



west virginia department of environmental protection

**Exceptional Events Demonstration for an Exceedance
of the 2024 Annual PM_{2.5} NAAQS at Martinsburg,
West Virginia on June 29, 2023 Due to Smoke from
Canadian Wildfires**

PROPOSED – October 15, 2024

West Virginia Department of Environmental Protection
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Promoting a healthy environment

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Section I. Introduction

1.1 Overview

This Exceptional Event Demonstration (demonstration) shows the 2.5 micron particulate matter (PM_{2.5}) federal reference monitor at Martinsburg, West Virginia (Martinsburg Monitor) was impacted by smoke from record-breaking wildfires across Canada in 2023¹ (2023 Canadian Wildfires), causing daily PM_{2.5} concentrations to exceed the newly promulgated 2024 PM_{2.5} Annual National Ambient Air Quality Standard (PM_{2.5} Annual NAAQS, NAAQS, or standard) of 9.0 µg/m³. The 2023 Canadian Wildfires burned nearly nine times the area of an average wildfire year in Canada, which significantly impacted air quality across much of North America. Because of these wildfires, the Martinsburg Monitor design value (DV) for 2021 – 2023 is above the standard²; all other monitoring sites in West Virginia are currently meeting the standard. The “regulatorily significant” PM_{2.5} Annual NAAQS exceedance included in this demonstration is for June 29, 2023, and it was the result of smoke impacts from the 2023 Canadian Wildfires, as described in this document. The West Virginia Department of Environmental Protection (WVDEP) submitted the initial notification for this demonstration to the Environmental Protection Agency (EPA) Region 3 via email on July 31, 2024. EPA Region 3 responded to the initial notification on August 27, 2024. In its response, the EPA determined the Martinsburg Monitor PM_{2.5} data for June 29, 2023 may affect the EPA’s initial area designations for the 2024 primary annual PM_{2.5} NAAQS and the exceedance could be considered for exclusion under the Exceptional Events Rule. The initial notification and the EPA’s response are included in **Appendix D** of this demonstration.

The WVDEP requests the EPA concur with the exclusion from regulatory decisions the specified PM_{2.5} concentration in **Table 1** which was above the PM_{2.5} Tier 1 threshold for the Martinsburg Monitor, influenced by smoke from the 2023 Canadian Wildfires, and impact regulatory decisions about West Virginia’s attainment of the 2024 Primary Annual PM_{2.5} NAAQS. The day for which the WVDEP is requesting concurrence was impacted by an event consistent with EPA’s definition of “unusual or naturally occurring events that can affect air quality but are not reasonably controllable using techniques that tribal, state, or local air agencies may implement in order to attain and maintain the [NAAQS]” (USEPA, 2020a)³.

Table 1: Monitor-Days Requested for Regulatory Exclusion

County	Monitor Name	AQS Site ID	Date	Air Quality Index Category	24-hour Average Concentration (µg/m ³)
Berkeley	Martinsburg	54-003-0003	2023-06-29	Unhealthy	83.8

The WVDEP has also identified additional data from its other ambient monitoring locations which were impacted by this exceptional event, but because the 2021 – 2023 design values for these monitors are below the new 2024 Primary Annual PM_{2.5} NAAQS, these data are not currently regulatorily significant. These data are listed in **Table 2** and represent other PM_{2.5} monitors operated by WVDEP on June 29, 2023. The WVDEP is submitting these additional data to provide a more complete view of the impacts from the 2023 Canadian Wildfires and may amend this request in the future to exclude some of these additional data points should they become regulatorily significant. An examination of regulatory PM_{2.5} monitors operated in nearby states on or around June 29, 2023, reveals similar unusually high fine particulate matter concentrations also attributable to the 2023 Canadian Wildfires. This data is illustrated in **Sections 4.1 and 4.2** of this demonstration.

¹ National Aeronautics and Space Administration (NASA), “Tracking Canada’s Extreme 2023 Fire Season,” NASA Earth Observatory, NASA, October 24, 2023, <https://earthobservatory.nasa.gov/images/151985/tracking-canadas-extreme-2023-fire-season>

² <https://www.epa.gov/air-trends/air-quality-design-values>

³ <https://www.epa.gov/outdoor-air-quality-data/what-exceptional-event>

Table 2: June 29, 2023 – PM_{2.5} Monitoring Sites in West Virginia Exceeding the Daily NAAQS

County	Monitor Name	AQS Site ID	Date	Air Quality Index Category	24-hour Average Concentration (µg/m ³)
Brooke	Follansbee	54-009-0005	2023-06-29	Unhealthy	101.1
Brooke	Marland Hts	54-009-0011	2023-06-29	Unhealthy	100.4
Cabell	Huntington	54-011-0007	2023-06-29	USG	51.7
Hancock	Summit Circle	54-029-0009	2023-06-29	Unhealthy	99.0
Harrison	Clarksburg	54-033-0003	2023-06-29	Unhealthy	77.3
Kanawha	Charleston NCore (FRM)	54-039-0020	2023-06-29	Unhealthy	55.5
Kanawha	Charleston NCore (FEM)	54-039-0020	2023-06-29	Unhealthy	59.8
Kanawha	S Charleston	54-039-1005	2023-06-29	Unhealthy	57.8
Marion	Fairmont	54-049-0006	2023-06-29	Unhealthy	81.9
Marshall	Moundsville	54-051-1002	2023-06-29	Unhealthy	88.2
Monongalia	Morgantown	54-061-0003	2023-06-29	Unhealthy	81.4
Ohio	Warwood	54-069-0010	2023-06-29	Unhealthy	102.0
Wood	Vienna	54-107-1002	2023-06-29	Unhealthy	77.6

1.2 Clean Air Act Requirements

The EPA's 2024 PM_{2.5} NAAQS has two components: an annual average standard of 9.0 µg/m³, and a 24-hour average standard of 35 µg/m³. The annual PM_{2.5} standard is met when the annual weighted quarterly average averaged over three years is less than or equal to 9.0 µg/m³ (40 CFR § 50.20). Promulgation of the 2024 PM_{2.5} NAAQS has triggered the state recommendation process and states are required to submit their area recommendations by February 7, 2025. As part of this process, the WVDEP is submitting this exceptional event demonstration to exclude certain data from the 2021 – 2023 DV calculations which will be relied upon by the state in making its recommendation. Further, the exclusion of this data will impact EPA's designation process as the events will also be included in the 2022 – 2024 DV, as well as the 2023 – 2025 DV.

1.3 Exceptional Event Rule Requirements

EPA's *Treatment of Data Influenced by Exceptional Events* (Exceptional Event Rule) (81 Fed. Reg. 68,216⁴) details what air agencies must demonstrate to exclude exceptional event-related concentrations from regulatory determinations. The following are requirements under 40 CFR § 50.14(c)(3)(iv)(A–E):

- A. A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s); (See Section III of this document)
- B. A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation; (See Section IV of this document)
- C. Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the requirement in paragraph (c)(3)(iv)(B) of this section. The

⁴ <https://www.govinfo.gov/content/pkg/FR-2016-10-03/pdf/2016-22983.pdf>

Administrator shall not require a State to prove a specific percentile point in the distribution of data; (See Section IV of this document)

- D. A demonstration that the event was both not reasonably controllable and not reasonably preventable; and (See Section V of this document)*
- E. A demonstration that the event was a human activity that is unlikely to recur at a location or was a natural event. (See Section VI of this document)*

The Exceptional Events Rule further provides that for wildfire exceptional events, the wildfire must occur predominantly on wildland.

40 CFR 50.14(b)(4): Wildfires. The Administrator shall exclude data from use in determinations of exceedances and violations where a State demonstrates to the Administrator's satisfaction that emissions from wildfires caused a specific air pollution concentration in excess of one or more national ambient air quality standard at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Provided the Administrator determines that there is no compelling evidence to the contrary in the record, the Administrator will determine every wildfire occurring predominantly on wildland to have met the requirements identified in paragraph (c)(3)(iv)(D) of this section regarding the not reasonably controllable or preventable criterion.

The definition for “wildland” is provided in 40 CFR § 50.1(o). The term “wildland” issued in this document consistent with this definition.

40 CFR 50.1(o): Wildland means an area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

This demonstration addresses the above requirements in showing transported smoke from the 2023 Canadian Wildfires on wildlands caused the PM_{2.5} exceedances at the Martinsburg Monitor. In addition, the WVDEP will provide a 30-day public comment period on this exceptional event demonstration.

1.4 Canadian Wildfire Impacts on PM_{2.5} Design Values in West Virginia

The annual PM_{2.5} design value is calculated using the three-year average of the design value year annual average with the previous two-year annual averages. Annual averages are an average of the four quarter averages of a given calendar year. If the EPA includes the Martinsburg Monitor June 29, 2023 24-hour PM_{2.5} concentration in the 2023 design value for the Hagerstown-Martinsburg, MD-WV Metropolitan Statistical Area (MSA), then the 2023 design value for this MSA will be 9.1 µg/m³. Excluding this data point lowers the 2023 design value to 8.9 µg/m³. Removal of this data point from the 2021 – 2023 preliminary design value is regulatorily significant because it directly influences the initial area designation for the 2024 Primary Annual PM_{2.5} NAAQS.

1.5 Action Requested

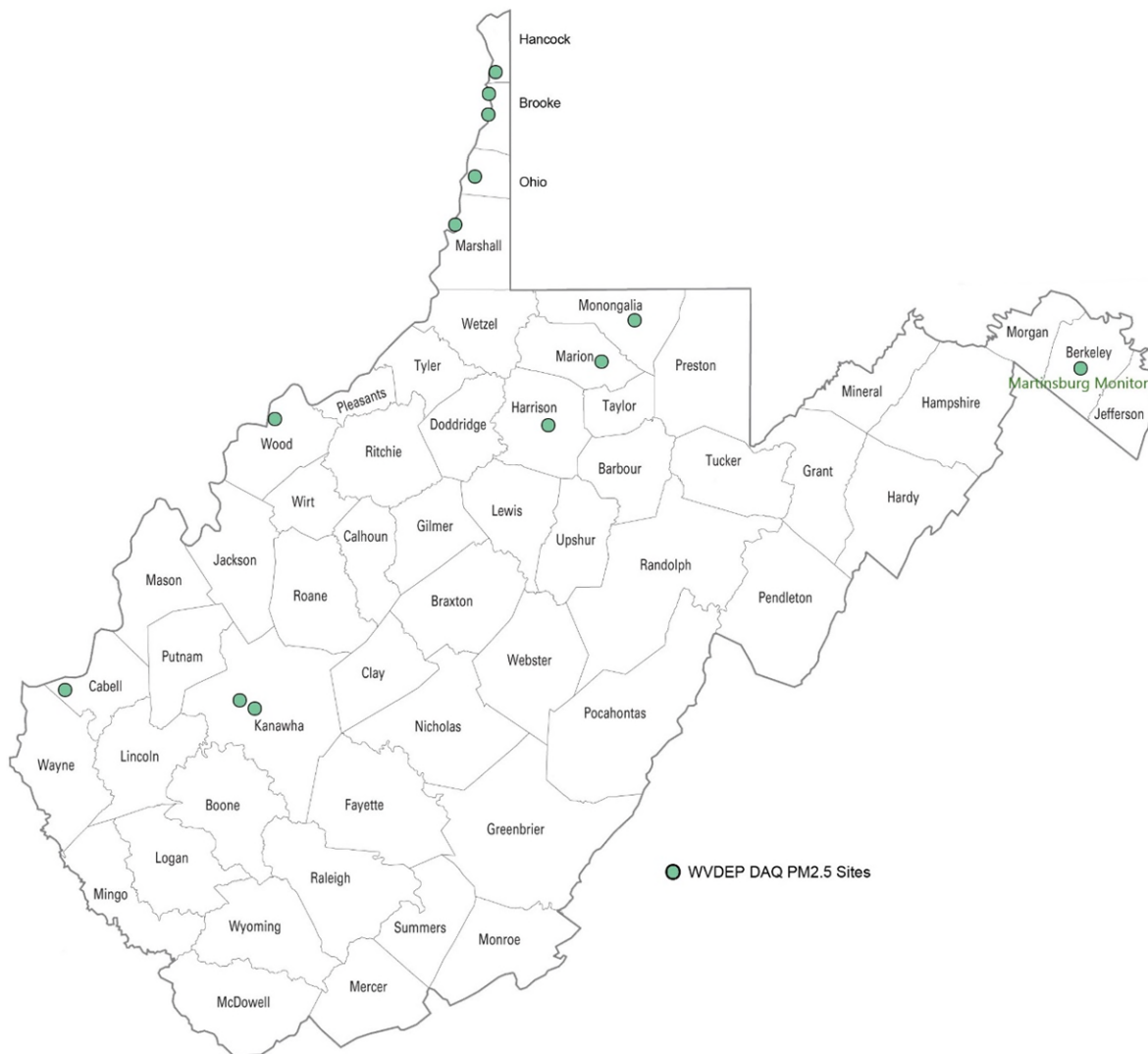
This demonstration meets all EPA documentation standards for Exceptional Events (see **Section 1.3**). Pursuant to federal regulations, the WVDEP requests EPA concurrence that the June 29, 2023 PM_{2.5} concentration shown in **Table 1** was caused by an exceptional event and should be excluded from regulatory decisions for the 2024 Primary Annual PM_{2.5} NAAQS and any other applicable regulatory purposes (40 CFR §50.14(b)). EPA’s Air Quality System (AQS) system for the Martinsburg Monitor on June 29, 2023, shows the data included in this demonstration initially had the “IF” flag applied. WVDEP updated the data flag to “rf” on July 31, 2024. As stated in **Section 1.1** above, the EPA concurred in their August 27, 2024 response to WVDEP’s initial notification that the data point could be considered for exclusion.

Section II. Overview of West Virginia Air Quality Monitoring Network

2.1 West Virginia Particulate Ambient Air Monitoring Network

West Virginia's ambient monitoring particulate matter network meets the minimum federal requirements by including all counties with required monitoring and additional monitors not required. More information about West Virginia's 2023 ambient monitoring network is available in the *2024 Ambient Air Monitoring Network Plan and SO₂ Data Requirements Rule Annual Report*, which is available on the WVDEP website⁵. **Figure 1** illustrates West Virginia's particulate matter ambient monitoring network locations.

Figure 1: West Virginia's Particulate Matter Ambient Monitoring Network. The Martinsburg Monitor is in Berkeley County in the Eastern Panhandle.



⁵ <https://dep.wv.gov/daq/air-monitoring/Documents/2024%20Ambient%20Air%20Monitoring%20Network%20Plan.pdf>

Section III. Narrative Conceptual Model

This section satisfies the following federal requirement:

A narrative conceptual model that describes the event(s) causing the exceedance or violation at the affected monitor(s); (40 CFR 50.14(c)(3)(iv)(A)).

The Exceptional Event Rule requires demonstrations include a narrative conceptual model describing the event. This section describes the 2023 Canadian Wildfires which affected public health and impacted air quality monitors across West Virginia. It also describes the general meteorological conditions which supported the transportation of the wildfire smoke and spread it across the state. PM_{2.5} pollution from the wildfire smoke impacted West Virginia ambient monitors and caused air quality concentrations which exceeded the NAAQS and were well above normal conditions across the state.

3.1 2023 Canadian Smoke and Wildfires

The 2023 Canadian Wildfires were well documented⁶ and impacted much of the geography of North America, including much of the United States. Wildland fire experts have described Canada's 2023 fire season as record-breaking⁷ and shocking⁸. Over the course of a fire season which started early⁹ and ended late¹⁰, blazes burned an estimated 71,410 square miles — an extraordinarily large area representing an area of land larger than the size of the US State of Washington, and representing about 5% of Canada's entire forested lands. On average, just over 8,100 square miles of wildlands burn in Canada annually¹¹; however, from January 1, 2023 through June 29, 2023, Canadian wildfires had already consumed 15,858 square miles of Canadian forest¹², much of it in the heavily forested remote sections of the eastern provinces of Quebec and Ontario. This figure represents nearly twice the average annual total area of wildfires throughout all of Canada but within the first six months of the year. The total area of Canadian forests which burned in 2023 amounted to nearly nine times the annual average area burned.

Many of Canada's 2023 fires, ignited by early summer lightning storms, burned for months in remote areas. The fires in Quebec, which heavily impacted air quality in the eastern United States, predominately started around June 1 as a result of lightning strikes and experienced surging growth by late June and into early July, a period when temperatures were unusually high and widespread drought gripped the region. On June 1, 2023 alone, more than 120 wildfires were started by lightning in Quebec. From June 1 until June 25, more forested land in southern Quebec burned than had burned during the previous 20 years combined¹³. These fires had a significant impact on air quality and spiked PM_{2.5} monitors to levels significantly higher than normal across the eastern half of North America.

Figure 2 is a map of Canada illustrating wildland areas which burned in 2023. Wildfire events were vastly more numerous than normal and highly unusual.

