PM$_{2.5}$ Designations Memorandum and Implementation Resources

Informational Overview Webinar
State and Local Air Agencies
February 21, 2024

Outline

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- Initial Area Designations Resources for Air Agencies

- PM$_{2.5}$ Designations Memorandum

- Anticipated Schedule

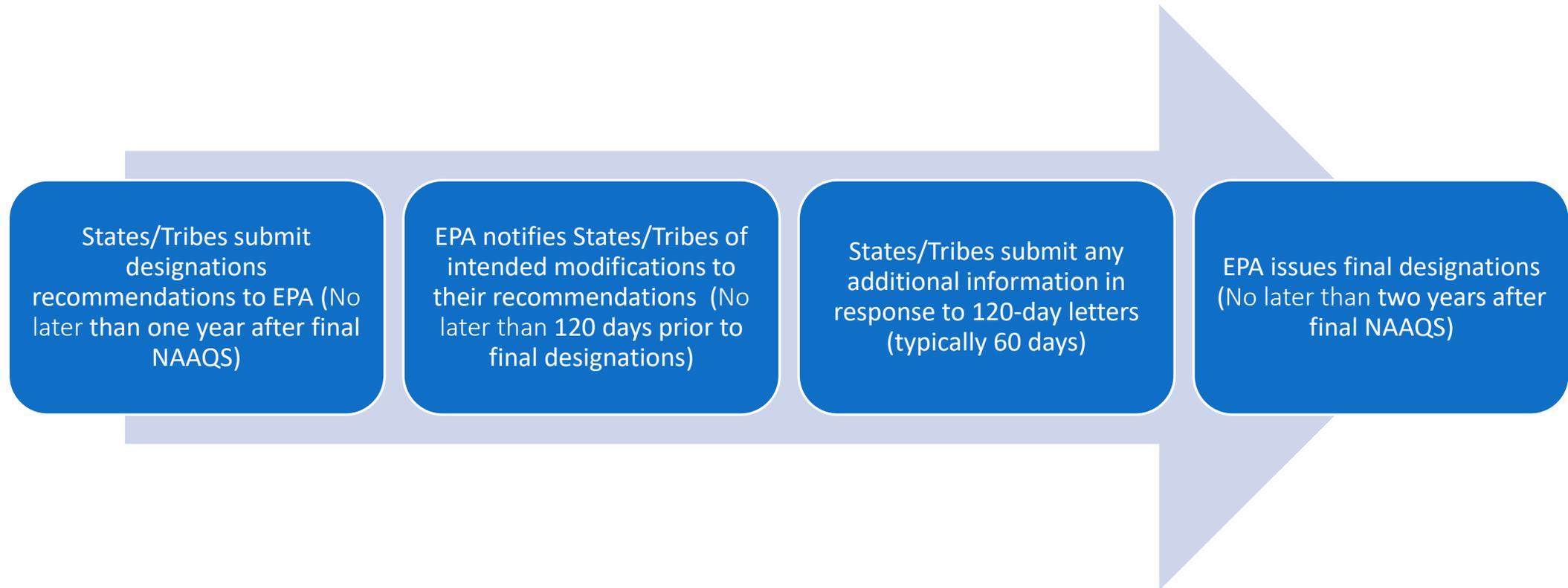- PM$_{2.5}$ Designations Mapping Tool

Background

Designations Follow a New or Revised NAAQS

- When the EPA establishes a new or revised NAAQS, the Clean Air Act (CAA) requires the EPA to designate all areas of the country, including Indian Country, as to whether the areas are attainment, nonattainment, or unclassifiable.

- CAA Section 107(d) governs the initial area designations.
  - Identifies and defines the designations categories
  - Provides the process and schedule
  - Establishes roles for the EPA and states

- The EPA generally follows the same process and schedule for Tribes pursuant to CAA section 301(d) Tribal Authority and the Tribal Authority Rule (TAR)

Designations Categories

- CAA Categories:
  - Nonattainment Area - An area that does not meet or that contributes to a nearby area that does not meet the NAAQS
    - For $PM_{2.5}$, the CAA provides that all initial areas are classified as "moderate."
  - Attainment Area – An area that is meeting the NAAQS and is not contributing to a nearby area that does not meet the NAAQS
    - For initial area designations, the EPA uses "Attainment/Unclassifiable" for this category.
  - Unclassifiable Area – An area that cannot be designated based on available information as meeting or not meeting the NAAQS

Key Steps in the Designations Process

States/Tribes submit designations recommendations to EPA (No later than **one year** after final NAAQS)

EPA notifies States/Tribes of intended modifications to their recommendations (No later than **120 days** prior to final designations)

States/Tribes submit any additional information in response to 120-day letters (typically **60 days**)

EPA issues final designations (No later than **two years** after final NAAQS)

Designations Resources for Air Agencies

Key Designations Resources

Website: https://www.epa.gov/particle-pollution-designations

$PM_{2.5}$ Designations Memorandum

$PM_{2.5}$ Designations Mapping Tool

Relevant Datasets

Tribal Policy and Guidance

Additional Resources

Exceptional Events Website

https://www.epa.gov/air-quality-analysis/treatment-air-quality-monitoring-data-influenced-exceptional-events

AirKnowledge Designations Learning Module: PLAN201-SI https://airknowledge.gov/SI/PLAN201-SI.html

