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Upcoming Nonattainment Changes in Arizona - Are You Prepared?

EPAZ Conference

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Content

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Introduction

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Camille's primary focus is air permitting and compliance, and her experience includes minor NSR, PSD, and Title V work with most Arizona jurisdictions. She is the regional subject matter expert on ozone nonattainment and has previously presented at several trade group associations and conferences.

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Founded in 1974, Trinity has a rich heritage of technical expertise, industry experience, and a breadth of capabilities to help clients achieve their business goals.

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Office Locations

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NAAQS Background

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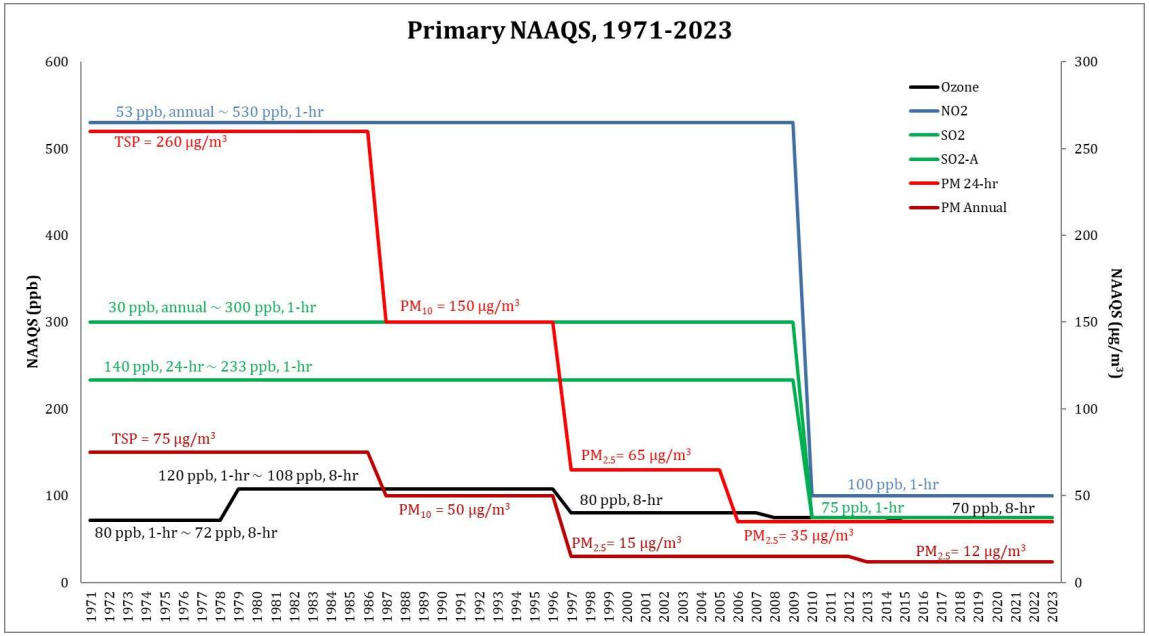
Clean Air Act and NAAQS Background

- **National Ambient Air Quality Standards (NAAQS)**
  - Established by the 1970 Clean Air Act (CAA) for six (6) criteria pollutants
- NAAQS Do Change – EPA is required to review and revise, if appropriate, every five years
  - NAAQS for particulate matter with an aerodynamic diameter ≤ 2.5 µm ($PM_{2.5}$) was revised in 2024
- Regulatory landscape of an area is impacted by nonattainment status
  - Air permits
  - Regulations
  - Requirements imposed by State Implementation Plans (SIP)