⁶ <https://ciffc.net/situation/archive/>

⁷ <https://natural-resources.canada.ca/simply-science/canadas-record-breaking-wildfires-2023-fiery-wake-call/25303>

⁸ <https://www.imperial.ac.uk/news/247154/scientists-uncover-role-climate-change-devastating/>

⁹ <https://earthobservatory.nasa.gov/images/151430/fires-burn-across-quebec>

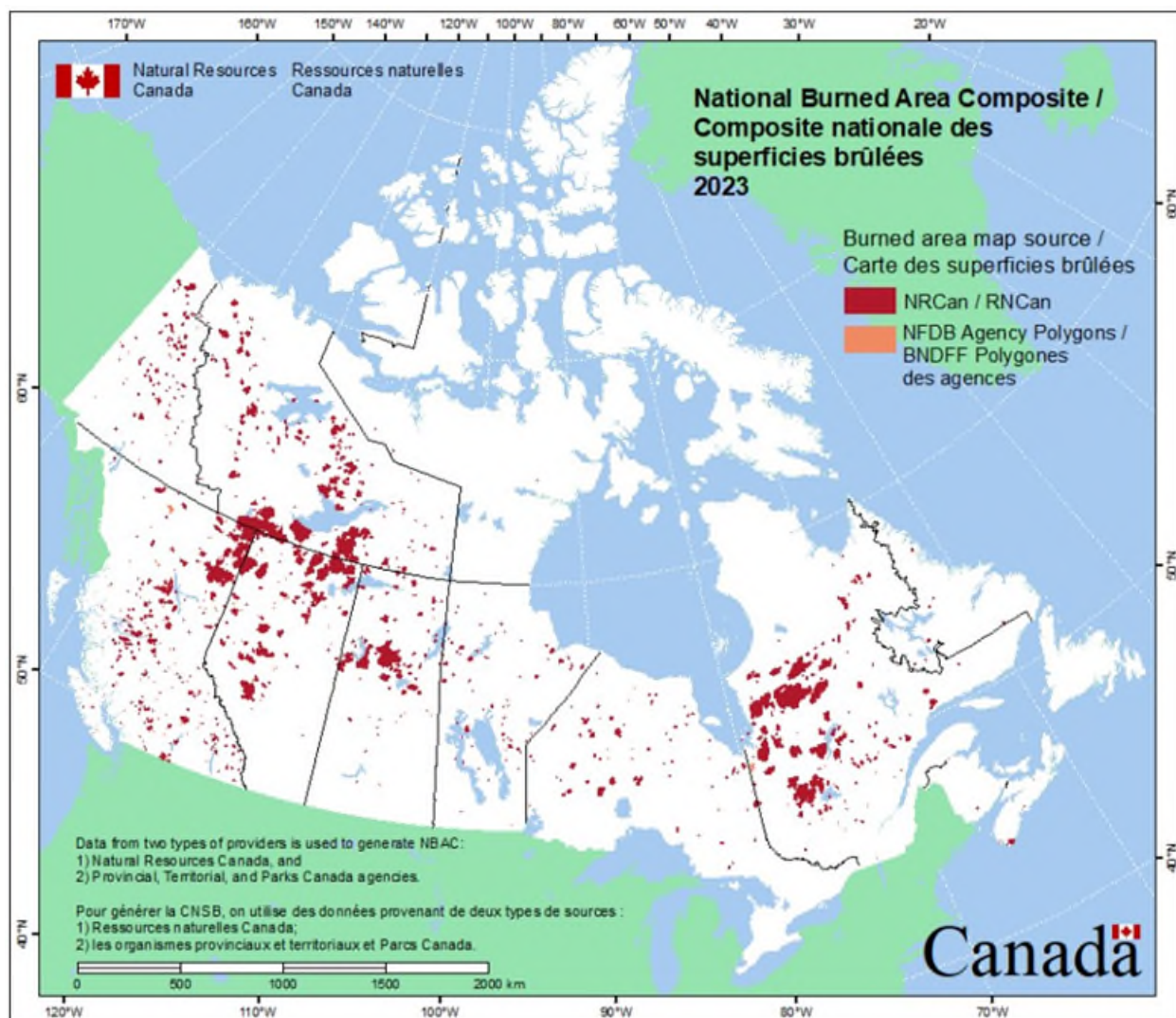
¹⁰ <https://earthobservatory.nasa.gov/images/151905/a-smoky-pall-over-canada>

¹¹ <https://cwfis.cfs.nrcan.gc.ca/ha/nfdb>

¹² <https://ciffc.net/situation/2023-06-29>

¹³ <https://natural-resources.canada.ca/simply-science/canadas-record-breaking-wildfires-2023-fiery-wake-call/25303>

Figure 2: 2023 Canadian Fires Total Area Burned¹⁴ (burned areas in red)



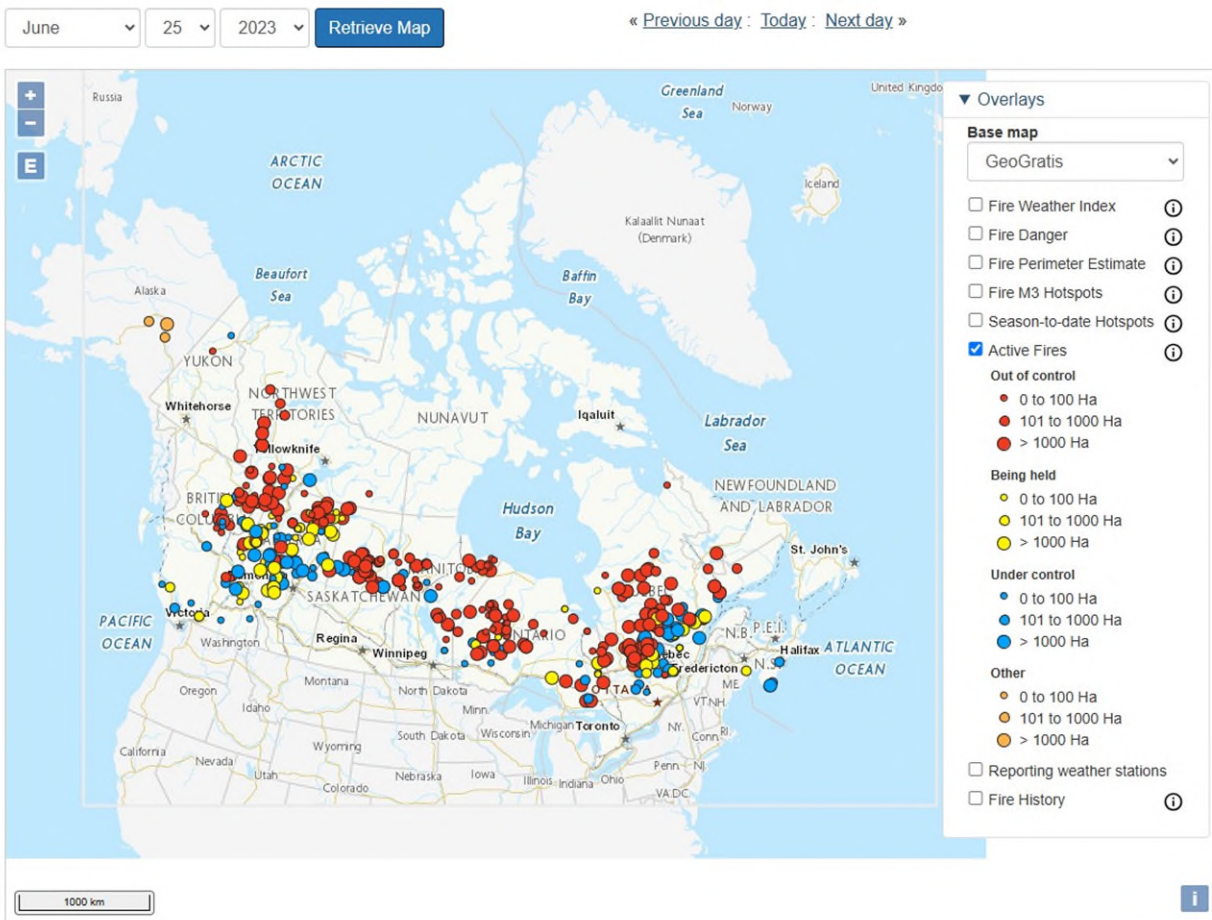
For much of the month of June 2023, remote wildfires across Canada contributed to extremely dense smoke and particulate emissions which were transported across much of North America. Numerous news reports covered the smoke impacts of these fires¹⁵. As illustrated on the Natural Resources Canada Interactive map in **Figure 3**, by June 25 many wildfires burned across Canada, with larger fires having burned uncontrolled for several weeks¹⁶. These immense myriad wildfires affected widespread remote areas and were especially intense in Quebec with numerous additional fires across most other Canadian provinces. The smoke plume generated by the Canadian wildfires was transported to West Virginia, as described, and shown later in this demonstration as measured by PM_{2.5} monitors.

¹⁴ <https://cwfis.cfs.nrcan.gc.ca/ha/nfdb?type=nbac&year=2023>

¹⁵ <https://wvmetronews.com/2023/06/29/canadian-fire-smoke-leads-to-poor-air-quality-in-west-virginia/>

¹⁶ <https://cwfis.cfs.nrcan.gc.ca/interactive-map?zoom=0¢er=425000%2C1865000&month=6&day=25&year=2023#iMap>

Figure 3: Canadian Wildfires Location and Size as of June 25, 2023



3.2 Martinsburg Area Smoke Impacts

Smoke from the June 2023 wildfires in eastern Canada impacted much of eastern North America, including the Martinsburg area. Local and regional news stories described how the smoke impacted planned local outdoor events, as well as the potential negative impacts to breathing the smoke laden air.^{17, 18, 19, 20} **Figures 4 and 5** below illustrate how dense smoke impacted the area at Poor House Farm Park, which is located approximately 4.25 miles west-northwest of the Martinsburg Monitor.

¹⁷ https://www.journal-news.net/journal-news/wildfire-smoke-causes-cancellations-across-the-eastern-panhandle/article_fba62f37-4113-5659-bbce-9602152bb9e4.html

¹⁸ <https://www.wboy.com/weather/air-quality-considered-unhealthy-across-west-virginia/>

¹⁹ <https://www.newsandsentinel.com/news/community-news/2023/06/smoke-from-canadian-wildfire-billows-over-mid-ohio-valley/>

²⁰ <https://justinweather.com/2023/06/29/june-29-code-red-air-quality-from-more-wildfire-smoke/>

Figure 4: View of Poor House Farm Park near the Martinsburg Monitor on June 29, 2023 (Credit: Tom Markland, The Journal²¹)



Figure 5: Similar view of Poor House Farm Park near the Martinsburg Monitor on October 8, 2024 (Credit: Joe Kreger, WVDEP)



²¹ https://www.journal-news.net/journal-news/wildfire-smoke-causes-cancellations-across-the-eastern-panhandle/article_fba62f37-4113-5659-bbce-9602152bb9e4.html

3.3 June 25 – 30, 2023 Timeline of Smoke Transport Progression

The following series of images illustrate – for each day of June 25 through June 30, 2023 – the National Oceanic and Atmospheric Administration (NOAA) Surface Analysis Weather Predictive Center²² synoptic meteorology across this demonstration area of interest within the United States and Canada, and the NOAA Hazard Mapping System smoke plume intensity²³. Changing weather over these six days illustrates how a low-pressure system originating in the upper Midwest passed across the southern waters of the Great Lakes, transported heavy wildfire smoke from Canada west and across the Great Lakes, into the upper Ohio River Valley, and finally into New England via its cyclonic counterclockwise rotation. The path of this low-pressure system and multiple accompanying adjacent anticyclonic high-pressure systems with clockwise rotations transported the smoke over the Martinsburg Monitor and nearby monitors, causing significantly higher than normal PM_{2.5} measurements. This general weather pattern affected air quality and spiked PM_{2.5} monitors across much of the eastern United States. Photographic evidence of the smoke in West Virginia and surrounding regions, including near the Martinsburg Monitor, can be found in the news articles referenced and footnoted in **Section 3.2**.

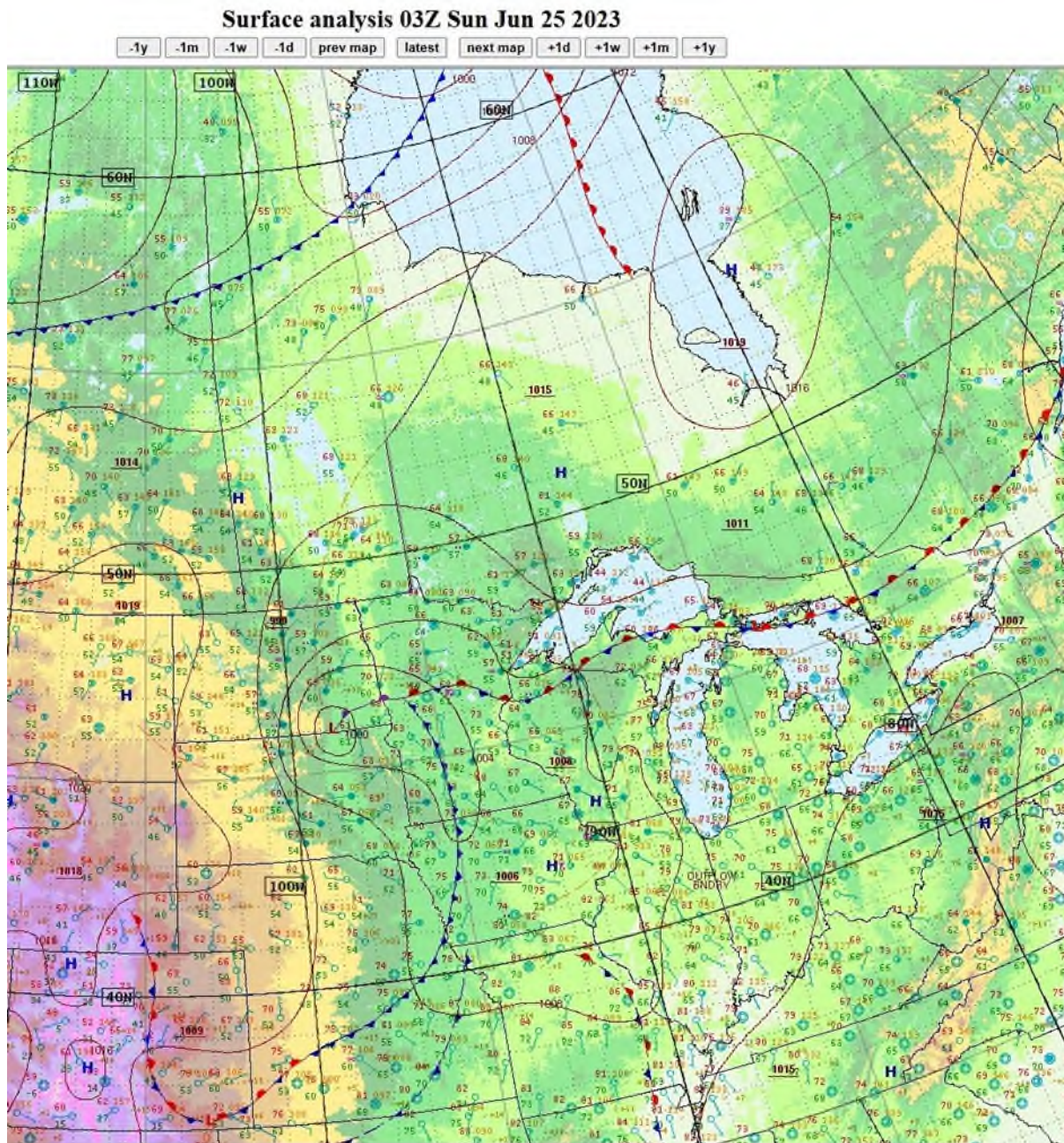
²² <https://www.wpc.ncep.noaa.gov/html/sfc-zoom.php>

²³ <https://www.ospo.noaa.gov/products/land/hms.html#data>

3.3.1 – June 25, 2023

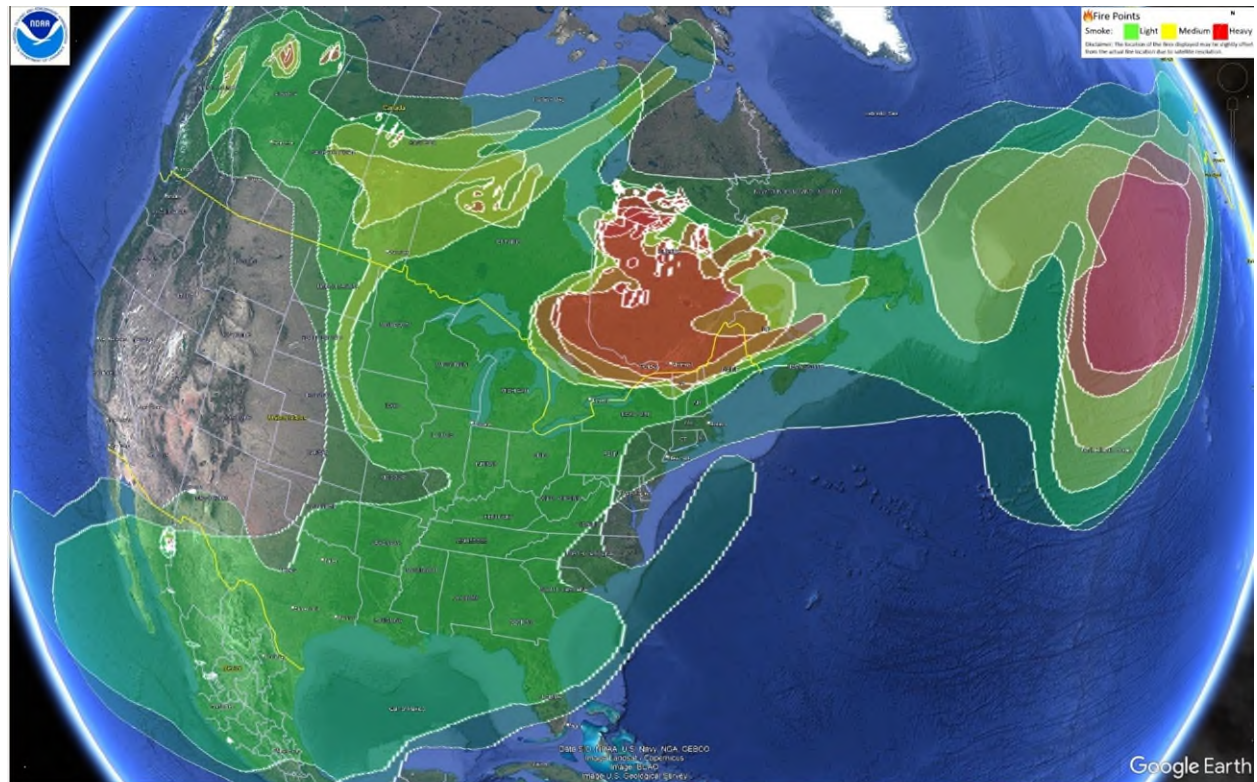
On June 25, 2023, a low-pressure system developed over the Dakotas and Minnesota. Concurrently, a high-pressure system formed over central Appalachia. The southeastern boundary counterclockwise motion of the low-pressure system meshed with the clockwise motion of the northwestern boundary of the high-pressure system, generally transporting cleaner air from the lower Mississippi River Valley up the Ohio River Valley and over the eastern Great Lakes. A frontal boundary from the low center across the Lakes acted as a barrier, preventing smoke from drifting south of the international border and causing it to concentrate over eastern Canada. This is illustrated in **Figure 6**.

