

ROY COOPER

Governor

MARY PENNY KELLEY

Secretary

MICHAEL ABRACZINSKAS

Director



NORTH CAROLINA
Environmental Quality

December 23, 2024

Jeaneanne Gettle, Acting Regional Administrator
USEPA Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Subject: North Carolina's Recommendations for Air Quality Designations for the 2024 Revised Primary Annual Fine Particle Standard

Dear Ms. Gettle:

I am writing on behalf of Governor Roy Cooper to recommend air quality designation status and related boundaries of areas in North Carolina for the primary annual fine particulate matter (PM_{2.5}) national ambient air quality standard (NAAQS), pursuant to Section 107(d)(1)(A) of the Clean Air Act (CAA), as amended. In this letter I summarize the status of North Carolina's PM_{2.5} air quality relative to the revised standard, the Exceptional Events demonstration being prepared to support an attainment designation for two monitors, public engagement efforts, and my conclusions and recommendations.

North Carolina is committed to protecting the health of our citizens and solving our air quality problems. We believe that improving our air quality is critical to the health of our citizens and to our future growth, prosperity and quality of life. We look forward to a continued dialogue with you and your staff as we work together to implement the 2024 PM_{2.5} NAAQS.

Status of North Carolina's PM_{2.5} Air Quality Relative to the Revised Standard

On February 7, 2024, the United States Environmental Protection Agency (EPA) promulgated a revised primary annual PM_{2.5} NAAQS (89 FR 16202). The EPA strengthened the primary annual PM_{2.5} standard from 12.0 micrograms per cubic meter (µg/m³) to 9.0 µg/m³; while retaining the existing 24-hour coarse particle (PM₁₀) standard at 150 µg/m³; the existing 24-hour PM_{2.5} standard at 35 µg/m³; and the current suite of secondary particulate matter (PM) standards. The CAA Section 107(d)(1)(A) requires states to submit area designation recommendations to EPA no later than 1 year after the promulgation of a new or revised NAAQS. The EPA has recommended that states base its boundary recommendations for the revised annual PM_{2.5} standard using air quality data from the three most recent years of certified monitoring data (2021-2023).¹

¹ Memorandum from Goffman, Joseph, Assistant Administrator, to Regional Administrators, Regions 1-10, Initial Area Designations for the 2024 Revised Primary Annual Fine Particle National Ambient Air Quality Standard, February 7, 2024, https://www.epa.gov/system/files/documents/2024-02/pm-naaqs-designations-memo_2.7.2024-jg-signed.pdf.



North Carolina Department of Environmental Quality | Division of Air Quality
217 West Jones Street | 1641 Mail Service Center | Raleigh, North Carolina 27699-1641
919.707.8400

North Carolina operates a robust PM monitoring network with years of measurement, quality-assurance, and data analysis experience. Figure 1 shows the design values (based on the certified 2021-2023 ambient monitoring data) for regulatory monitors in North Carolina. As shown in Figure 1, all monitors in North Carolina are below the annual PM_{2.5} NAAQS except for the Remount Road monitor (371190045) in Mecklenburg County and Lexington Water Tower monitor (370570002) in Davidson County which each have a rounded design value of 9.2 µg/m³. The North Carolina Division of Air Quality (DAQ) reviewed the monitoring data and determined that Canadian wildfire smoke-laden air masses significantly increased PM_{2.5} concentrations measured by these two monitors during four multi-day events in June and July of 2023. These events were significant enough to increase the three-year average design value for each of the two PM_{2.5} monitors to slightly above the revised standard.