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Current NAAQS

Pollutant	Primary Standards		Date of Standard (Last Review)	Secondary Standards	
	Level	Averaging Time		Level	Averaging Time
CO	9 ppm	8-Hour	1971 (2011)	None	
	35 ppm	1-Hour	1971 (2011)		
Pb	0.15 µg/m^3	3-Month	2008	Same as Primary Standard	
NO_2	0.053 ppm	Annual	1971 (2010)	0.053 ppm	Annual
	0.100 ppm	1-Hour	2010		
PM_{10}	150 µg/m^3	24-Hour	1987 (2012)	Same as Primary Standard	
$PM_{2.5}$	9.0 µg/m^3	Annual	2024	15.0 µg/m^3	Annual
	35 µg/m^3	24-Hour	2006 (2012)	Same as Primary Standard	
Ozone	0.070 ppm	8-Hour	2015	Same as Primary Standard	
	0.075 ppm	8-Hour	2008	Same as Primary Standard	
SO_2	0.075 ppm	1-Hour	2010	0.5 ppm	3-hour

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Ozone Nonattainment: Reclassification Status and Impacts

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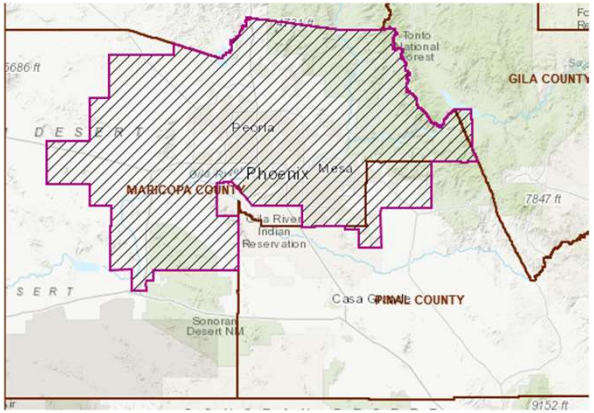
Ozone Nonattainment

Current Arizona nonattainment (NA) areas for the ozone 2015 8-hour NAAQS include:

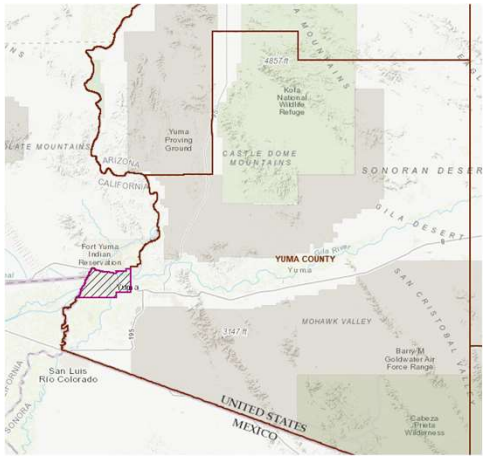
Phoenix-Mesa NA Area

- Includes portions of Maricopa, Pinal, and Gila Counties
- **Moderate** nonattainment status
- Nonattainment permitting requirements are potentially applicable in this area



Yuma NA Area

- Includes a portion of Yuma County
- **Marginal** nonattainment status
  - Attained the 2015 ozone NAAQS by August 3, 2021; additional requirements need to be met prior to formal redesignation
- Nonattainment permitting requirements are potentially applicable in this area



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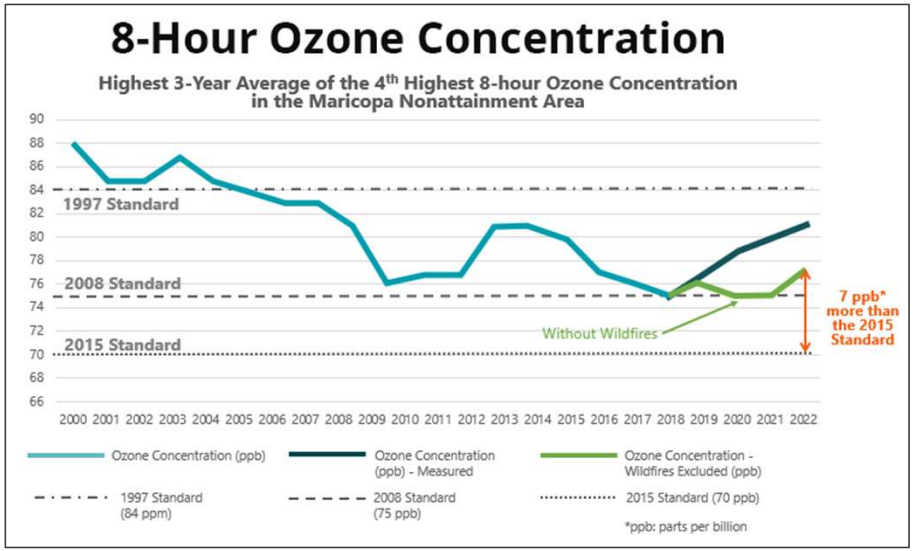
Upcoming Changes to Ozone NA Status: Phoenix-Mesa