Figure 6: June 25, 2023 03Z Surface Analysis. Source: NOAA Surface Analysis Weather Predictive Center



On June 25, 2023, dense smoke from the Quebec wildfires had accumulated over the province, in part by the motion of the meshed low- and high-pressure systems. This is clearly shown in **Figure 7**. Also visible is the transport of cleaner air from the lower Midwest over central Missouri and southern Illinois by the dual gear-mesh action of the low- and high-pressure systems. The frontal system from the low center across the Great Lakes acted to keep most of the smoke north, over Quebec and Ontario.

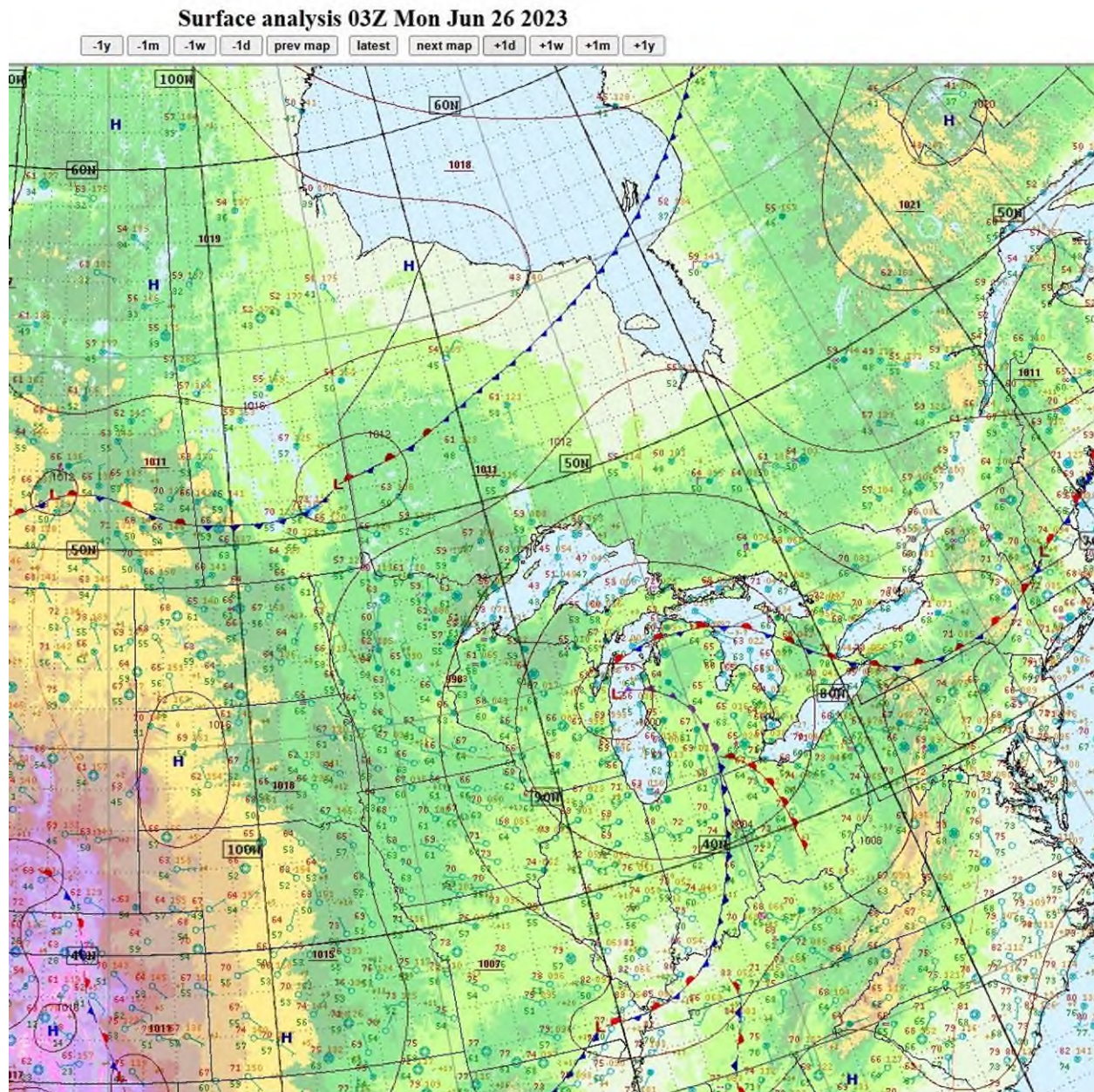
Figure 7: June 25, 2023 Smoke Layer. Source: NOAA Hazard Mapping System Fire and Smoke Product



3.3.2 – June 26, 2023

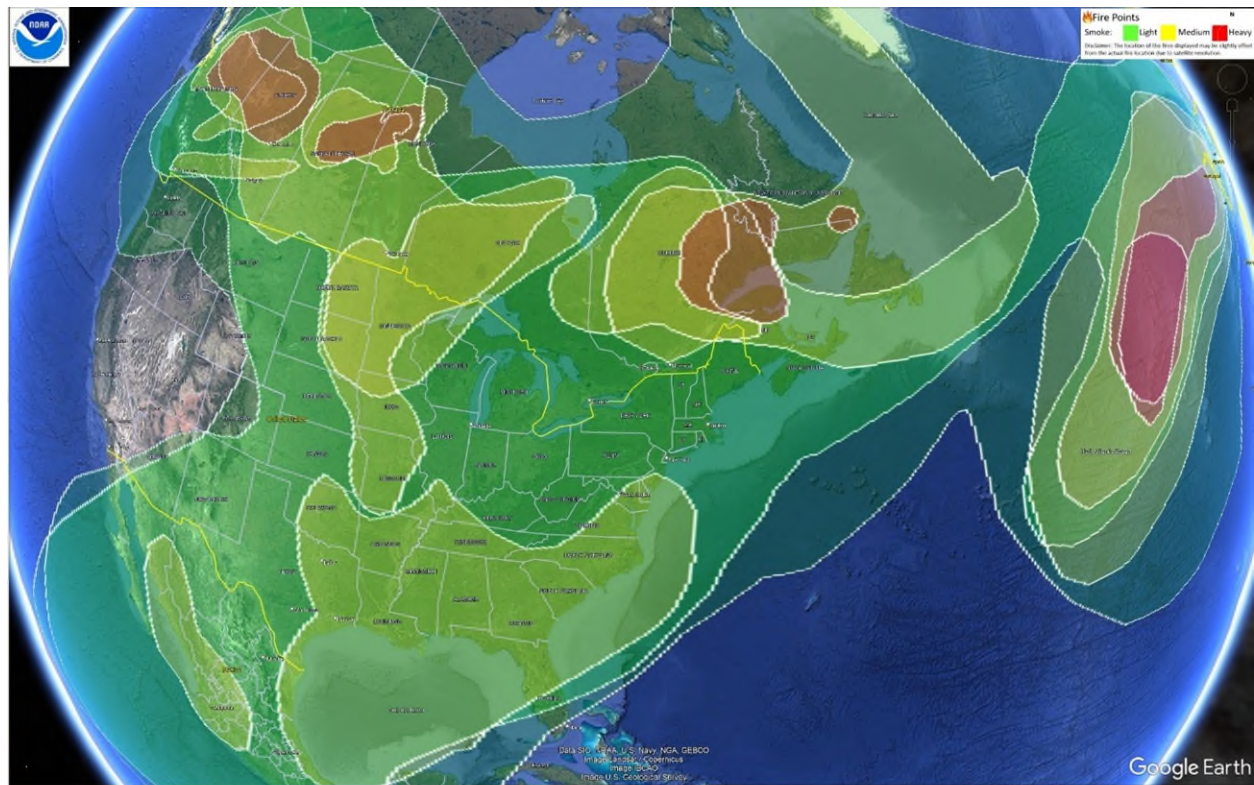
As shown in **Figure 8**, by June 26, 2023 the center of the low-pressure system steadily moved in an east-southeasterly direction over Lake Michigan, developing a more defined structure as it traveled. The high-pressure system over the Appalachian Region slipped south, assisting the motion of the low system via its own clockwise rotation in its generally eastward movement.

Figure 8: June 26, 2023 03Z Surface Analysis. Source: NOAA Surface Analysis Weather Predictive Center



As it moved over Lake Michigan, the northern boundary of the counterclockwise motion of the low-pressure system transported the dense concentrated Quebec and Ontario wildfire smoke around its western and southern boundaries, and transported the denser smoke-laden air southward across the upper American Midwest. This can be seen in **Figure 9**.

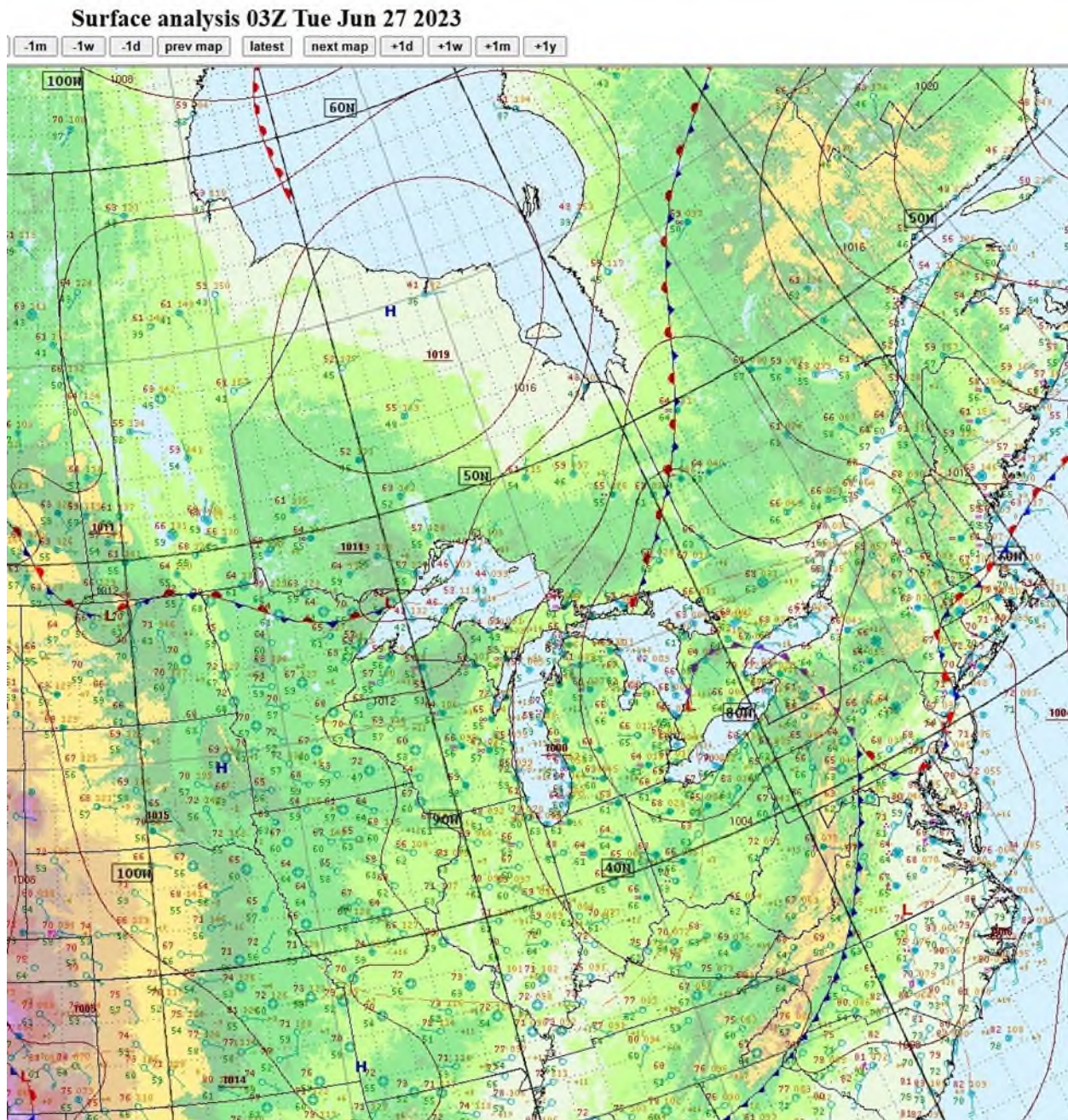
Figure 9: June 26, 2023 Smoke Layer. Source: NOAA Hazard Mapping System Fire and Smoke Product



3.3.3 – June 27, 2023

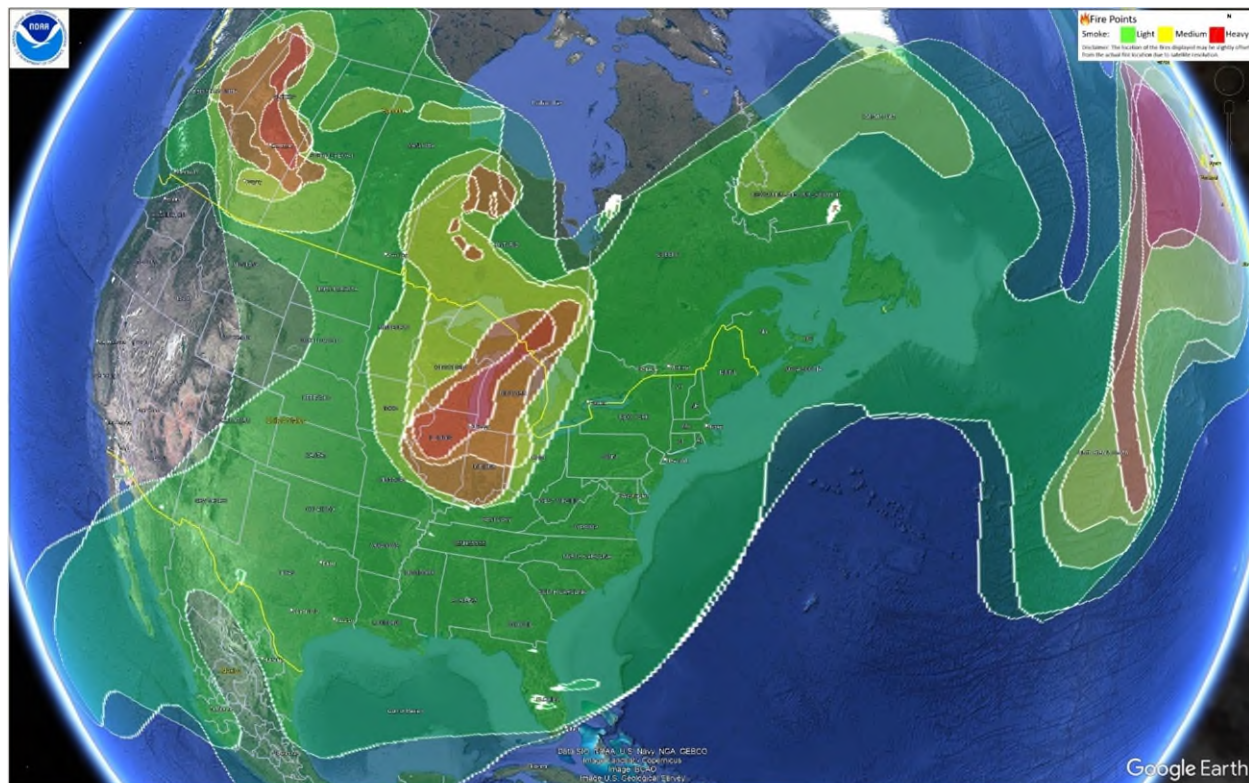
By June 27, 2023, the low-pressure system center moved over southern Lake Huron and northern Lake Erie. Concurrently, a clockwise rotating high-pressure system formed west and northwest of the low, over the Dakotas, Minnesota, Iowa, Nebraska, and Missouri, as well as over the southern Hudson Bay shoreline. This can be seen in **Figure 10**.

