to TV semiconductor
- A rule to regulate electric arc furnaces and steel manufacturing due to a TV facility

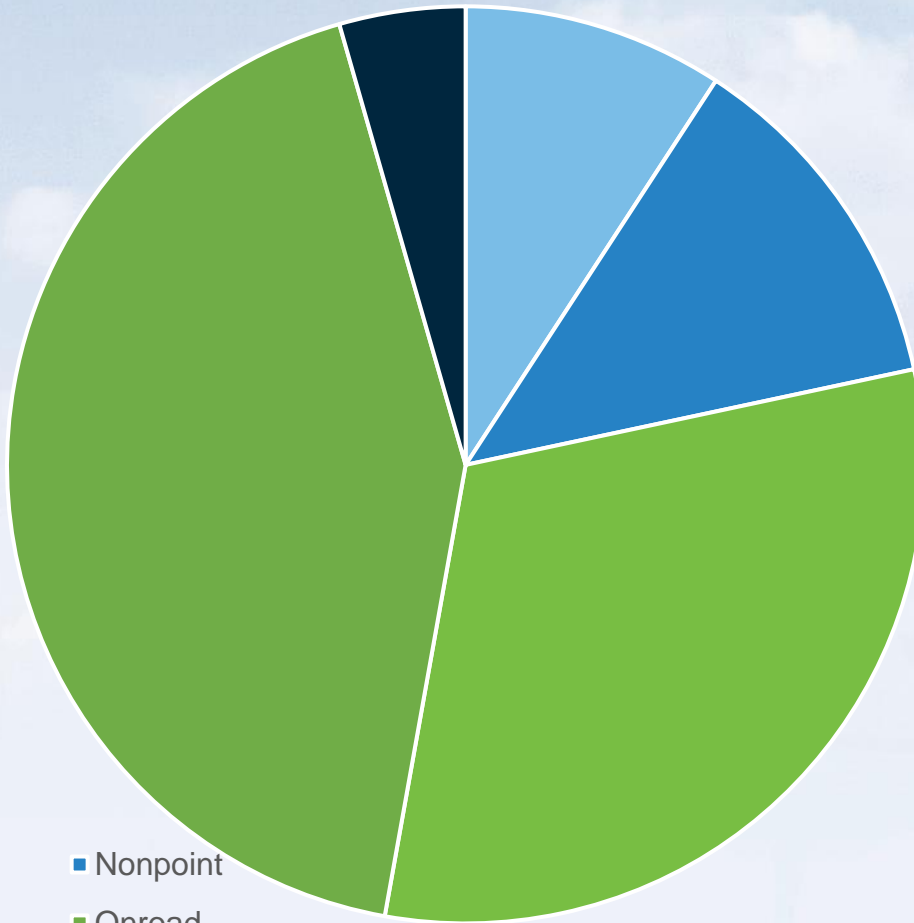
RACT SIP Status

- October 7, 2022 the EPA published the final rule determining Maricopa County did not meet the 2015 Ozone NAAQS.
 - The deadline for submission of the 2015 Ozone Moderate Plan is January 1, 2023.
- MCAQD is evaluating the current regulations on Title V facilities and if all current rules meet the Control Technologies Guidelines (CTG).