- Deadline to attain NAAQS was 8/3/2024:
  - EPA must determine if NAAQS was attained within six (6) months of the deadline: 2/3/2025.
  - Determinations based on 2021-2023 monitoring data.
- No determination for Phoenix-Mesa yet – ***what now?***
  - The 1/20/2025 Executive Order for Regulatory Freeze Pending Review may also impact determination timelines.
  - Approval by new EPA Administrator is necessary.
- Anticipated determination for the Phoenix-Mesa NA area:
  - Failure to attain
  - **Reclassification to serious nonattainment**



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Nonattainment Classification	VOC or NO_X Major Source Threshold (Title V and Major NSR) (ton per year or tpy)	Emission Offset Ratios	Lowest Achievable Emissions Rate (LAER) for major sources? (Y/N)
Marginal	100	1.1:1	Y
Moderate	100	1.15:1	Y
Serious	50	1.2:1	Y
Severe	25	1.3:1	Y
Extreme	10	1.5:1	Y

Where we are now

Where we are headed

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Air Program Impacts to Existing Minor Sources

- Major source thresholds (MST) for NO_x and VOC will be lowered from **100 to 50 (tpy).**
- Majority of impacted sources are in Maricopa County Air Quality Department (MCAQD) jurisdiction.
- Changes in NO_x and VOC MSTs may affect current MCAQD air permit status for minor sources.

Current NO_x and/or VOC PTE	MCAQD Air Permit Status
<45 tpy	• Facility will maintain the current true minor or synthetic source Non-Title V permit.
Between 45-49 tpy	• Facility will be treated as a synthetic minor source and maintain a Non-Title V permit. • Additional compliance requirements may be added to ensure emissions remain below 50 tpy.
≥50 tpy	• Unless the facility installs additional controls or accepts voluntary limits such that potential emissions < 50 tpy, **a Title V permit will be required.** • A **complete** Title V application will be due within 12 months of the EPA final rule. • Title V fees: $7,000 submittal plus $194.40/hr for application review. • Additional compliance requirements will be included in the Title V permit (e.g., semi-annual compliance reporting)

Air Program Impacts to Major Sources

- Projects at facilities and expansions with NO_x /VOC potential emissions >50 tpy: **Will trigger more complex permitting.**
  - Nonattainment New Source Review (NNSR) permitting includes:
    - Lowest Achievable Emission Rate (LAER) – Control technology evaluation more stringent than RACT and BACT.
    - Emission offsets: Require offsets in actual emissions 1.2 times the potential increases from the project by obtaining emission reduction credits (ERCs).
  - Public comment, EPA review, and **time needed to obtain ERCs** could significantly delay project timelines.

- Identify future expansion needs and ask yourself :
  - *Will the expansion result in NO_X and VOC PTE increases?*
  - *Will the expansion PTE increase exceed the upcoming MSTs for NO_X and VOCs?*
  - *Would I be able to obtain necessary ERCs for expansion?*

VOC/NOx Significant Emission Rate (SER)	VOC/NOx Offset Ratios
25 tpy	1.2:1 (could be increased to 2:1 if Maricopa County is sanctioned!)