Figure 10: June 27, 2023 03Z Surface Analysis. (Source: NOAA Surface Analysis Weather Predictive Center)



The opposite motions of these systems meshed in a gear-like fashion along their respective boundaries, working together to squeeze and transport the Ontario and Quebec wildfire smoke between them and south over Michigan, Wisconsin, Illinois, and Indiana. This is well illustrated in **Figure 11**.

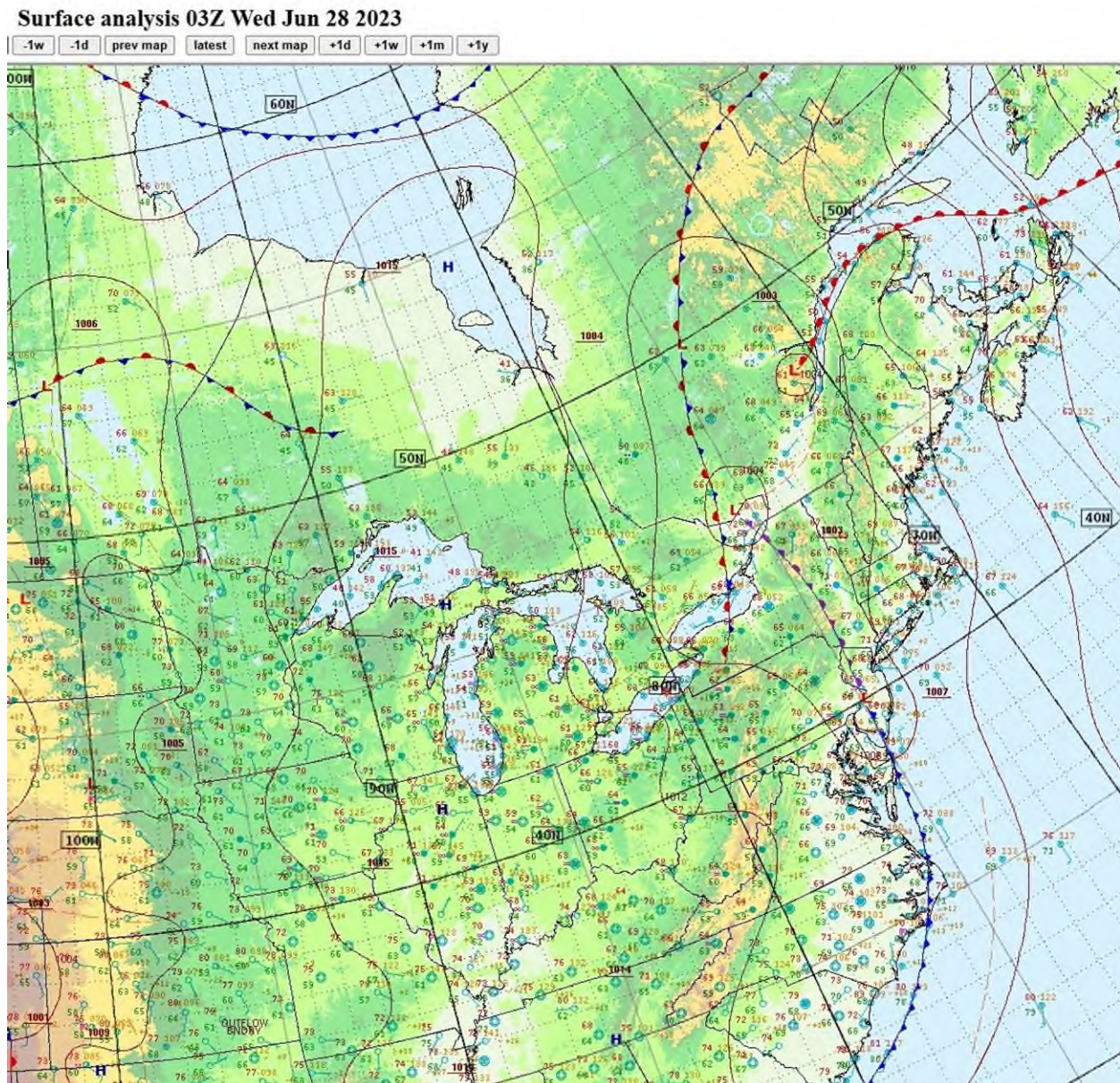
Figure 11: June 27, 2023 Smoke Layer. Source: NOAA Hazard Mapping System Fire and Smoke Product



3.3.4 – June 28, 2023

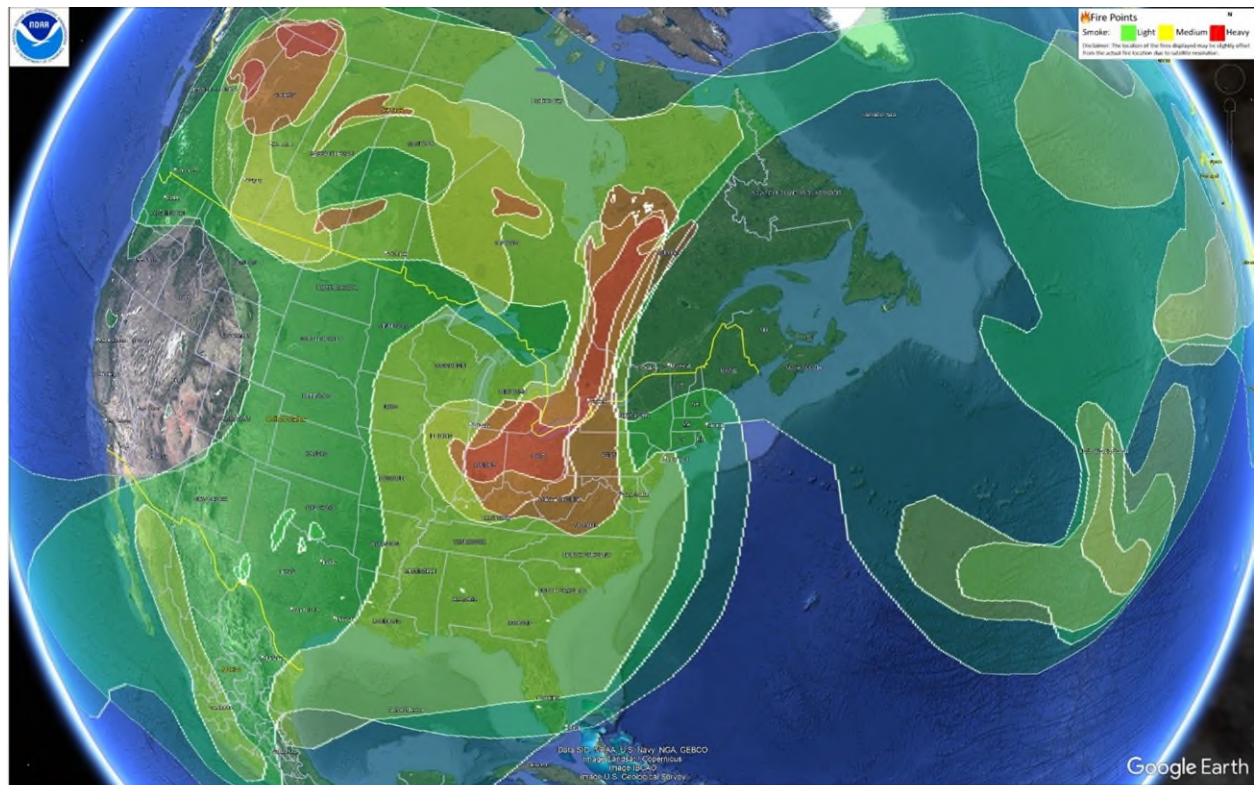
By June 28, 2023, the low-pressure system moved down the Saint Lawrence River along the eastern Canada-United States border. The high-pressure system, which was located west and northwest of the low-pressure system the day before, moved eastward over the Great Lakes and their border states and provinces. This is shown in **Figure 12**.

Figure 12: June 28, 2023 03Z Surface Analysis. (Source: NOAA Surface Analysis Weather Predictive Center)



The eastward motion of air from the interaction of the low- and high-pressure systems transported the dense Quebec and Ontario wildfire smoke first south over Lakes Huron and Erie, and then eastward over the upper Ohio River Valley, including Ohio, Pennsylvania, Kentucky, and West Virginia. This transport is shown in **Figure 13**.

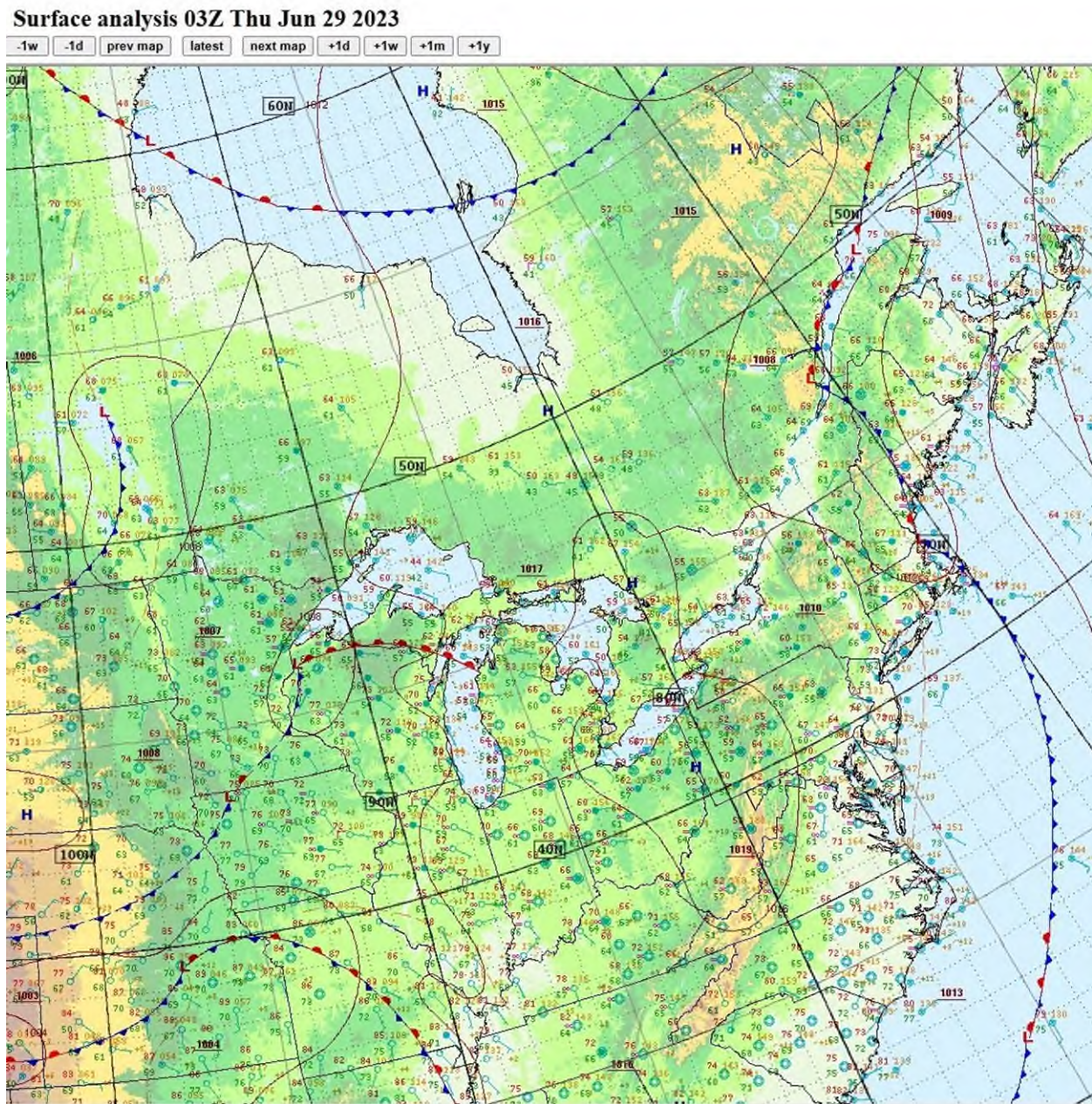
Figure 13: June 28, 2023 Smoke Layer. Source: NOAA Hazard Mapping System Fire and Smoke Product



3.3.5 – June 29, 2023

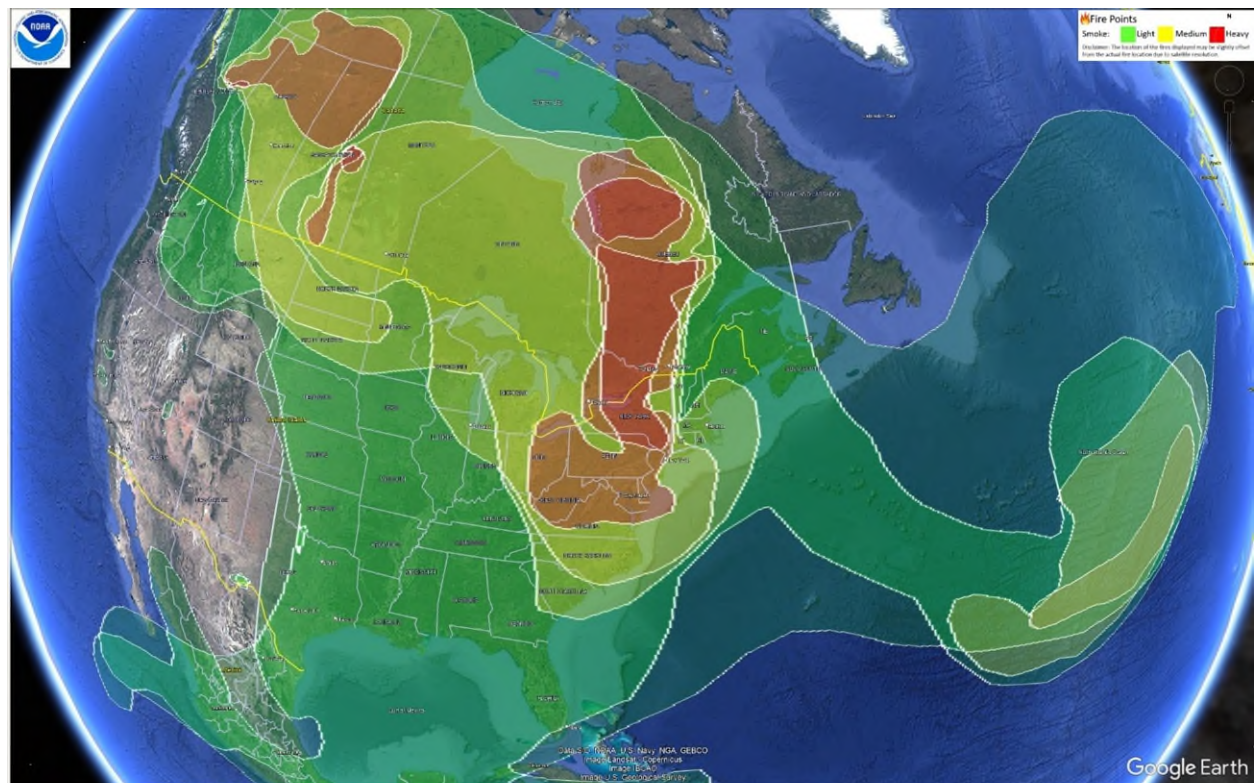
By June 29, 2023, the low-pressure system moved more northeastward, with its center of rotation generally following the Saint Lawrence River to the Gulf of Saint Lawrence. Also, by June 29, the high-pressure system moved eastward, and it was now centered along a line from near Pittsburgh northward along the Ontario-Quebec border. This can be seen in **Figure 14**.

Figure 14: June 29, 2023 03Z Surface Analysis. (Source: NOAA Surface Analysis Weather Predictive Center)



This boundary gear-like motion between the low- and high-pressure systems transported the densest parts of the most southern smoke east-northeasterly over Pennsylvania and into New York. This is illustrated in **Figure 15**.