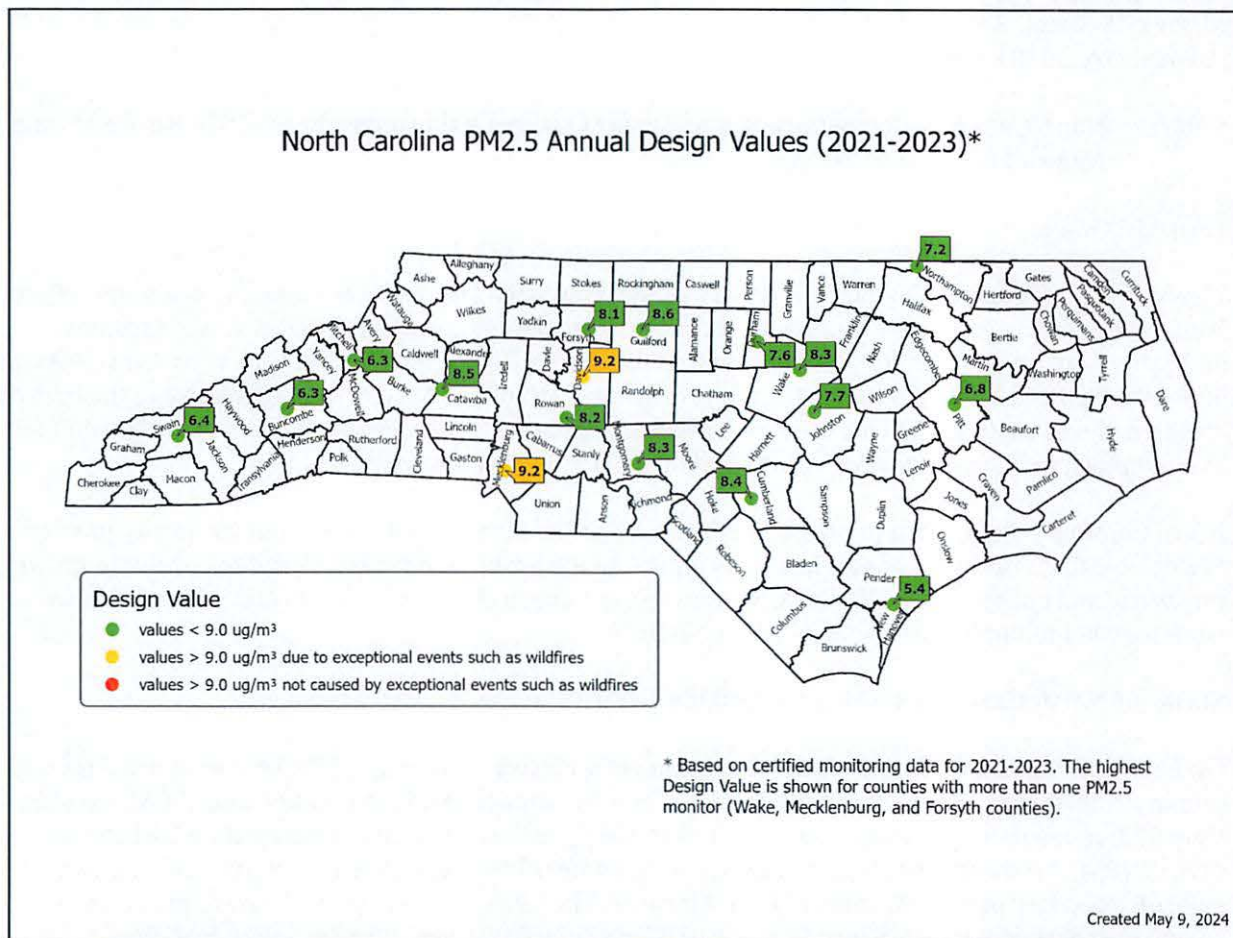


Figure 1. Map of North Carolina PM_{2.5} Monitors and 2021-2023 Design Values (µg/m³)

Exceptional Events Demonstration for Mecklenburg and Davidson County PM_{2.5} Monitors

The DAQ initiated communication with EPA Region 4's exceptional events staff in July 2024 to present the current status, analyses, and strategy for requesting data exclusion for the Mecklenburg and Davidson County PM_{2.5} monitors. Based on guidance from EPA Region 4 staff, on September 11, 2024, the DAQ prepared and submitted to EPA an "Initial Notification of Potential Exceptional Event Submission for the

Revised Primary Annual PM_{2.5} National Ambient Air Quality Standard (NAAQS)." On November 1, 2024, EPA Region 4 staff responded via email to the initial notification submittal confirming that the initial notification meets the requirements of 40 CFR 50.14(c)(2)(i) and it is appropriate for the DAQ to submit a full Exceptional Events demonstration.