Other Considerations – All Sources

Reasonably Available Control Technology (RACT)

- RACT in ozone nonattainment areas for:
  - Any VOC source subject to an EPA Control Technology Guideline (CTG) category
  - Major sources of NO_x and/or VOC
- VOC RACT is implemented by MCAQD
  - MCAQD also implements ozone nonattainment RACT locally for NOx
    - Example: Rule 324 for Stationary Reciprocating Internal Combustion Engines
- RACT does change as a result of nonattainment reclassification – becomes more stringent.

ERC Generation:

- If your site is planning equipment shutdowns or retrofits, consider generating NO_x/VOC ERCs – additional $ stream, can support project funding.

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New $PM_{2.5}$ NAAQS: Status and Impacts

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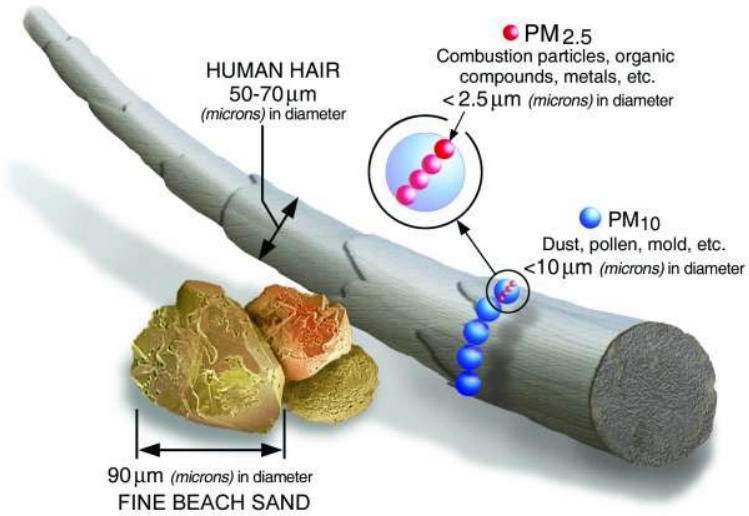
Refresher: What is $PM_{2.5}$?

- PM_{10} : Inhalable particles, with diameters that are generally 10 micrometers and smaller
- $PM_{2.5}$: fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller
- $PM_{2.5}$ precursors: **SO_2** and **NO_X**

- In **Arizona,** VOC and ammonia are considered precursors for $PM_{2.5}$ nonattainment areas too:
  - MCAQD - Rule 100 Section 200.112(b)
  - ADEQ – AAC R18-2-101.124.a



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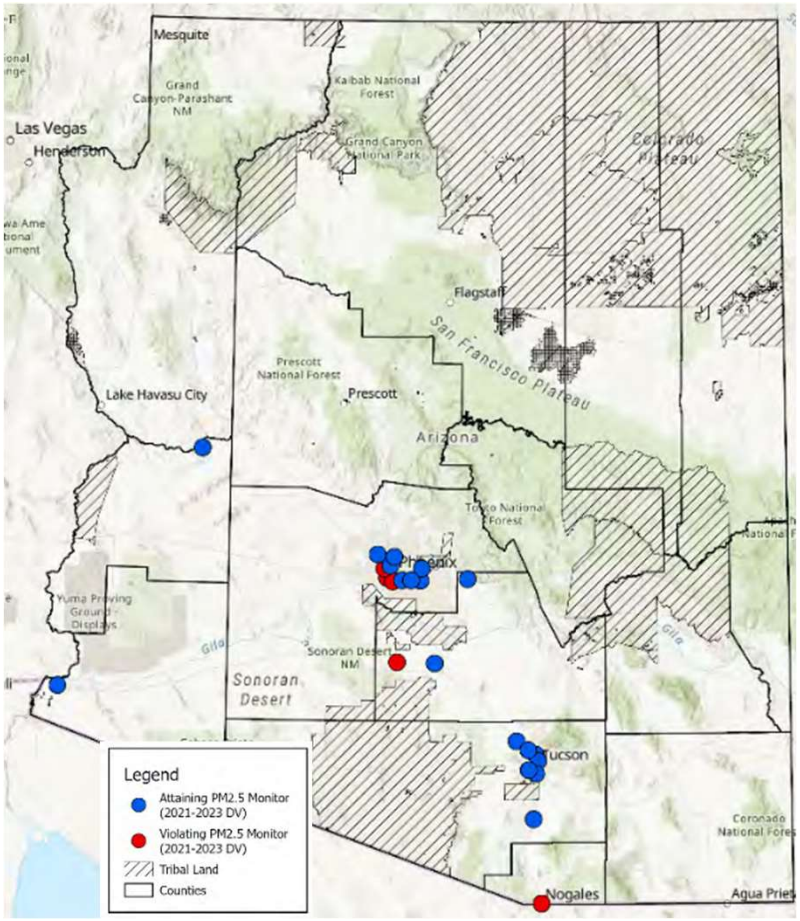
What happened in 2024 and so far in 2025?