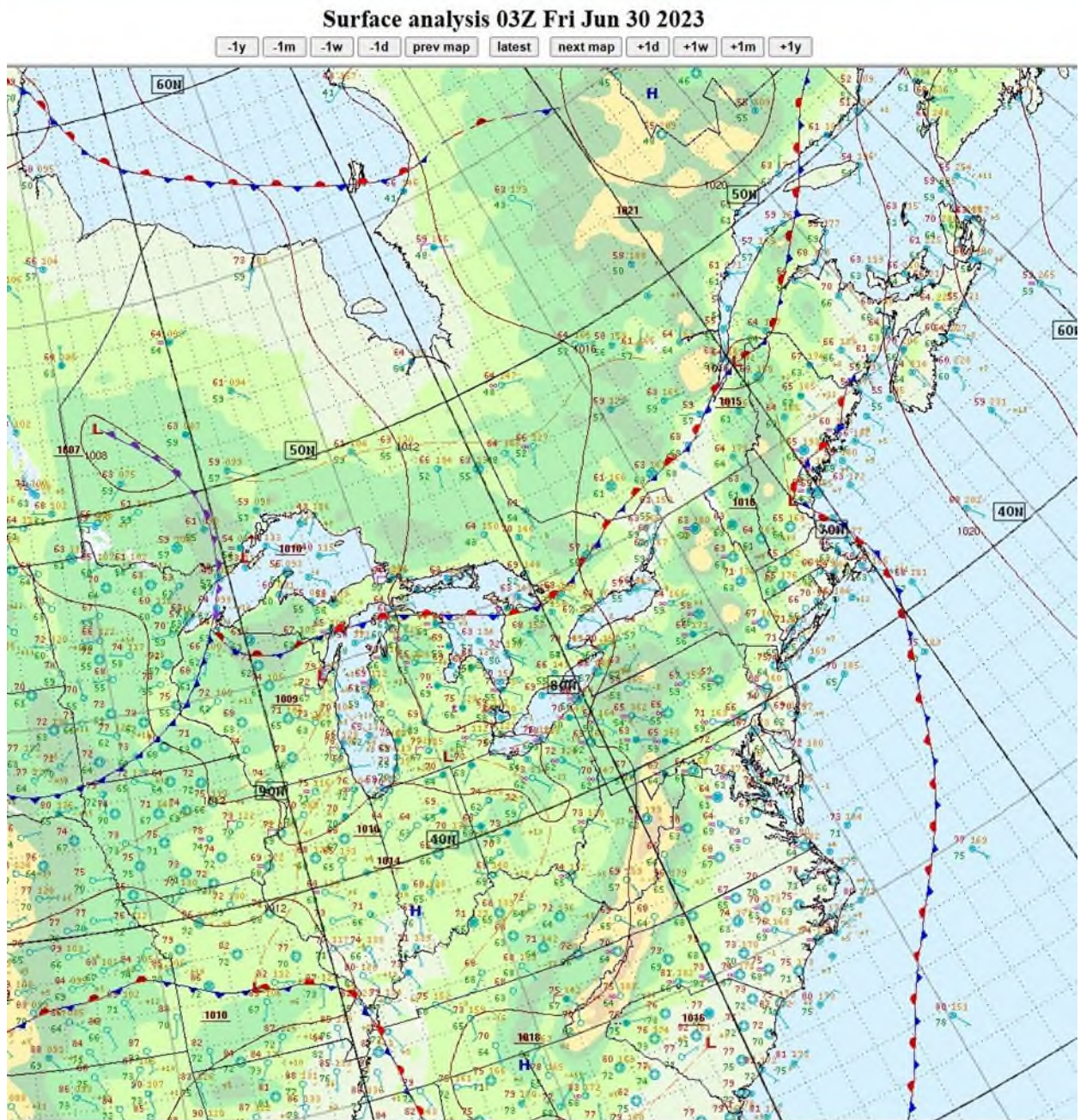
Figure 15: June 29, 2023 Smoke Layer. Source: NOAA Hazard Mapping System Fire and Smoke Product



3.3.6 – June 30, 2023

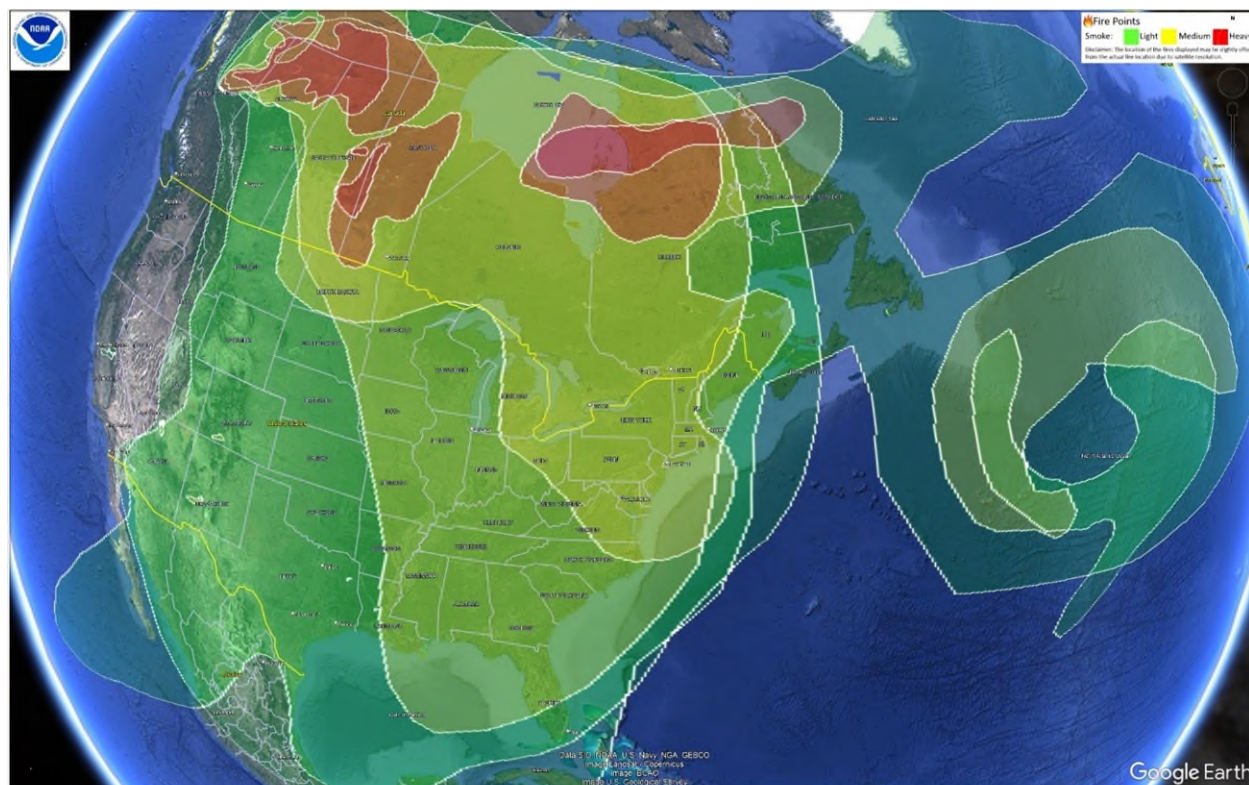
By June 30, 2023, the low-pressure system center had moved out over the North Atlantic Ocean and it was slowly replaced by a building high-pressure system which had formed over the southeastern United States. This is apparent in **Figure 16**.

Figure 16: June 30, 2023 03Z Surface Analysis. (Source: NOAA Surface Analysis Weather Predictive Center)



The eastward moving high-pressure system transported cleaner air into the Ohio Valley from the southwest along its western boundary, dissipating and diluting the smoke and transporting it northeasterly, back into Canada and over the northwestern waters of the North Atlantic Ocean. This is illustrated in **Figure 17**.

Figure 17: June 30, 2023 Smoke Layer. Source: NOAA Hazard Mapping System Fire and Smoke Product



The level of $PM_{2.5}$ concentration measured in West Virginia during this event was highly unusual. The measured $PM_{2.5}$ concentration for the Martinsburg Monitor exceedance on June 29, 2023 was a Tier 1 event since it was more than 1.5 times the most recent 5-year month specific 98th percentile for 24-hour $PM_{2.5}$ data, as identified in the Environmental Protection Agency’s Tiering Tool.²⁴ The tiering graph for the Martinsburg Monitor is shown in **Section IV – Clear Causal Relationship** in **Figure 50**. The tiering graph shows the June 29, 2023 measured concentration of $83.8 \mu g/m^3$ is 4.3 times the highest 98th percentile of data, which far exceeded the 1.5 times or more threshold to be considered a Tier 1 event.

²⁴ U.S. Environmental Protection Agency. “Tiering Tool – for Exceptional Events Analysis”. Air Quality Analysis. U.S. Environmental Protection Agency, March 26, 2024, <https://www.epa.gov/air-quality-analysis/tiering-tool-exceptional-events-analysis>.

Section IV. Clear Causal Relationship

This section satisfies the following federal requirements:

- The event affected air quality in such a way that there exists a clear, causal relationship between the specific event and the monitored exceedance(s) or violation(s). (40CFR 50.14 (c)(3)(iv)(B))
- Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site(s) at other times. (40 CFR 50.14(c)(3)(iv)(C))

The Exceptional Event Rule requires a clear causal relationship exist between the measured exceedances and the exceptional event to demonstrate the exceptional event caused a specific air pollution concentration at an air quality monitoring location. The analysis provided in this section is consistent with the clear causal relationship examples provided in the Final Rule on the Treatment of Data Influenced by Exceptional Events.

This demonstration follows the process described in the *PM_{2.5} Wildland Fire Exceptional Events Tiering Document*.²⁵ It states:

This document outlines a tiered approach for addressing the clear causal relationship element within a wildland fire PM_{2.5} demonstration, recognizing that some causal relationships may be clearer and, therefore, require relatively fewer pieces of evidence to satisfy the rule requirements.

Tier 1 clear causal analyses are intended for wildland fire events which cause unambiguous PM_{2.5} impacts well above historical 24-hour concentrations, thus requiring fewer pieces of evidence to establish a clear causal relationship. This demonstration is for a Tier 1 event.

Tier 1 analyses should include:

- The tiering threshold used for the event day, which calculation methodology was used, and comparison of the 24-hour PM_{2.5} value to the tiering threshold. (See **Figure 50, Section 4.3** of this document)
- Comparison of the fire-influenced exceedance with historical concentrations, by providing two data plots appropriate to the chosen tiering threshold calculation methodology. (See **Figures 50 and 51, Section 4.3** of this document)
- Evidence of transport of fire emissions from fire to the monitor. (See **Section 4.1** of this document)

While the West Virginia Division of Forestry has a limited prescribed fire program for state lands²⁶ and it issues vegetative matter burn permits to private landowners for land-clearing operations²⁷, any prescribed burns and wildfires in West Virginia during the 2023 Canadian Wildfires event generally did not impact PM_{2.5} concentrations sufficiently to affect the Causal Relationship. During drought or other dry seasonal conditions, burn permits are not issued until conditions improve. Federal lands in West Virginia are managed by Federal Land Managers (FLM), including the United States Forest Service (USFS) and the National Park Service (NPS). Wildfires on federal properties are managed and monitored by the respective managing FLM, and the WVDEP is included in communications concerning large fire events.

²⁵ U.S. Environmental Protection Agency. PM_{2.5} Wildland Fire Exceptional Events Tiering Document, April 2024, P.5.

<https://www.epa.gov/system/files/documents/2024-04/final-pm-fire-tiering-4-30-24.pdf>

²⁶ <https://code.wvlegislature.gov/20-3-5A/>

²⁷ <https://wvforestry.com/permits-and-payments/>

4.1 Canadian Wildfire Smoke Impacts PM_{2.5} Monitors

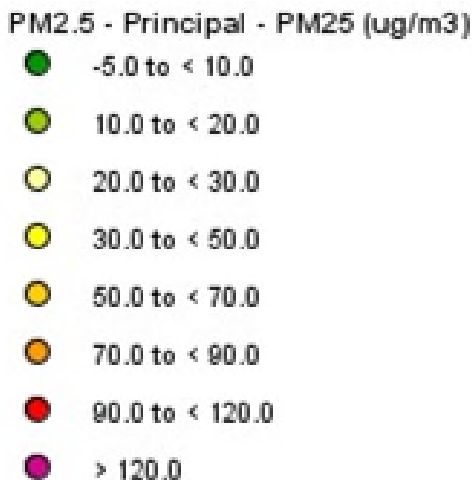
The following figures show, for each day of June 25 through June 30, 2023, the AirNow Navigator Data Fusion Tool with the Hazard Mapping System (HMS) Smoke satellite overlay and a color scale for the 24-hour PM_{2.5} average concentrations²⁸ measured at regulatory monitors. Alternating figures illustrate measured PM_{2.5} 24-hour concentration values for regulatory monitors in the Martinsburg, West Virginia region. The legend for the images shows the concentration ranges for the monitor color range.

Similarly to **Figures 6 through 17**, the daily progression of images featured in **Sections 4.1.1 through 4.1.6** demonstrate high PM_{2.5} concentrations in southern Quebec on June 25 and the rotation and transport of the most intense smoke plume across the Great Lakes and then into the Ohio River Valley before transport into New England and eventually out over the North Atlantic Ocean. As the low-pressure system described in **Section 3.2** moved eastward from June 25 through June 30, high PM_{2.5} concentrations rotated in a counterclockwise motion over the eastern United States, transported by boundary flow between the low-pressure and adjacent high-pressure systems. This is illustrated in **Figures 19, 21, 23, 25, 27, and 29** for June 25 through June 30, 2023, respectively.

Similarly, PM_{2.5} 24-hour concentrations measured by continuous PM monitors spiked in a similar counterclockwise circular pattern on the same days. These concentrations for the region around the Martinsburg Monitor are shown in **Figures 20, 22, 24, 26, 28, and 30** for June 25 through June 30, 2023, respectively.

Monitor colors in **Figure 19 through Figure 30** represent measured PM_{2.5} concentration ranges and are defined in the key of each image, but this key is also shown in **Figure 18**.

Figure 18: PM_{2.5} Monitor Concentrations in Figures 19 through 30

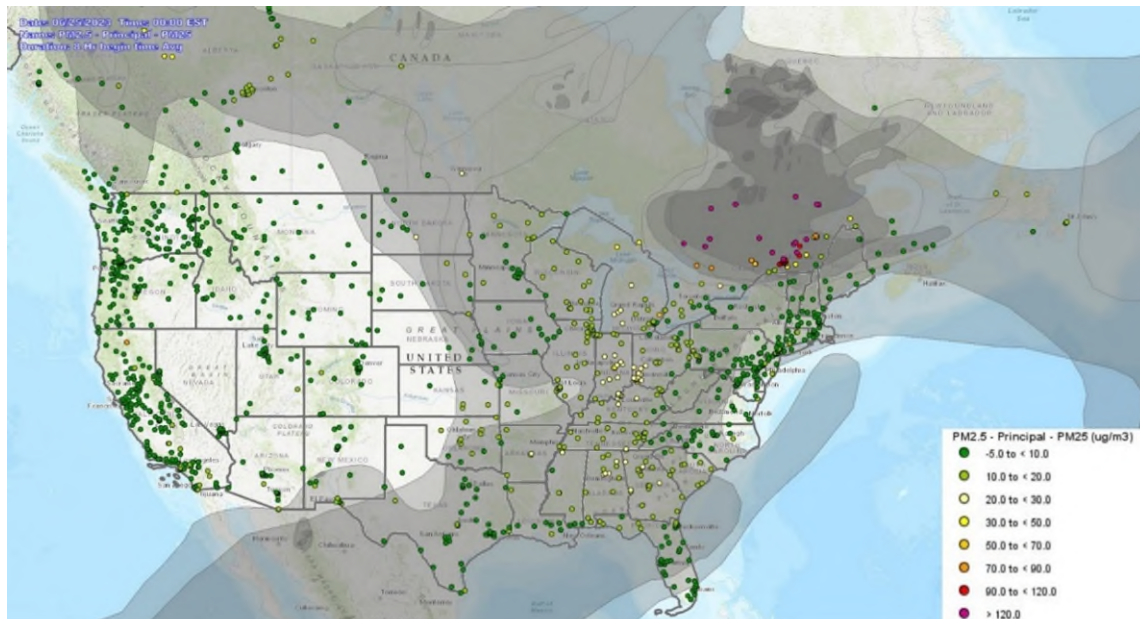


²⁸ <https://www.airnowtech.org/>.