Periodic Emission Inventory Summary



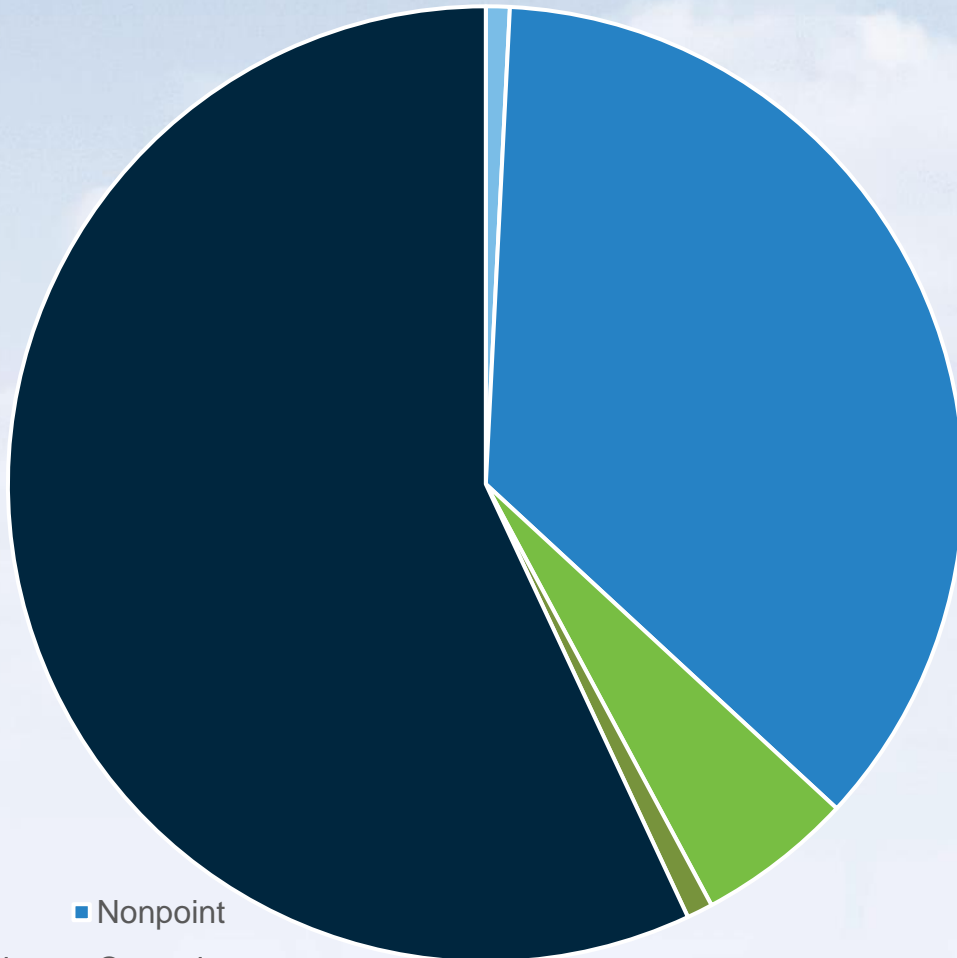
2020 Nitrogen Oxides (NOX) Emissions (Tons)



- Point
- Nonpoint
- Nonroad
- Onroad
- Biogenic

Category	Tons of Emissions	Percent of Emissions
Point	4,001	9%
Nonpoint	5,426	13%
Nonroad	13,570	31%
Onroad	18,604	43%
Biogenic	1,934	4%
Total	43,535	

2020 Volatile Organic Compound (VOC) Emissions (Tons)



Category	Tons of Emissions	Percent of Emissions
Point	1,118	1%
Nonpoint	50,170	36%
Nonroad	7,364	5%
Onroad	1,225	1%
Biogenic	79,213	57%
Total	139,090	

- Point
- Nonpoint
- Nonroad
- Onroad
- Biogenic

National Ambient Air Quality Standards (NAAQS) Update



Exceedances to Date

(Maricopa County Sites Only - as of 9/22/22)

Pollutant	2022	2021	2020	2019	2018	2017
Ozone* (2015 Standard)	48	50	34	33	47	39
Ozone* (2008 Standard)	25	28	16	7	20	17
PM ₁₀ *	6	8	4	4	14	8
PM _{2.5} *	1	3	12	0	8	6

* Does Not Exclude Exceptional Events

2022 Ozone Status-70 ppb Standard

(includes all monitoring sites within the ozone non-attainment area)