Learning Management System: https://epaapti.csod.com/ui/lms-learning-details/app/curriculum/33951135-f937-4181-8737-03c55ca454d2

Webinar(s) on 2016 $PM_{2.5}$ Implementation Rule (~spring 2024)

PM$_{2.5}$ Initial Area Designations Memorandum

Identifying Nonattainment Areas and Boundary Determinations

- CAA directs the EPA to designate as nonattainment an area that is violating the NAAQS and nearby areas with emissions that contribute to the violation(s)
  - The analytical starting point for the 2024 $PM_{2.5}$ designations is the entire metropolitan area where the violating monitor is located (Core Based Statistical Area and Combined Statistical Area)
- The EPA will consider the 3 most recent years of certified air quality monitoring data
  - States and Tribes will likely use 2021-2023 data for developing recommendations
    - States/Tribes are not required to develop complete exceptional events demonstrations for their recommendations but should address any data they believe were affected by exceptional events.
  - EPA will likely use 2022-2024 for making final designations

Identifying Nonattainment Areas and Boundary Determinations

- Boundaries for each nonattainment area will be evaluated on a case-by-case basis. The EPA strives for national consistency in decisions.
  - Boundaries determined by a weight of evidence approach based on consideration of five factors (air quality data, emissions and emissions-related data, meteorology, geography/topography, and jurisdictional boundaries)

- The EPA will consider and evaluate the five factors as applied to federal lands, particularly national parks and wilderness areas

Data Considerations

- Proposed air quality data updates for T640/T640X addressed in recent *Federal Register* notice (See 32 FR 22831, February 15, 2024) .

- The EPA will use the draft 2022 emissions modeling platform inventory (2022v1 draft EMP) for the initial mapping tool and will post dataset on the website. Both updated when the official 2022v1 is available

- Violations are identified using data from FRM and FEM monitors that are sited and operated in accordance with 40 CFR Part 58

- Data from non-FRM/FEM monitors (e.g., sensors) and air quality modeling, where available, may help define an appropriate boundary for areas contributing to FRM/FEM based monitored violations

Five Factor Analysis

- For nonattainment areas, EPA recommends air agencies base boundary recommendations on an evaluation of 5 factors. These factors are included in the mapping tool:

  - Air quality data-design values, urban increment

  - Emissions and emissions-related data: 2022 emissions modeling platform, county and gridded emissions for all PM components

  - Meteorology - HYSPLIT

  - Geography/topography

  - Jurisdictional boundaries.

Exceptional Events

- Initial area designations are an action of regulatory significance described in the EPA's "Treatment of Data Influenced by Exceptional Events" Final Rule (81 FR 68216; October 3, 2016)

- Air quality monitoring data affected by exceptional events may be excluded from use in area designations if the data meet the criteria for exclusion, as specified in the Exceptional Events Rule.

- The EPA is committed to ensuring a timely and efficient process for evaluating and making exceptional events determinations.

  o Tools and resources to assist air agencies developing PM-related exceptional events demonstrations and best practice materials can be found at the EPA's exceptional events website located at: *https://www.epa.gov/air-quality-analysis/exceptional-events-analysis-and-visualization-tools*

Anticipated Schedule

Anticipated PM$_{2.5}$ Designations Schedule

Designations Action	Anticipated Date
EPA promulgates 2024 Revised Primary Annual Fine Particle NAAQS final rule	February 7, 2024
States certify 2023 PM$_{2.5}$ data; EPA calculates design values	May 2024
States and Tribes submit their designations recommendations to EPA	No later than February 7, 2025
States certify 2024 PM$_{2.5}$ data; EPA calculates design values	May 2025
EPA notifies states and Tribes concerning any intended modifications to their recommendations (120-day letters); 30- day public comment period begins	Mid-October 2025 (120 days prior to final designations
End of 30-day public comment period	Mid-November 2025
States and Tribes submit additional information, if any, to respond to the EPA's modification of recommended designations	Mid-December 2025
Final designations decisions (without extension)	February 6, 2026

Anticipated Exceptional Events Schedule

Exceptional Events Action	Applicable Data Years*	Anticipated Date
Initial Notifications for Designations Recommendations	2021, 2022, 2023	No later than January 1, 2025
Exceptional Events Demonstration Submittal	2021, 2022, 2023	No later than February 7, 2025
Initial Notification and Exceptional Events Demonstration Submittal	2024	September 30, 2025
EPA Promulgates Final Area Designations	2022, 2023, 2024	February 6, 2026

*States and Tribes are not required to submit completed exceptional events demonstrations for data years that will not be relied upon for final area designations (e.g., data year 2021), but should address any data they believe was influenced by an exceptional event in their area designations recommendations to the EPA.

PM$_{2.5}$ Designations Mapping Tool

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- Mapping tool gives air agencies access to air quality data, emissions data, and jurisdictional boundaries to assist in designations for the 2024 revised annual fine particle NAAQS

- Visualize data and group similar datasets using the five factor analysis

- Tool will be updated throughout the designations process as newer datasets become available (i.e., Design Values, HYSPLIT, NEI, etc)

PM$_{2.5}$ Designations Mapping Tool

- New data layers added for communication and outreach
  - CEJST Disadvantaged Communities mapped data included
  - Additional datasets provided by Office of Mission Support depicting information for federally recognized Tribes
    - To be used for consultation and outreach purposes

PM$_{2.5}$ Designations Mapping Tool Demonstration