4.1.1 – June 25, 2023

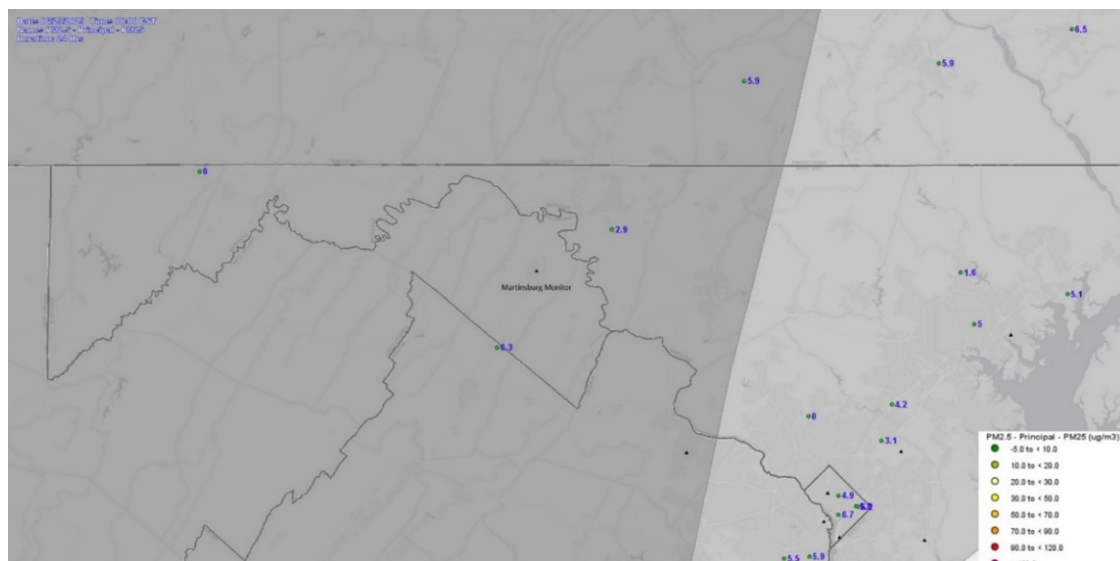
On June 25, 2023, higher PM_{2.5} concentrations as measured by continuous PM monitors were visible over Quebec and Ontario at the start of the event as mapped in **Figure 19**. These are shown as red and purple dots on the map. Most PM_{2.5} monitors throughout the eastern United States measured <30.0 µg/m³, which are visible as dark green, light green, and yellow dots.

Figure 19: North America PM_{2.5} Monitor Values and Smoke Plume for June 25, 2023



Continuous PM_{2.5} monitor values for the wider area around the Martinsburg Monitor are illustrated in **Figure 20**. Values are low and in normal ranges. The smoke plume is the darker area towards the west on the map, on the left side of image.

Figure 20: Martinsburg Monitor Regional PM_{2.5} 24-hour Concentrations and Smoke Plume for June 25, 2023



4.1.2 – June 26, 2023

By June 26, 2023, the low-pressure system moved eastward, and its counterclockwise rotation pulled the smoke plume south over Minnesota, Wisconsin, Iowa, and Missouri; higher monitor values were measured in these states. Widespread air transport moved cleaner air from the Midwest into the Mid-Atlantic region, as can be seen in the monitor color changes in the affected areas in **Figure 21**. Yellow dots represent monitors where increased PM_{2.5} measurement in the upper Midwest areas west of the Great Lakes as the smoke-laden Canadian air moved into the region. Meanwhile, the green and yellow dots more eastward represent monitors measuring cleaner air which moved into the Mississippi River Valley, pushing the air previously along the Mississippi River over the Appalachian Mountains and the southeastern states.

Figure 21: North America PM_{2.5} Monitor Values and Smoke Plume for June 26, 2023

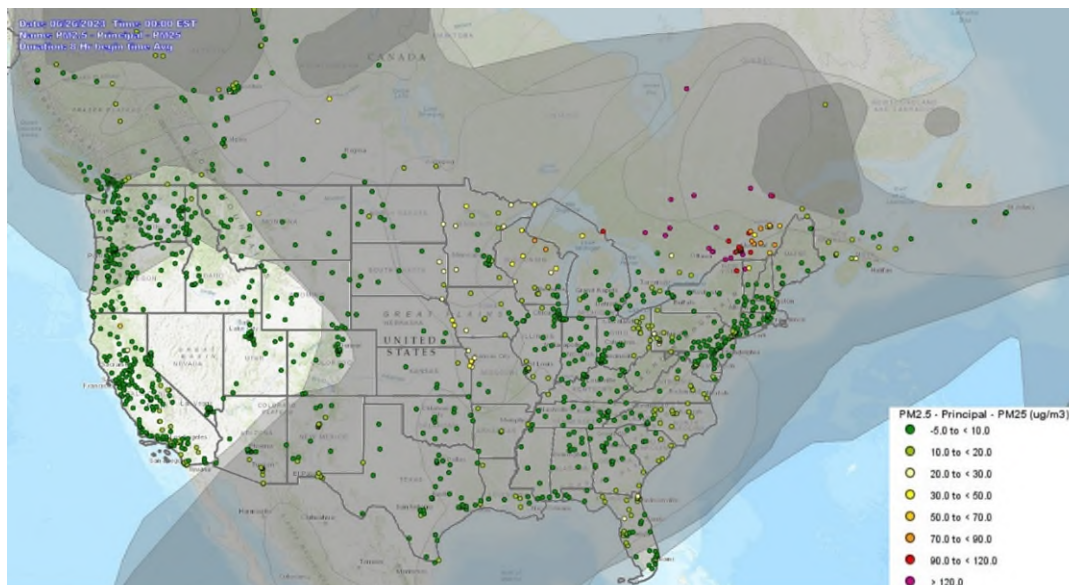
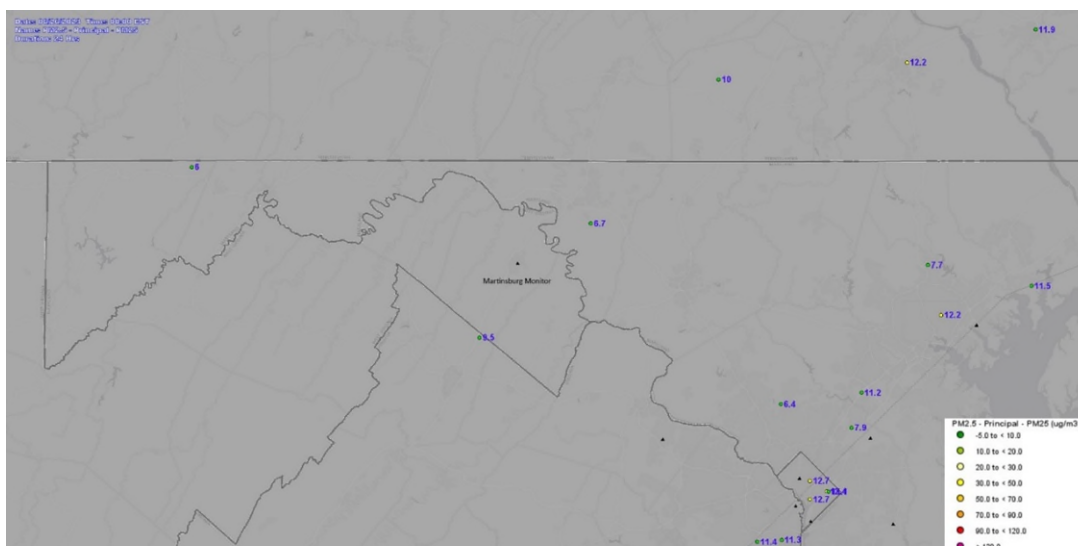


Figure 22 shows a denser smoke plume inundated the region around the Martinsburg Monitor on June 26. Regional continuous PM_{2.5} monitor values were higher than June 25.

Figure 22: Martinsburg Monitor Regional PM_{2.5} 24-hour Concentrations and Smoke Plume for June 26, 2023



4.1.3 – June 27, 2023

By June 27, 2023, the low-pressure system moved eastward over the Great Lakes and transported the smoke plume southeasterly. This is illustrated in **Figure 23**, which shows the very high PM_{2.5} concentrations in the areas with the densest smoke. Red dots representing monitors measuring the densest smoke plume and highest PM_{2.5} measurements >90.0 µg/m³ were concentrated over Lake Michigan and its border states. The PM_{2.5} gradient decreased quickly east of the red dot cluster, as shown as the area of orange and yellow dots on the southeast perimeter of the densest smoke plume through Illinois, Indiana, Ohio, and Michigan. Cleaner air moved in from the west over Minnesota and Iowa and lowered the local monitor values, which are represented by yellow and light green dots.

Figure 23: North America PM_{2.5} Monitor Values and Smoke Plume for June 27, 2023

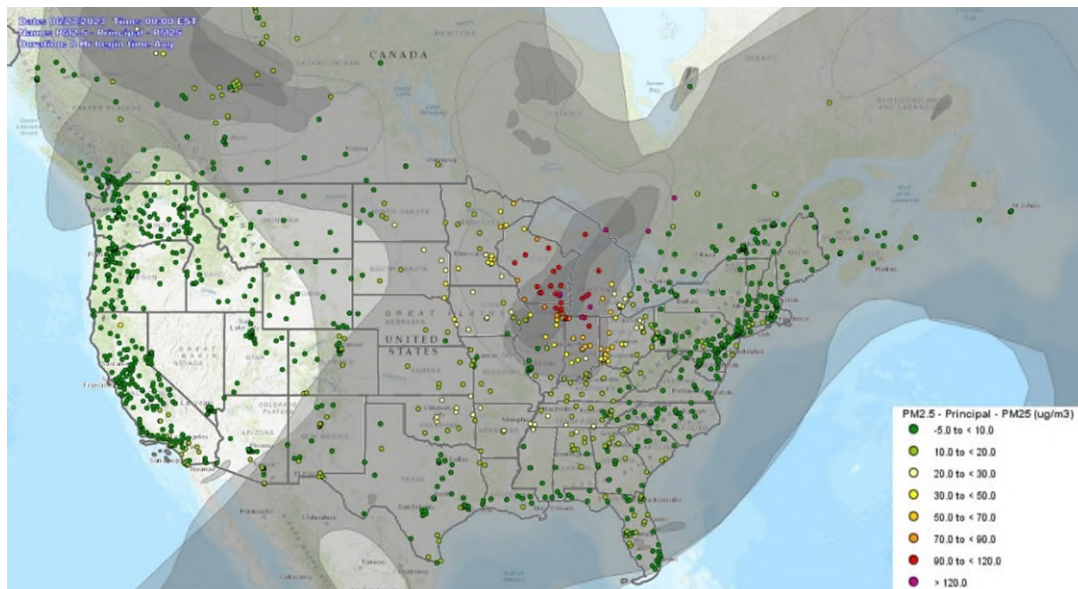
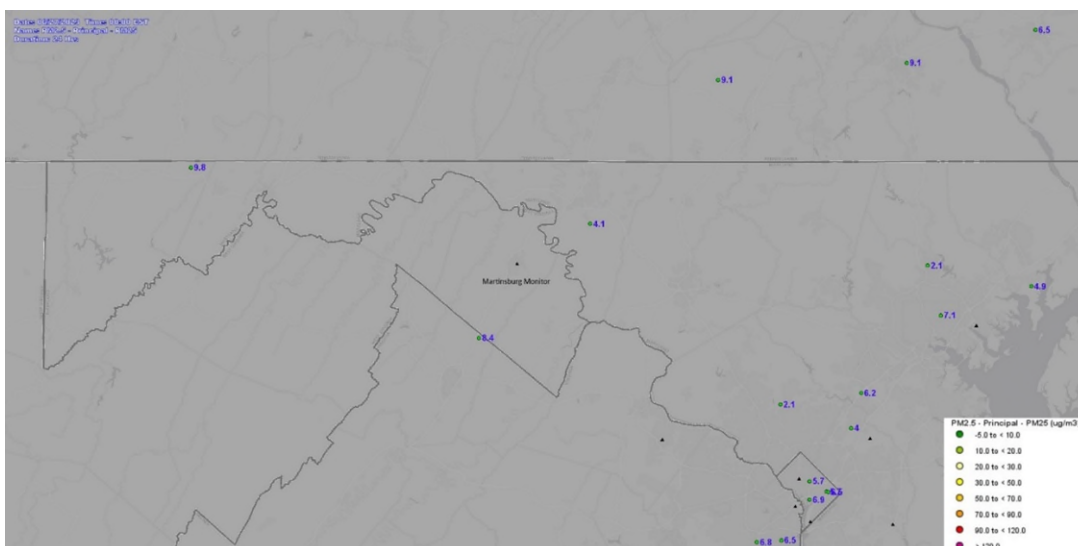


Figure 24 shows continuous PM_{2.5} monitors in the region around the Martinsburg Monitor on June 27, 2023 are not yet measuring the worst impacts of the smoke, which was still densest further west. This situation rapidly deteriorated over the next few days.

Figure 24: Martinsburg Monitor Regional PM_{2.5} 24-hour Concentrations and Smoke Plume for June 27, 2023



4.1.4 – June 28, 2023

Figure 25 illustrates the extremely high PM_{2.5} measurements of the continuous monitors on June 28, 2023 as the densest portion of the smoke plume was transported eastward across Illinois, Indiana, Ohio, and the westernmost areas of Pennsylvania, roughly centered around Indianapolis and with a radius of approximately 300 miles. A tight gradient of smoke concentration is visible around the cluster of red and purple dots representing PM_{2.5} measurements >90.0 µg/m³. The eastern edge of the densest smoke plume was immediately upwind of the Martinsburg Monitor in the upper Ohio Valley.

Figure 25: North America PM_{2.5} Monitor Values and Smoke Plume for June 28, 2023

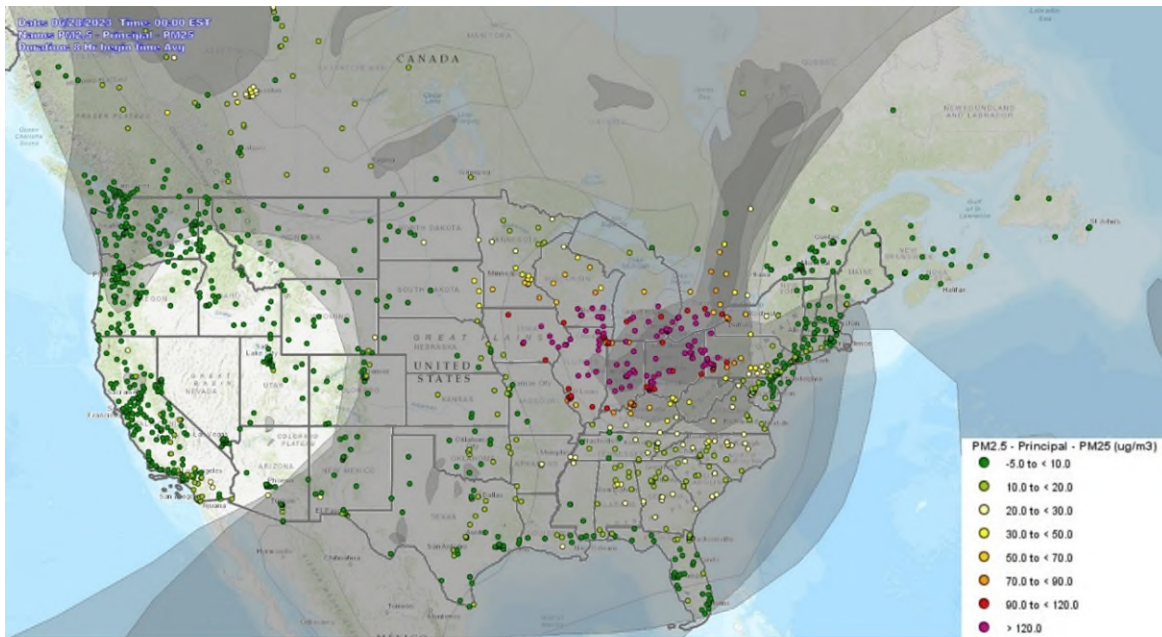
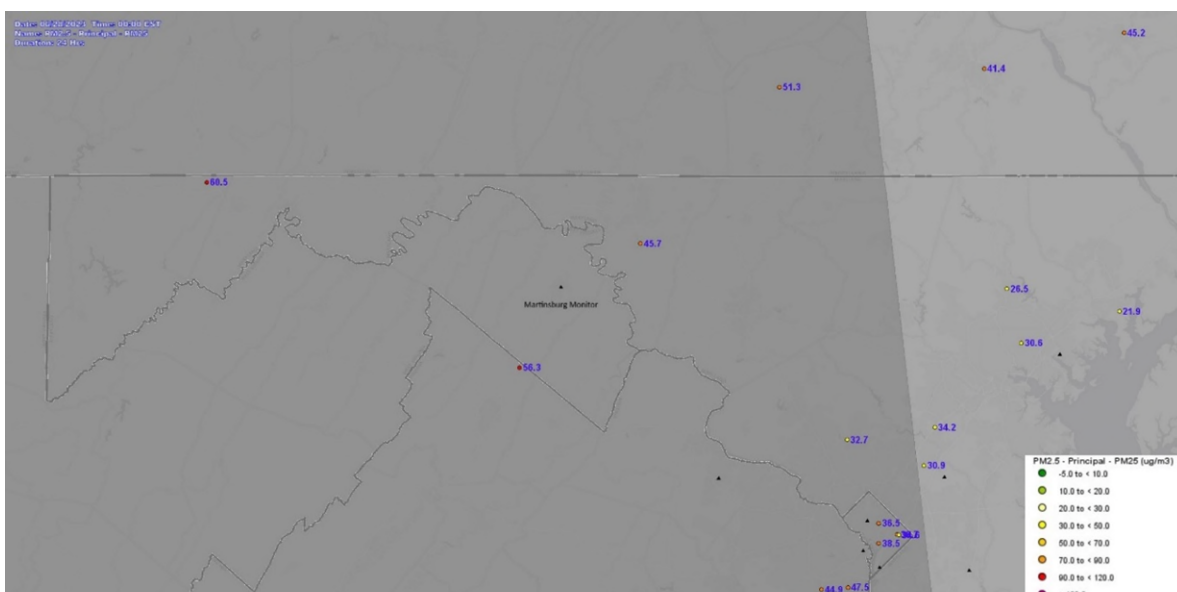


Figure 26 shows on June 28, 2023 the effects of the denser smoke plume were measured by continuous PM monitors in the region around the Martinsburg Monitor, but especially upwind towards the west.