54 Exceedances, 21 Exceptional Events (as of 9/22/22):

Date	# of Sites Exceeding	Date	# of Sites Exceeding	Date	# of Sites Exceeding	Date	# of Sites Exceeding	Date	# of Sites Exceeding	Date	# of Sites Exceeding
4/18/22 [#]	1	5/15/22	1	6/27/22 [*]	4	7/17/22 [*]	15	8/10/22	6	8/24/22	1
4/25/22 [*]	3	5/25/22	1	6/28/22 [*]	2	7/18/22 [*]	7	8/11/22	5	8/25/22	5
4/26/22 [*]	5	5/26/22	1	6/29/22 [*]	1	7/20/22 [#]	1	8/13/22	6	8/26/22	6
4/29/22	9	6/1/22	10	6/30/22	2	7/22/22 [*]	4	8/15/22	11	8/30/22	2
4/30/22	2	6/2/22	9	7/10/22	1	8/1/22 [#]	2	8/16/22	16	8/31/22 [*]	7
5/5/22	1	6/15/22 [*]	16	7/13/22 [*]	4	8/4/22	8	8/17/22 [#]	1	9/1/22 [*]	9
5/6/22	12	6/16/22 [*]	14	7/14/22 [*]	5	8/5/22	6	8/18/22 [*]	4	9/2/22 [*]	5
5/12/22	14	6/21/22 [*]	1	7/15/22 [*]	19	8/6/22	1	8/22/22	10	9/7/22 [#]	1
5/13/22	10	6/22/22 [*]	4	7/16/22 [*]	6	8/8/22	8	8/23/22	11	9/8/22 [*]	2

*A wildfire exceptional event influenced the ozone values on these dates

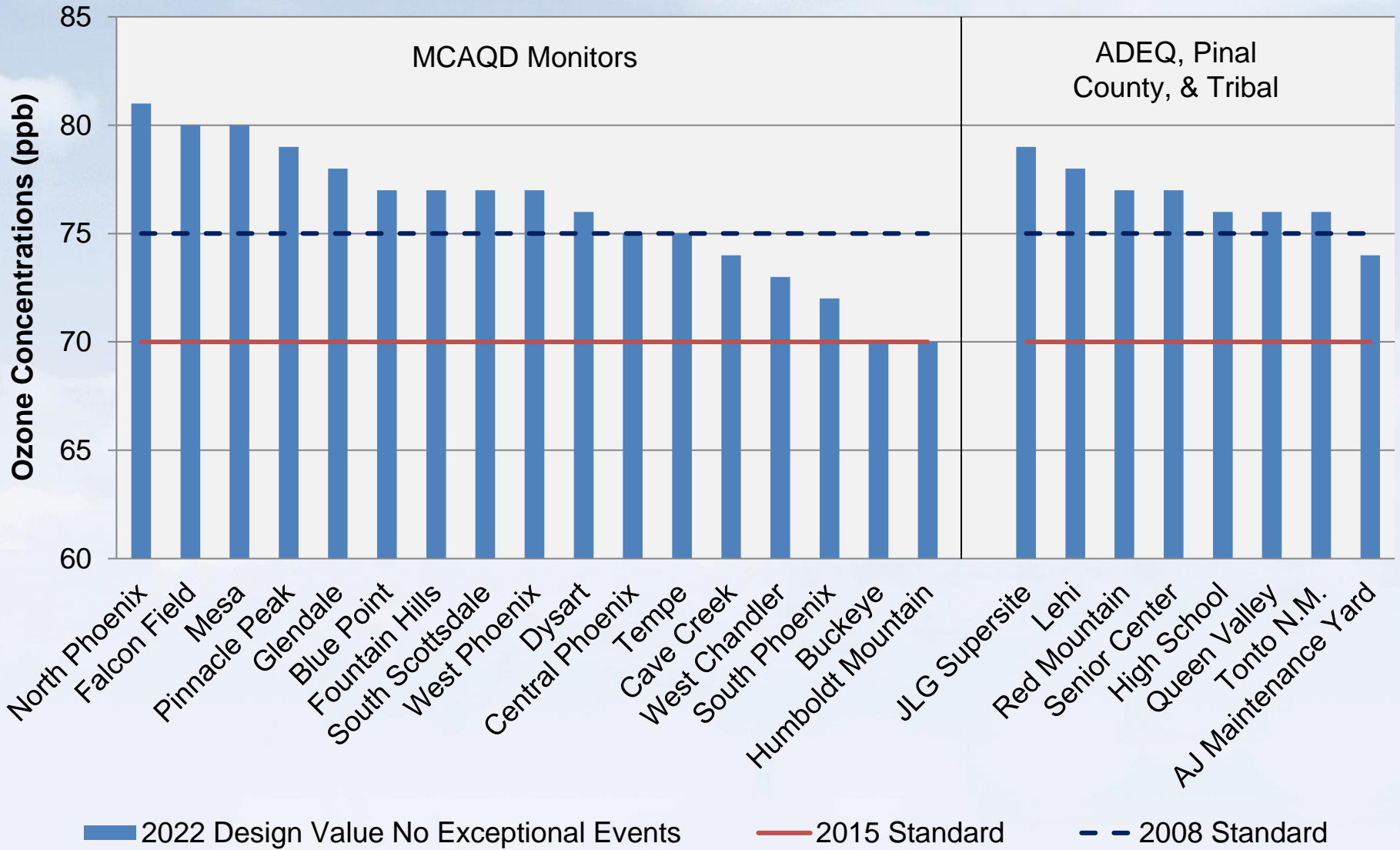
#These exceedances occurred at non-MCAQD sites and were not evaluated for exceptional events.