- New annual $PM_{2.5}$ NAAQS of 9 µg/m³ was established by EPA, **effective 5/6/2024:**
  - There is existing ongoing litigation which can take years.
  - ***In the meantime, the current rule proceeds.***
- In 2024, Arizona Department of Environmental Quality (ADEQ) reviewed 2021-2023 monitor data
- 1/7/2025: ADEQ submitted final NA area boundary recommendations to the Governor.
  - Proposed partial nonattainment areas in the following counties:
    - Santa Cruz – aligned with existing PM_{10} NA area
    - Maricopa
    - Pinal



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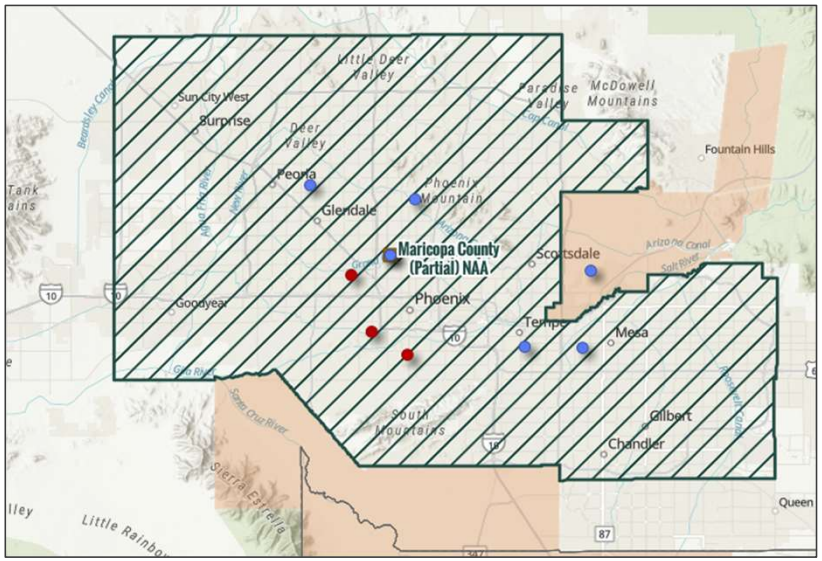
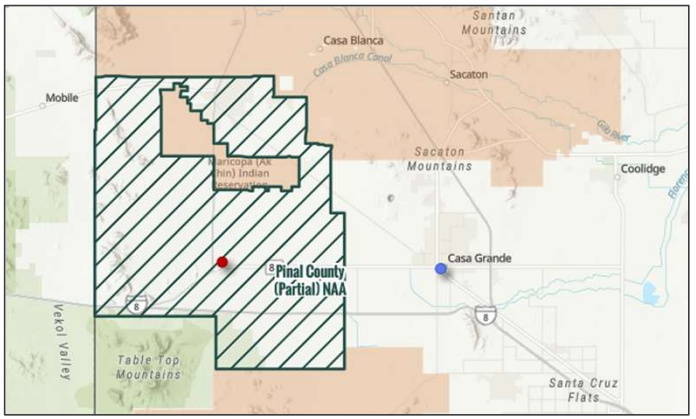
ADEQ $PM_{2.5}$ NA Boundary Recommendations