Figure 26: Martinsburg Monitor Regional PM_{2.5} 24-hour Concentrations and Smoke Plume for June 28, 2023



4.1.5 – June 29, 2023

Figure 27 shows by June 29, 2023 the densest smoke was transported over much of the Ohio River Valley, with the highest concentrations measured by the continuous PM_{2.5} monitors in a band from northern Illinois, across Indiana, Ohio, West Virginia, and Pennsylvania. These are shown by the red and purple dots representing PM_{2.5} concentrations >90.0 µg/m³ ranging from eastern Iowa across the Midwest and southern shores of the Great Lakes into central Pennsylvania.

Figure 27: North America PM_{2.5} Monitor Values and Smoke Plume for June 29, 2023

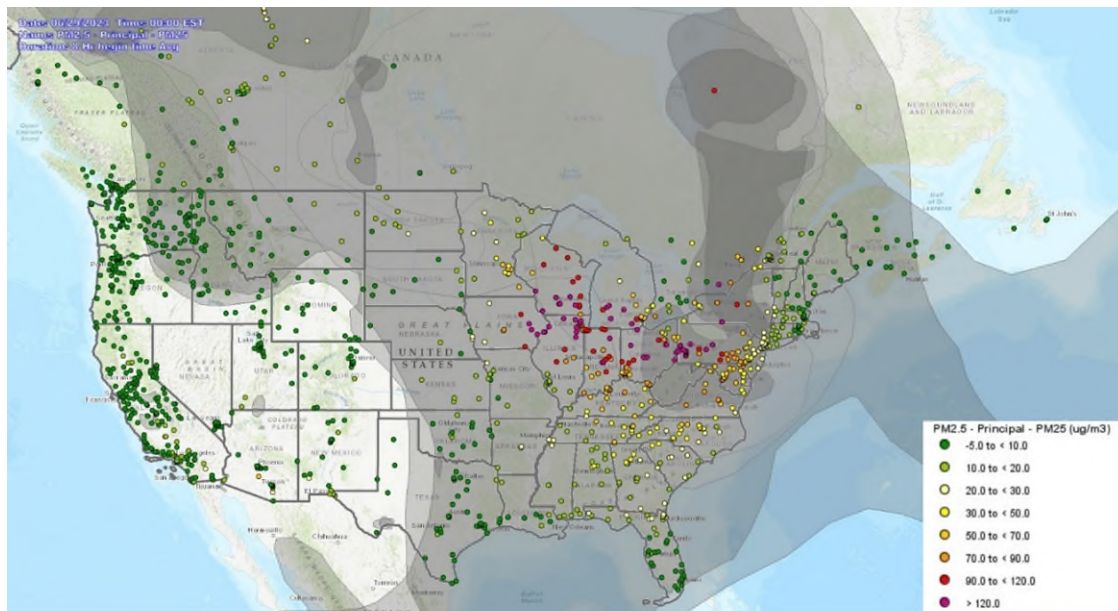
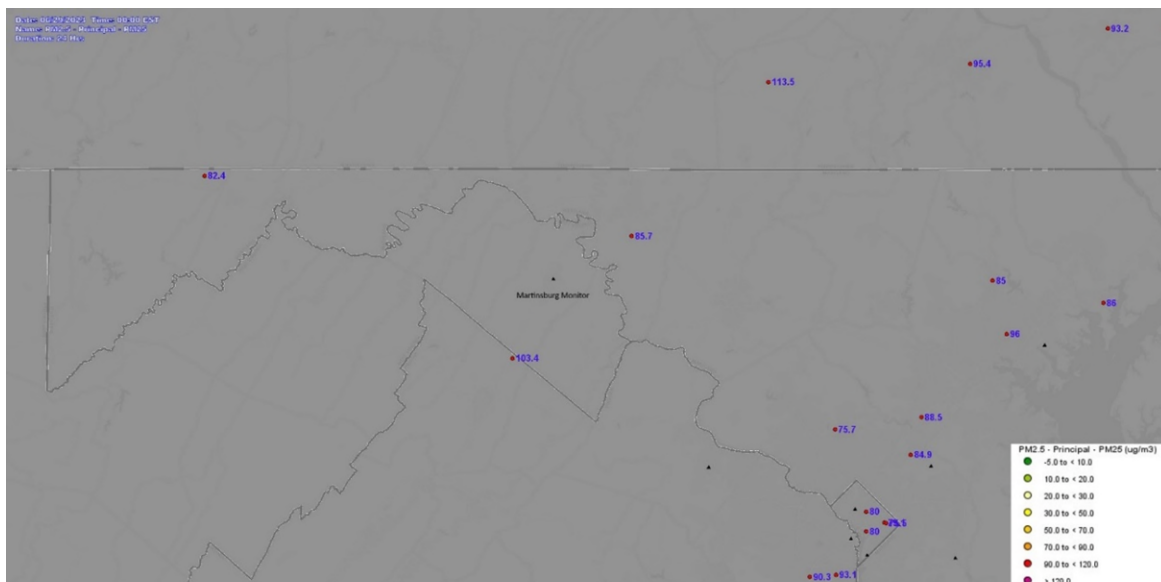


Figure 28 illustrates extremely high continuous PM_{2.5} monitor measurements on June 29, 2023 in the area around the Martinsburg Monitor. The extraordinarily high Martinsburg Monitor measurement of June 29, 2023 is the reason for this exceptional events demonstration.

Figure 28: Martinsburg Monitor Regional PM_{2.5} 24-hour Concentrations and Smoke Plume for June 29, 2023



4.1.6 – June 30, 2023

By June 30, 2023, the smoke plume began to dissipate, dilute, and was transported away from the most impacted areas of the previous five days. The highest measured PM_{2.5} concentrations were across Pennsylvania, northern West Virginia, and Maryland. This is illustrated in **Figure 29** by the smaller cluster of red and purple dots now centered across southern Pennsylvania.

Figure 29: North America PM_{2.5} Monitor Values and Smoke Plume for June 30, 2023

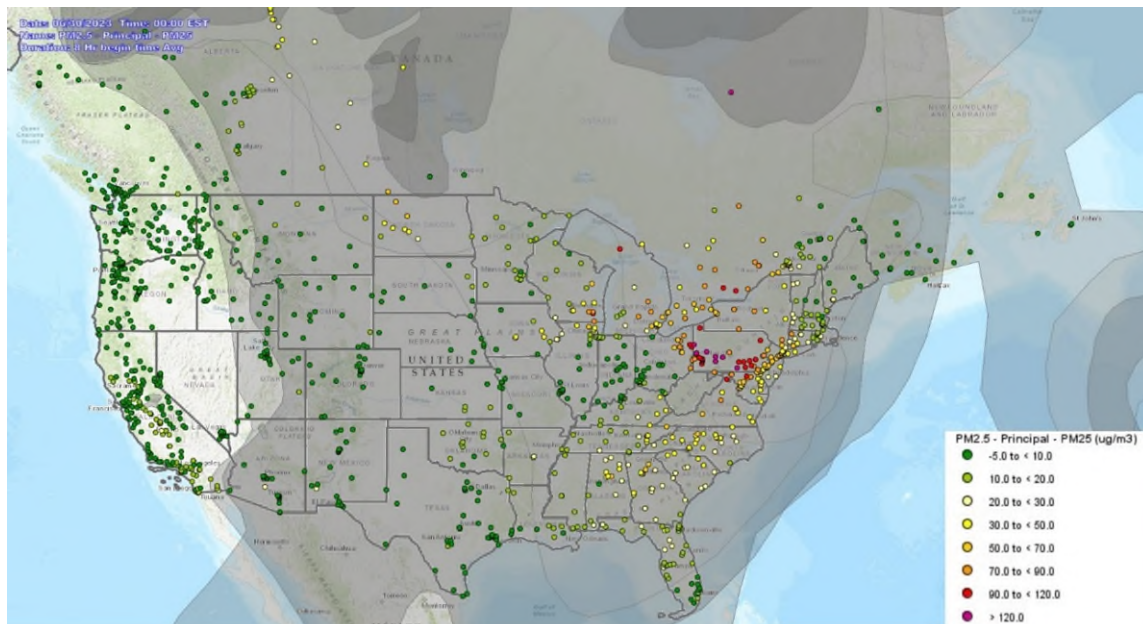
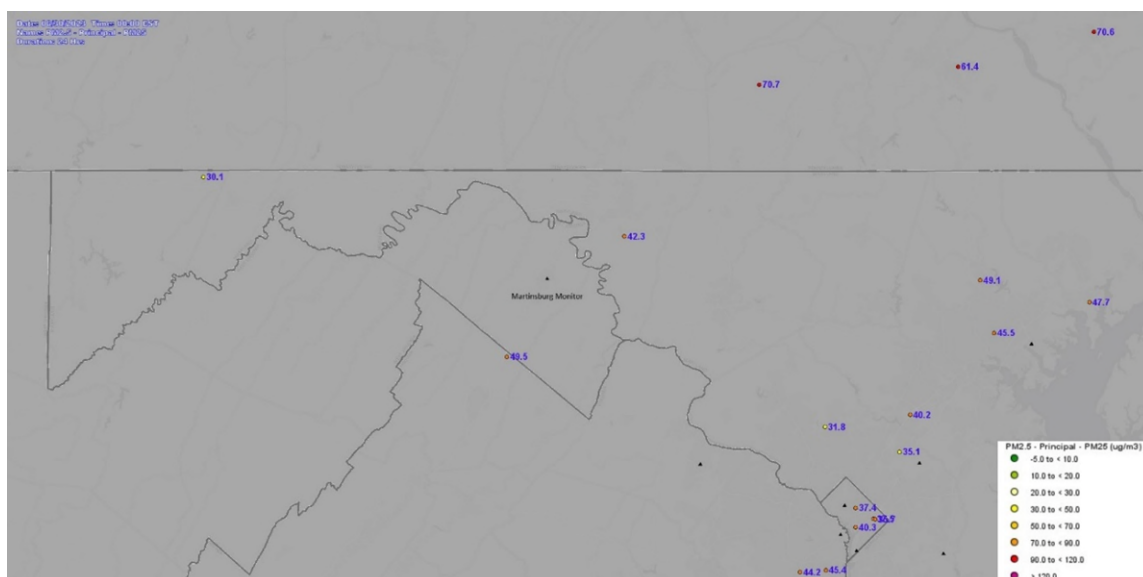


Figure 30 shows still considerably elevated continuous PM_{2.5} monitor measurements in the region around the Martinsburg Monitor on June 30, 2023. However, these concentrations were measured at much lesser values than those of June 29, 2023 as the changing weather systems transported cleaner air into the Martinsburg region, providing much needed relief.

Figure 30: Martinsburg Monitor Regional PM_{2.5} 24-hour Concentrations and Smoke Plume for June 30, 2023



4.2 Chemical Speciation Network Data

The Chemical Speciation Network (CSN) of air monitors supplements the PM_{2.5} air monitors and assists regulators with identifying the composition of PM_{2.5} air pollution²⁹. Regional CSN monitors provided composition data during the most smoke-impacted days of the 2023 Canadian Wildfires. **Figure 31** shows the locations of nine CSN monitors in the region, including two CSN monitors in Lawrenceville, PA, as well as the Martinsburg Monitor.

Figure 31: Chemical Speciation Network monitor locations in and around West Virginia in relation to the Martinsburg Monitor



Data collected by CSN monitors is used to speciate and quantitate PM_{2.5} pollution into different categories, including ammonium nitrate, ammonium sulfate, soil, chloride, elemental carbon, and organic carbon compounds. Wildfire smoke particulate consists of high concentrations of organic carbon molecules, including many biogenic compounds released to the atmosphere during a wildfire. The following **Figures 32 through 49** illustrate for comparison how organic carbon species concentrations varied within the measured PM_{2.5} pollutant concentrations during a normal non-wildfire impacted day a year earlier on June 28, 2022 and how the organic carbon species fractions increased on June 29, 2023. Measured organic carbon at these regional CSN monitors ranged from 70% to 88% of the speciated high PM_{2.5} concentrations on June 29, 2023, which is considerably higher than normal PM_{2.5} organic carbon speciation during non-smoke days, which ranged from 30% to 60% on June 28, 2022. This is further evidence that the high PM_{2.5} concentrations measured on June 29, 2023 originated from the 2023 Canadian Wildfires.

²⁹ <https://www.epa.gov/amtic/chemical-speciation-network-csn>

4.2.1 – West Virginia CSN Monitors

Figure 32: Moundsville, WV CSN Monitor (54-051-1002-05) Speciation Percentages on June 28, 2022

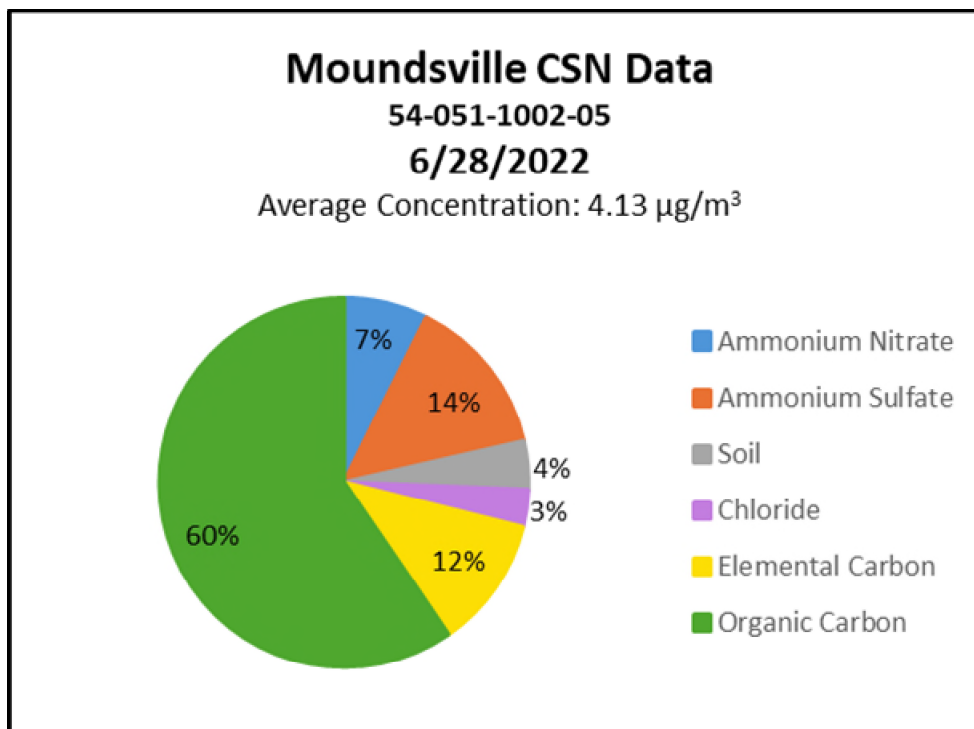


Figure 33: Moundsville, WV CSN Monitor (54-051-1002-05) Speciation Percentages on June 29, 2023

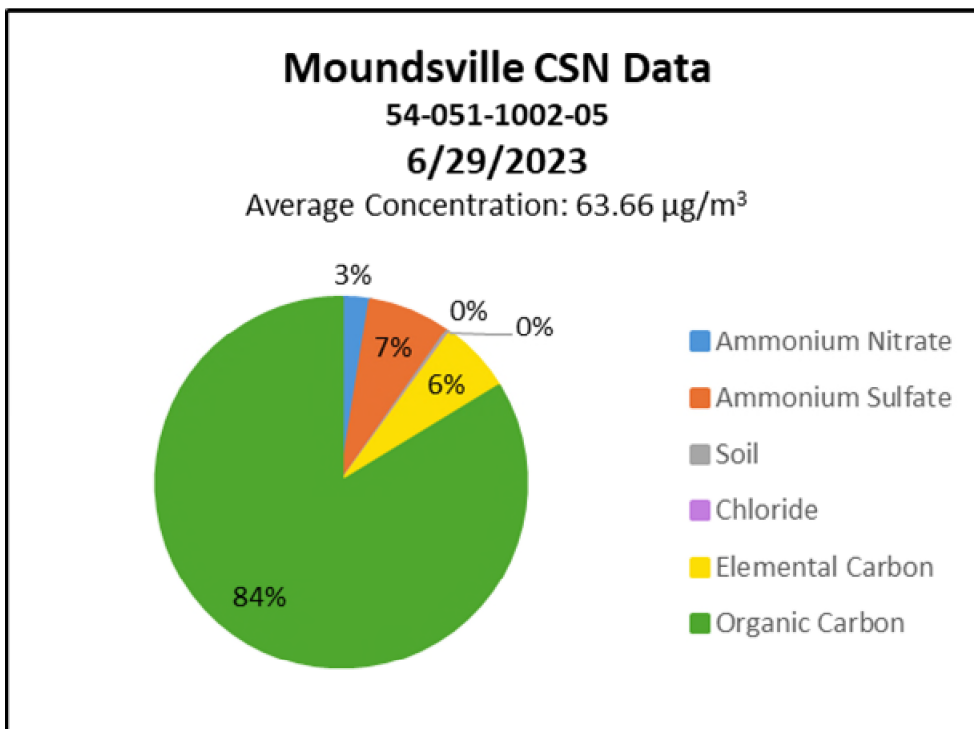


Figure 34: Charleston, WV NCore CSN Monitor (54-039-0020-05) Speciation Percentages on June 28, 2022