Number of exceedances per site. Sites highlighted in red have 4th highs that are above the 70 ppb standard

# Exceedance Days by Site	Buckeye	Blue Point	Cave Creek	Central Phoenix	Dysart	Falcon Field	Fountain Hills	Glendale	Humboldt Mt.
	4	17	5	6	11	18	18	19	5
	Mesa	North Phoenix	Pinnacle Peak	South Phoenix	South Scotts.	Tempe	West Chandler	West Phoenix	
22	28	17	3	2	8	4	17		
	JLG Supersite	Queen Valley	Tonto NM	Apache Junction	Senior Center	Red Mount.	Lehi	High School	
12	15	6	10	14	16	21	20		

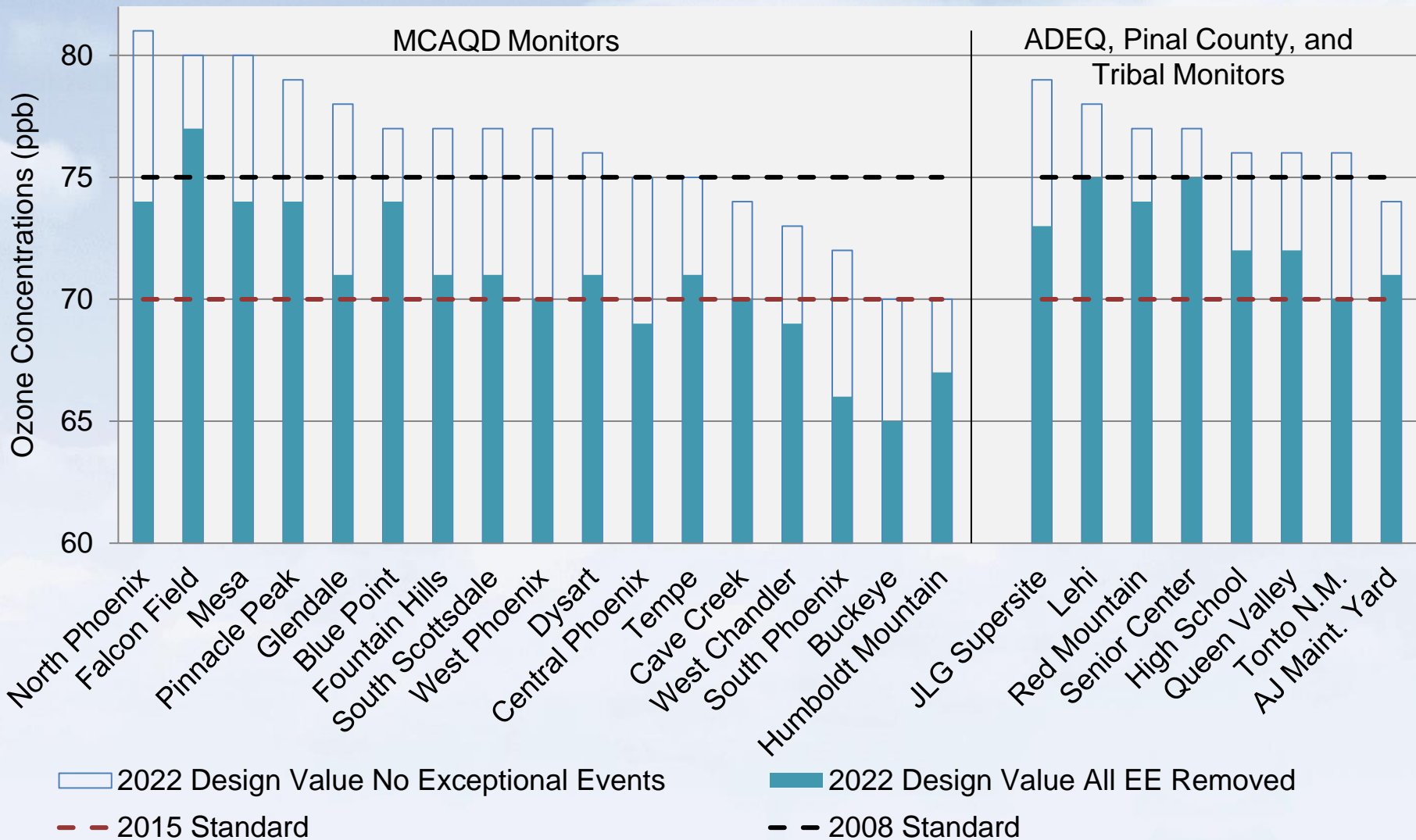
2022 Ozone Design Values

Design value is based upon a 3-year average of the 4th highest 8-hour reading.