In accordance with EPA's Exceptional Events Rule (40 CFR 50.14(c)(3)), the DAQ is finalizing an Exceptional Events demonstration that shows that Canadian wildfire smoke significantly increased PM_{2.5} concentrations on certain days in June and July 2023 and that if it were not for these exceptional events, the design value for the two monitors would be below the revised standard.² The DAQ posted the Exceptional Events demonstration for a 30-day comment period and will finalize and submit the document by February 7, 2025.

PM_{2.5} Monitoring Network

The DAQ has reviewed North Carolina's PM_{2.5} monitoring network and determined that the network complies with the requirements for measuring compliance with the revised standard.³ The DAQ and local air program agencies will address future changes to the monitoring network by revising the Annual Network Plan in accordance with EPA monitoring network rules and quality assurance/quality control procedures. In addition, long-term changes to the network will be proposed through the Five-Year Network Assessment to evaluate projected needs of the ambient air monitoring program. Both the Annual Network Plan and Five-Year Network Assessment are issued for public comment and public comments received are addressed in the final submittals of these work products to EPA.

Public Engagement

Beginning in summer 2024, the DAQ engaged in a variety of stakeholder outreach through information sessions, online resources, virtual and in-person presentations, and community events especially targeting Mecklenburg and Davidson counties. The DAQ helped stakeholders learn about DAQ's ongoing work related to PM_{2.5} and the revised standard and understand how to better protect their health by using the Division's air quality forecasts and resources. The DAQ also met and partnered with health groups, environmental groups, and local governments to further share PM_{2.5}-related information with residents. In addition, the DAQ is engaging with the state's forest and wildland managers to coordinate smoke management planning to minimize impacts on local communities and impacts on air quality.

The DAQ has been committed to being transparent with the public regarding the use of the Exceptional Events Rule and informing and engaging with stakeholders during the attainment designation process. For example, the Department's Environmental Justice team developed an Environmental Justice Impact Analysis that assessed the exposure and health outcomes for communities in proximity to PM_{2.5} monitoring stations that are above the revised standard due to exceptional events. Based on the findings of this Environmental Justice analysis, the DAQ made informational resources available in Spanish, provided a statewide virtual event in English and Spanish, and conducted targeted outreach during the

² During June and July 2023, Canadian wildfire smoke also contributed to elevated design values for many other monitors in North Carolina; however, the design values are below the revised NAAQS and therefore not eligible for inclusion in an Exceptional Events demonstration at this time.

³ The local air program agencies include the Forsyth County Office of Environmental Assistance and Protection, Mecklenburg County Air Quality, and Asheville-Buncombe Air Quality Agency (Buncombe County). The current 2024-2024 Annual Monitoring Network Plans and the 2020 Five-Year Network Assessment are available on the DAQ website at: <https://www.deq.nc.gov/about/divisions/air-quality/air-quality-monitoring/annual-network-plan>.

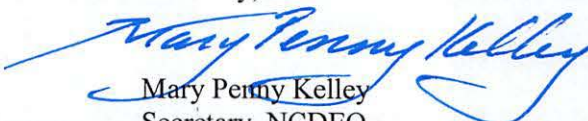
public comment period for the Exceptional Events demonstration. This Environmental Justice analysis was guided by EPA's *Final Regulatory Impact Analysis for the Reconsideration of the National Ambient Air Quality Standards for Particulate Matter*.⁴ The DAQ plans continued outreach to communities to help them learn more about air quality and what steps they can take to better protect their health.

Conclusions and Recommendations

It is North Carolina's recommendation that, because there is no evidence of violations other than those monitors impacted by the 2023 Canadian wildfires, all counties in North Carolina be designated as "attainment" for the revised primary annual PM_{2.5} standard, as listed in Table 1. Based on the technical analyses presented in the Exceptional Events demonstration that the DAQ will submit to EPA by February 7, 2025, the DAQ is requesting that EPA approve the Exceptional Event demonstration and exclude the days documented as highly impacted by Canadian wildfire smoke from the design value for the Mecklenburg and Davidson county PM_{2.5} monitors to show attainment of the revised primary annual PM_{2.5} standard. The EPA's approval of the Exceptional Event demonstration would support an attainment designation for the Mecklenburg and Davidson county PM_{2.5} monitors.

If you should have any questions, please contact Randy Strait of my staff at (919) 707-8721 or randy.strait@deq.nc.gov.