Maricopa County

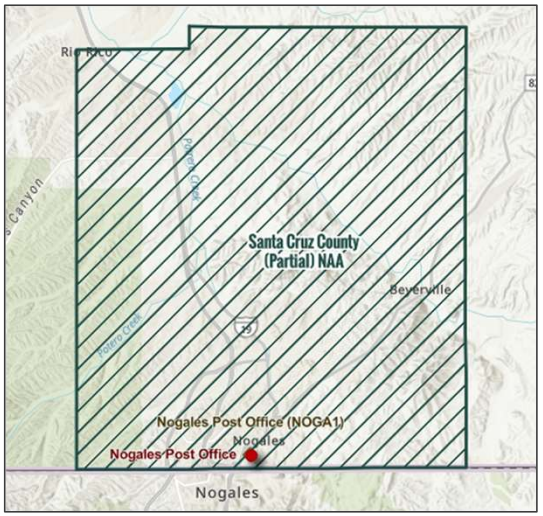


Note: On 2/4/2024, MCAQD formally appealed the proposed boundary and requested ADEQ revise the boundary in collaboration with MCAQD.

Pinal County



Santa Cruz County



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Subsequent Regulatory Timelines

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February 7, 2024

EPA released pre-publication version of NAAQS

- Date from which subsequent timelines are established.

02

February 7, 2025

Governor submits $PM_{2.5}$ designation recommendations to the EPA – **has not occurred.**

03

October 9, 2025 - February 6, 2026

EPA designations based on 2022-2024 monitoring data:

- October 9, 2025: EPA issues 120-day letter + 30 days public comment
- **February 6, 2026: EPA issues final designations.**
- **Effective ~90 days later**

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August 2027

States with newly designated NA areas submit attainment SIPs to EPA.

- All NA areas initially designated as “Moderate” with $PM_{2.5}$ MST of 100 tpy.
- Attainment deadline is 2032.

Administration change may affect final timeline.

Basic Permitting/Compliance Implications

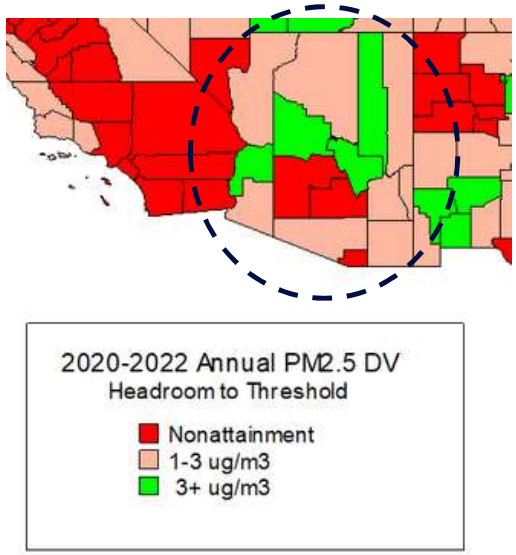
Short-Term Impact (>5/6/2024) - Local and federal modeling analyses must address reduced annual $PM_{2.5}$ NAAQS - affects active/planned projects which trigger modeling

- Includes minor New Source Review (NSR) modeling – ADEQ and MCAQD sources.
- To demonstrate NAAQS compliance: Site impacts + nearby source impacts + **background concentrations** < NAAQS

Medium Term Impact (within ~2 years from 5/6/2024) - More prevalent NNSR permitting.

Long-Term Impact (18 Months after Designations or ~3-4 Years from 5/6/2024) - New and revised RACT requirements for existing sources in NA areas.