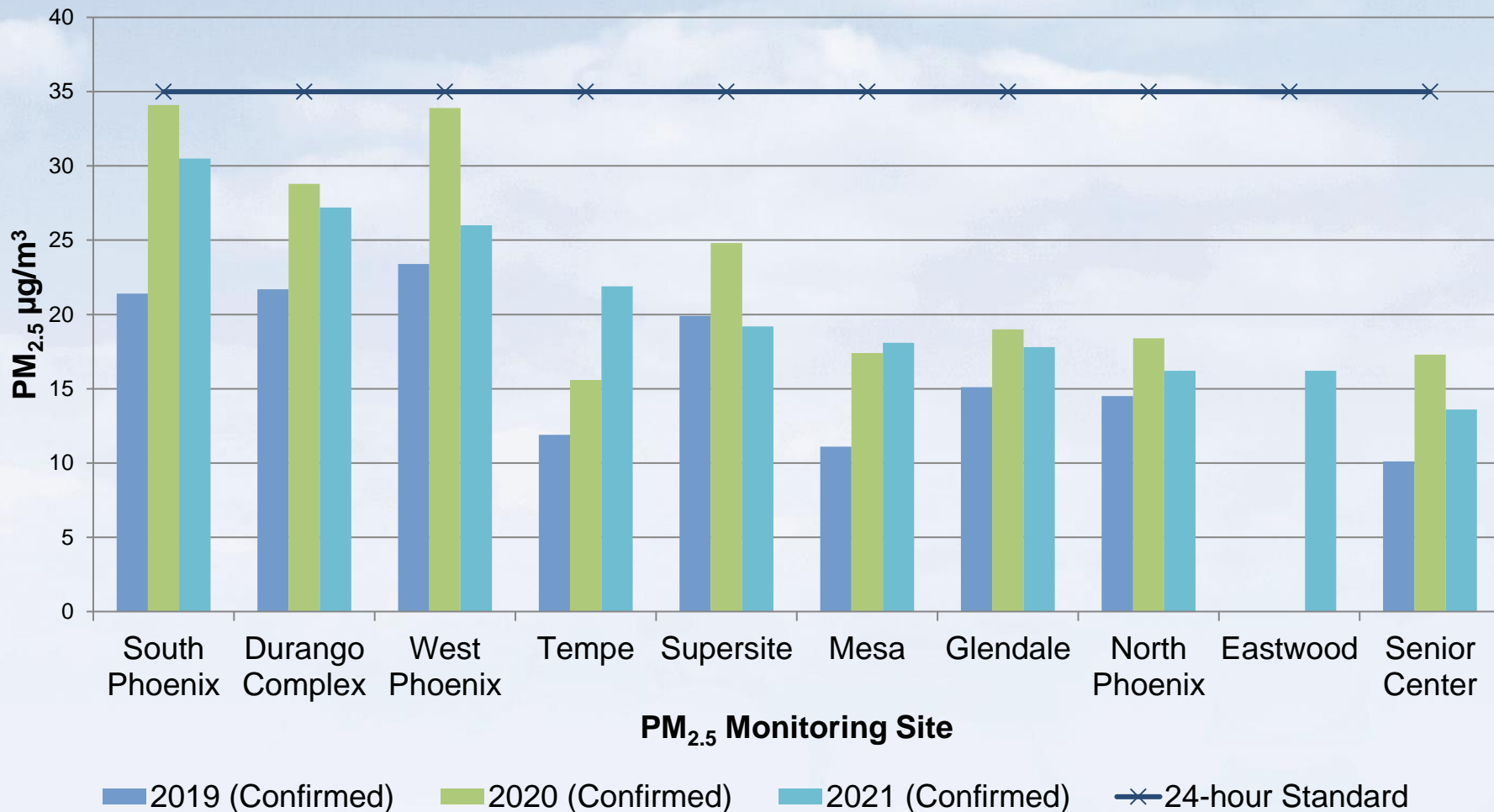
Ozone 2022 data are preliminary (collected on 9/19/22), have not been quality assured, and are subject to change

2022 Ozone Design Values



Design value is based upon a 3-year average of the 4th highest 8-hour reading. Data flagged as wildfire exceptional events from 2020-2022 have been removed. Note: Exceptional event days at ADEQ, Pinal County, and Tribal monitors were estimated based on MCAQD-flagged days. 2022 ozone data are preliminary.