Sincerely,


Mary Penny Kelley
Secretary, NCDEQ

MAA/rps

cc: Sushma Masemore, NCDEQ
Michael A. Abraczinskas, NCDAQ
Denisse Diaz, USEPA
Lynorae Benjamin, USEPA
Jane Spann, USEPA
Weston Freund, USEPA
Simone Jarvis, USEPA
Katy Lusky, USEPA
Darren Palmer, USEPA
Rick Gillam, USEPA
Taylor Hartsfield, DAQ
Randy Strait, DAQ
Tammy Manning, DAQ
Jonathan Navarro, DAQ

Jordan Root, DAQ
Sara Kreuser, DAQ
Bradley McLamb, DAQ
Davis Murphy, DAQ
Patrick Butler, DAQ
Jeremy Pope, DAQ
Melinda Wolanin, DAQ
William Barnette, Forsyth County Office of
Environmental Assistance and Protection
Ashley Featherstone, Asheville-Buncombe Air
Quality Agency
Leslie Rhodes, Mecklenburg County Air Quality
Agency

⁴ EJ 2020 Glossary. Environmental Protection Agency (EPA). <https://www.epa.gov/environmentaljustice/ej-2020-glossary>.

**Table 1. North Carolina Designation Recommendations for 2024 Primary Annual PM_{2.5}
National Ambient Air Quality Standard**

Designated Area	Recommended Designation Status
Alamance County	Attainment
Alexander County	Attainment
Alleghany County	Attainment
Anson County	Attainment
Ashe County	Attainment
Avery County	Attainment
Beaufort County	Attainment
Bertie County	Attainment
Bladen County	Attainment
Brunswick County	Attainment
Buncombe County	Attainment
Burke County	Attainment
Cabarrus County	Attainment
Caldwell County	Attainment
Camden County	Attainment
Carteret County	Attainment
Caswell County	Attainment
Catawba County	Attainment
Chatham County	Attainment
Cherokee County	Attainment
Chowan County	Attainment
Clay County	Attainment
Cleveland County	Attainment
Columbus County	Attainment
Craven County	Attainment
Cumberland County	Attainment
Currituck County	Attainment
Dare County	Attainment
Davidson County	Attainment
Davie County	Attainment
Duplin County	Attainment
Durham County	Attainment
Edgecombe County	Attainment
Forsyth County	Attainment

Designated Area	Recommended Designation Status
Franklin County	Attainment
Gaston County	Attainment
Gates County	Attainment
Graham County	Attainment
Granville County	Attainment
Greene County	Attainment
Guilford County	Attainment
Halifax County	Attainment
Harnett County	Attainment
Haywood County	Attainment
Henderson County	Attainment
Hertford County	Attainment
Hoke County	Attainment
Hyde County	Attainment
Iredell County	Attainment
Jackson County	Attainment
Johnston County	Attainment
Jones County	Attainment
Lee County	Attainment
Lenoir County	Attainment
Lincoln County	Attainment
Macon County	Attainment
Madison County	Attainment
Martin County	Attainment
McDowell County	Attainment
Mecklenburg County	Attainment
Mitchell County	Attainment
Montgomery County	Attainment
Moore County	Attainment
Nash County	Attainment
New Hanover County	Attainment
Northampton County	Attainment
Onslow County	Attainment
Orange County	Attainment
Pamlico County	Attainment
Pasquotank County	Attainment

Designated Area	Recommended Designation Status
Pender County	Attainment
Perquimans County	Attainment
Person County	Attainment
Pitt County	Attainment
Polk County	Attainment
Randolph County	Attainment
Richmond County	Attainment
Robeson County	Attainment
Rockingham County	Attainment
Rowan County	Attainment
Rutherford County	Attainment
Sampson County	Attainment
Scotland County	Attainment
Stanly County	Attainment
Stokes County	Attainment
Surry County	Attainment
Swain County	Attainment
Transylvania County	Attainment
Tyrrell County	Attainment
Union County	Attainment
Vance County	Attainment
Wake County	Attainment
Warren County	Attainment
Washington County	Attainment
Watauga County	Attainment
Wayne County	Attainment
Wilkes County	Attainment
Wilson County	Attainment
Yadkin County	Attainment
Yancey County	Attainment