Very Long-Term Impact (~2032 and beyond) – Reduced MSTs for areas not attaining standard.

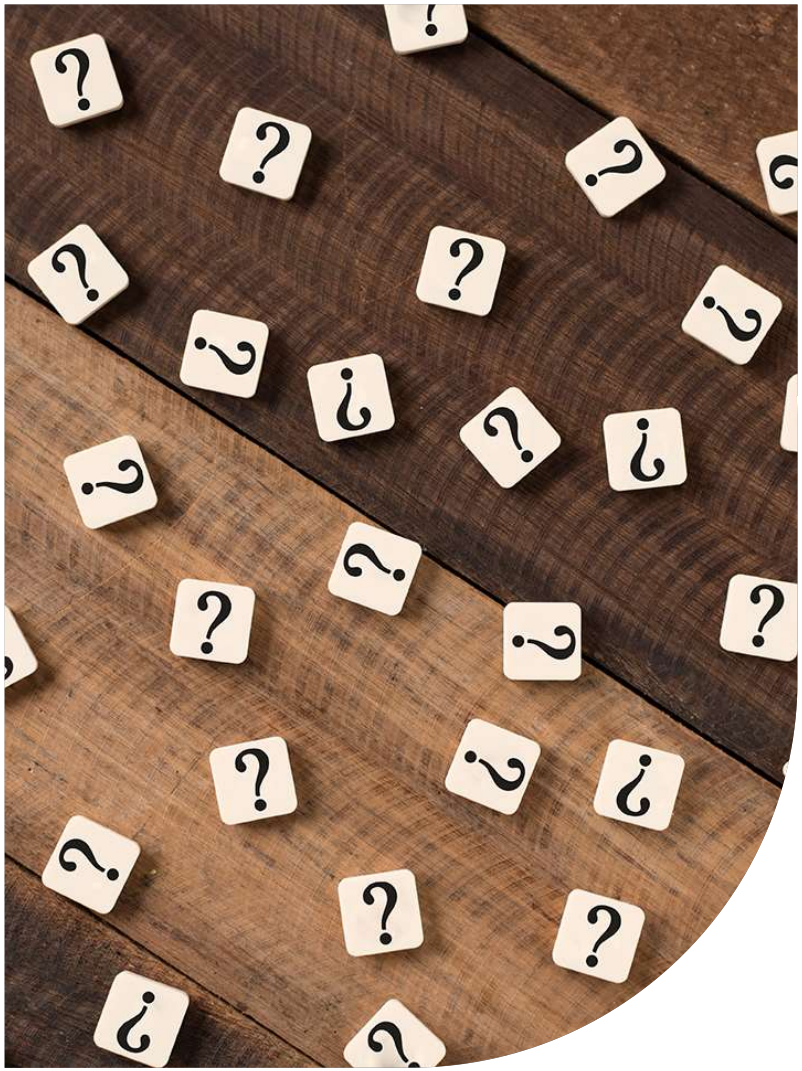


Source: https://www.afandpa.org/news/2024/afpa-and-awc-respond-epas-pm-naaqs-rule

Implications to Facility Operations

- A more stringent $PM_{2.5}$ NAAQS could lead to….
  - More stringent emission limits on $PM_{2.5}$, NO_x, and/or SO_2 emissions
  - More expansive recordkeeping/reporting for those pollutants
  - More source testing/evaluation of facility emission sources
    - For many industries/source categories, $PM_{2.5}$ emissions estimation methodologies are still very poor and/or dated
  - Restrictions to facility hours of operation
- **If a facility is located in a NA area:**
  - Permitting requirements for nonattainment areas that have historically been attainment will mirror those of larger cities that struggle with ozone
    - Limitations/restrictions to facility expansion, more stringent controls
    - New emission limits, emissions controls, work practice updates, etc. for existing facility operations

Questions



Thank you!

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