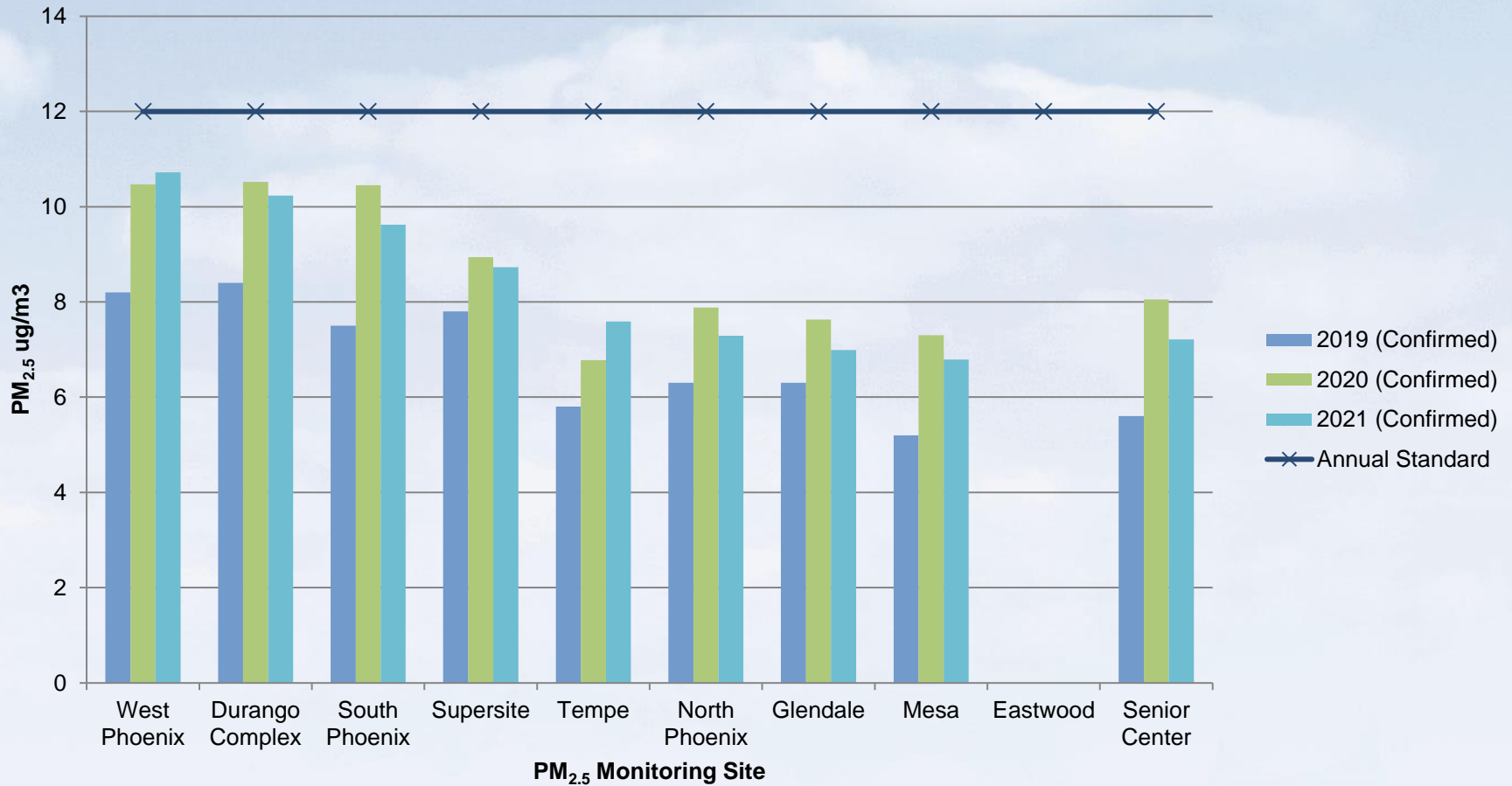
PM_{2.5} 24-Hour Standard-98th Percentile 2019-2021



Notes:
Eastwood began operation in 2021

Updated
9/20/2022

PM_{2.5} Annual Standard Annual Average 2019-2021



Notes:
Eastwood began operation in 2021 and complete annual average is not available

Updated
9/20/2022

Emission Reduction Credits (ERC) Update



Background

Why Do We Need Credits?

- Sources that are interested in expanding or locating new major sources in Maricopa County may not be able to obtain enough emission offsets in the form of emission reduction credits (ERCs)
 - As a result, industrial growth for certain major sources in Maricopa County could be limited
- Maricopa County seeks to accommodate future economic growth, while complying with federal air quality offset requirements.

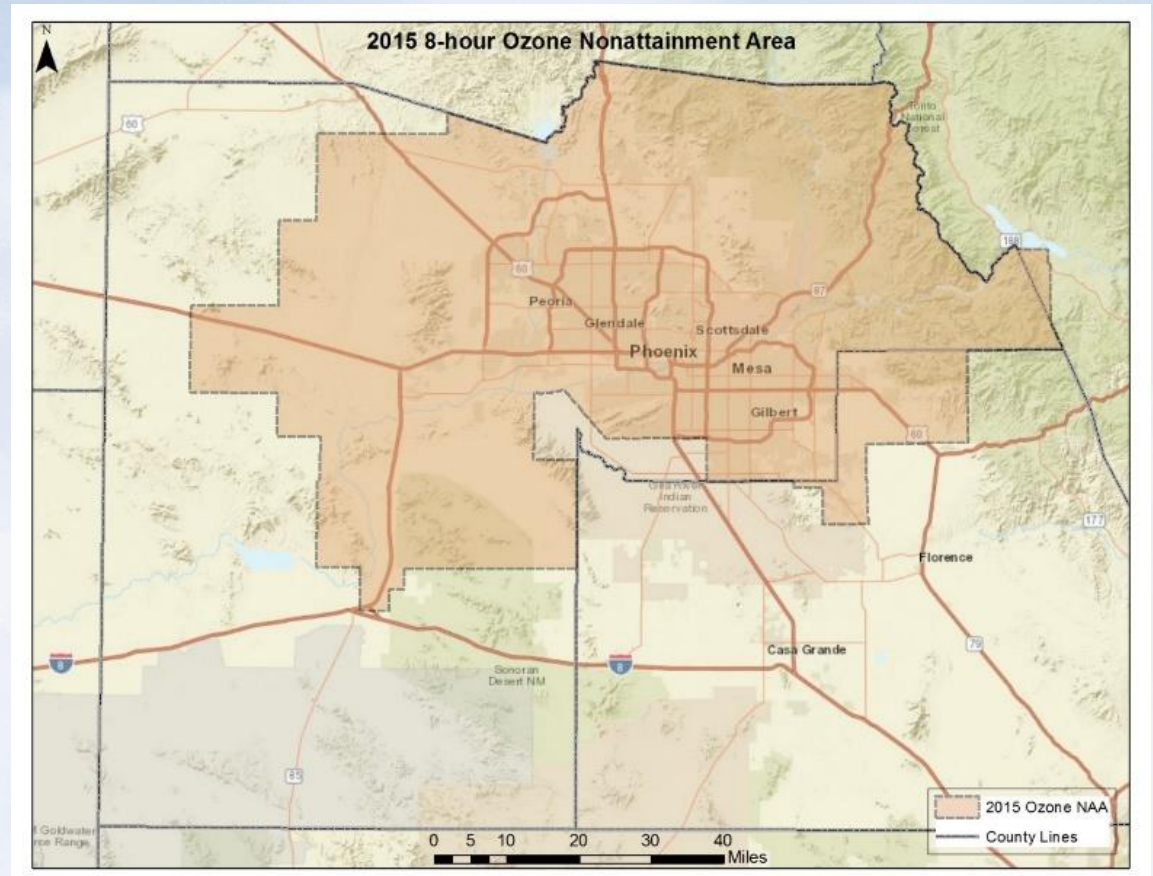
Background

Why Do We Need Credits?

New Major Source:
Needs **115 credits** to
obtain a permit for 100
tons emissions

Major Modification of a
Major Source: Needs
46 credits to obtain a
permit to emit an
additional 40 tons

If the Non-Attainment
Area is reclassified to
Serious, then **120
credits** will be needed
for a new Major Source
and **48 credits** for a
Major Modification



Federal Offset Requirements

ERCs must at a minimum meet certain integrity criteria of the in accordance with 40 CFR 51.165 and other EPA guidelines.

- Real
- Quantifiable
- Enforceable
- Permanent
- Surplus

Rule 204

Emission Reduction Credit (ERC) Generation, Certification, and Use

- Adopted by the Board of Supervisors December 11, 2019
 - EPA has not taken action on Rule 204
- Voluntary ERC Generation:
 - Permitted sources
 - Nontraditional sources
 - Private truck stop electrification
 - Electric standby equipped transport refrigeration units
 - Electrified onsite equipment

Nontraditional Mobile Source ERCs or MERCs

- Maricopa County has identified mobile sources that are part of a captive fleet as a viable generator of emission reduction credits to supplement the insufficient supply of emission reduction credits currently within the Arizona Emissions Bank.
 - MERCs – Mobile Source Emission Reduction Credits
 - Through voluntary fleet vehicle replacement or retrofit, allow for the generation, certification and use of MERCs as federal NSR emission offsets.

Thank you.

Kimberly Butler

Kimberly.Butler@maricopa.gov

602-506-6731