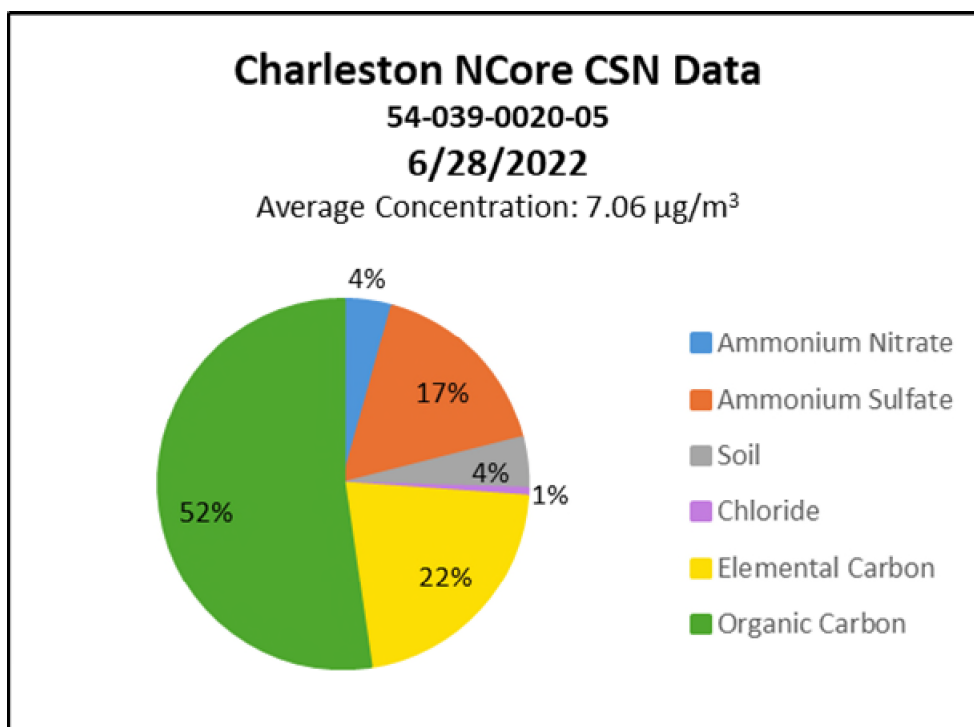
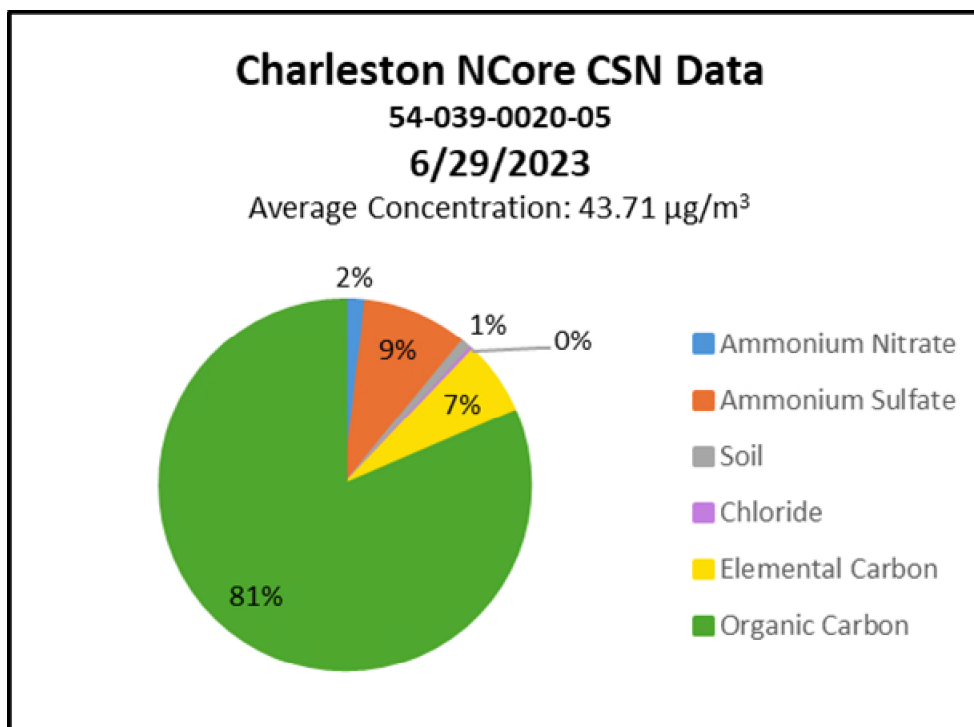


Figure 35: Charleston, WV NCore CSN Monitor (54-039-0020-05) Speciation Percentages on June 29, 2023



4.2.2 – Maryland CSN Monitors

Figure 36: Essex, MD CSN Monitor (24-005-3001-05) Speciation Percentages on June 28, 2022

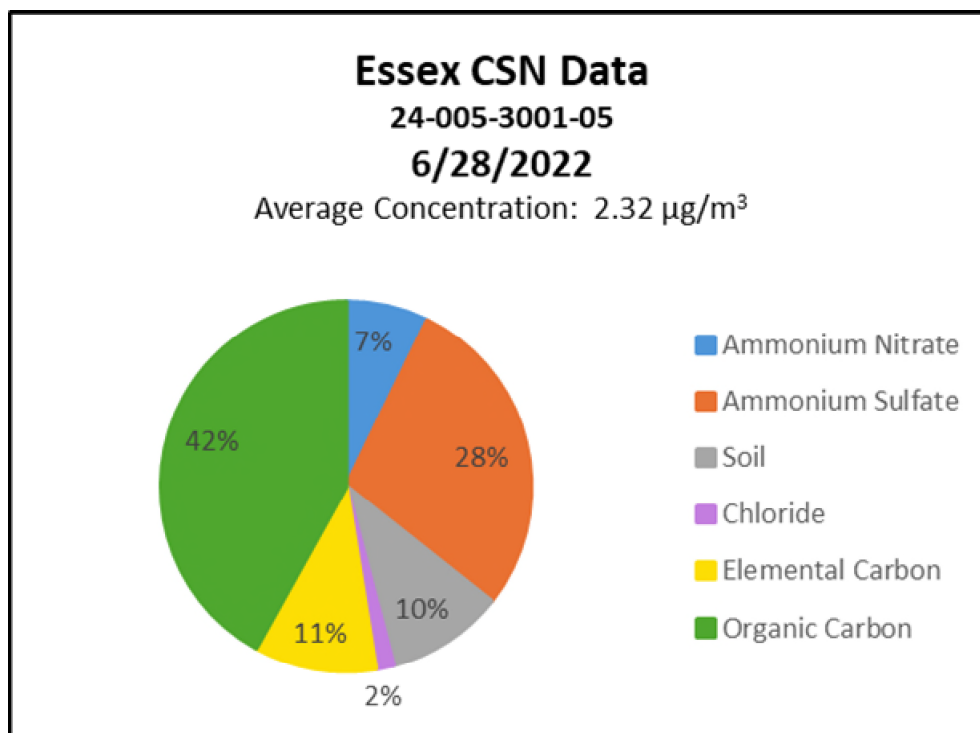


Figure 37: Essex, MD CSN Monitor (24-005-3001-05) for June 29, 2023 (sample voided – filter damage)

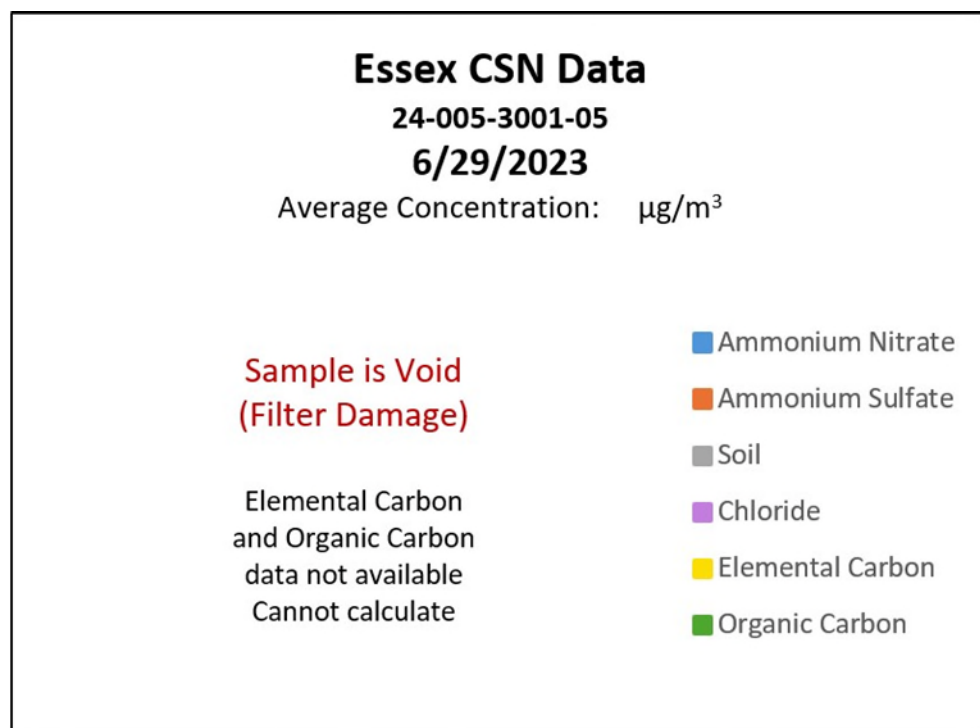


Figure 38: Grantsville, MD CSN Monitor (24-023-0002-01) Speciation Percentages on June 28, 2022

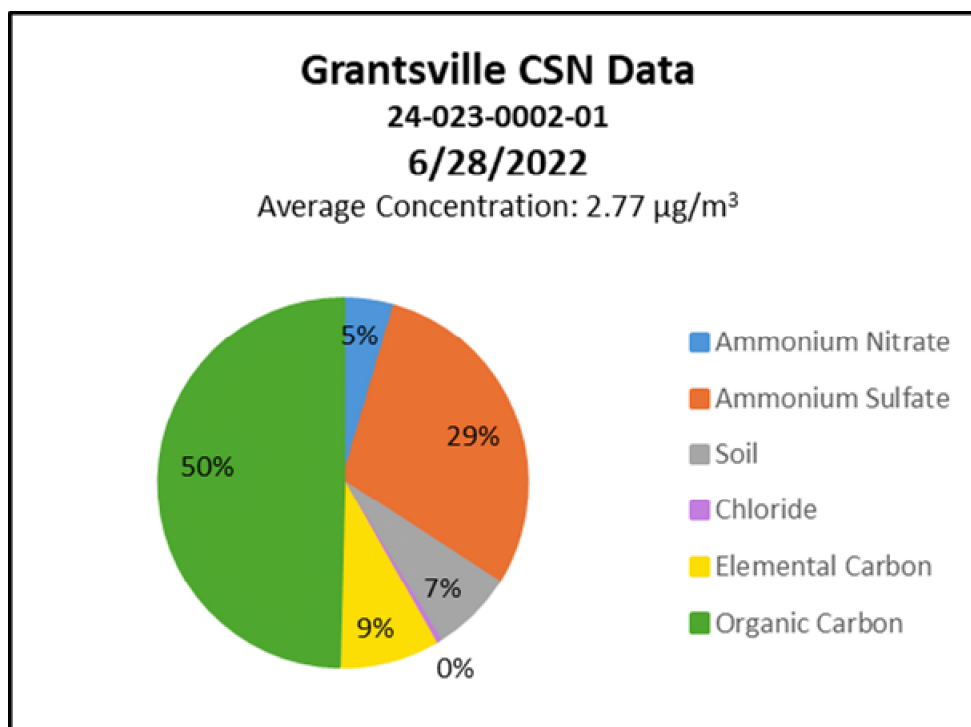


Figure 39: Grantsville, MD CSN Monitor (24-023-0002-01) Speciation Percentages on June 29, 2023

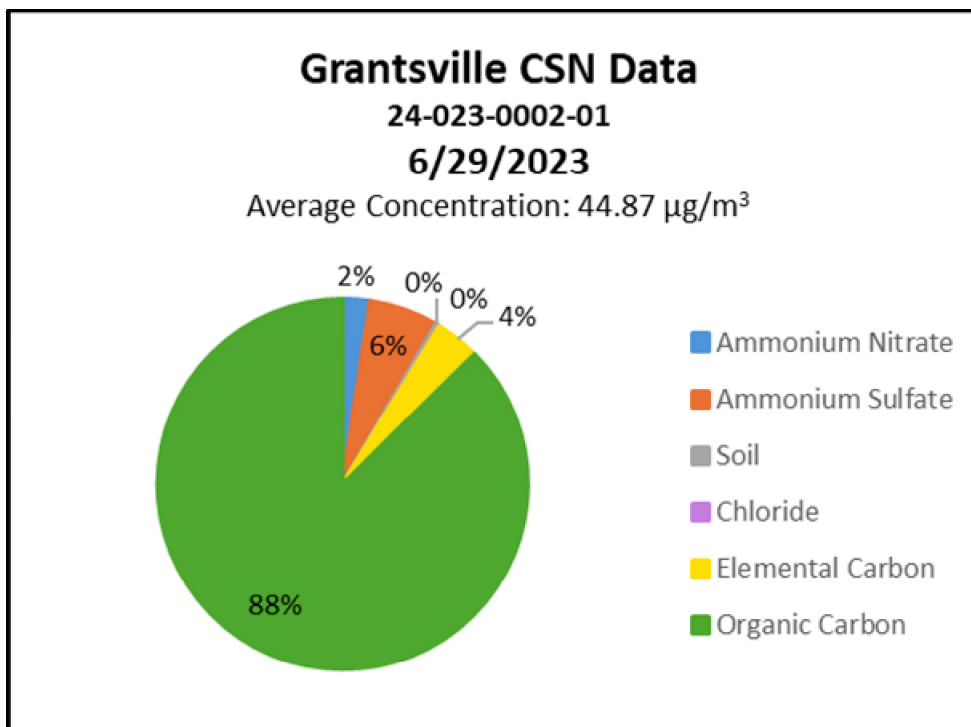


Figure 40:Beltsville, MD CSN Monitor (24-033-0030-05) Speciation Percentages on June 28, 2022

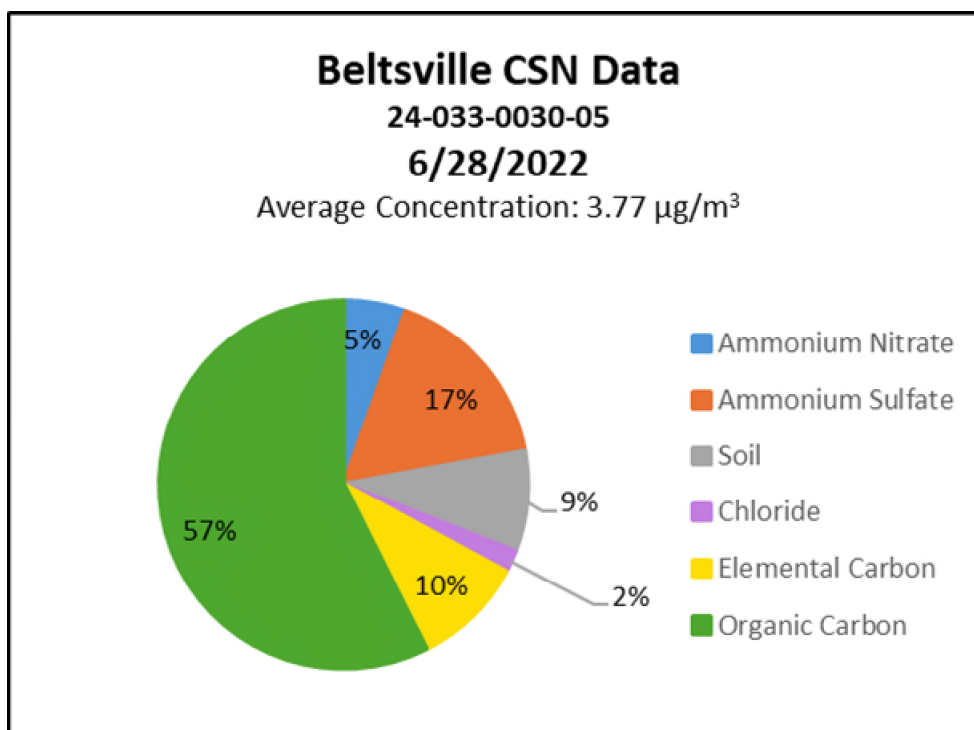
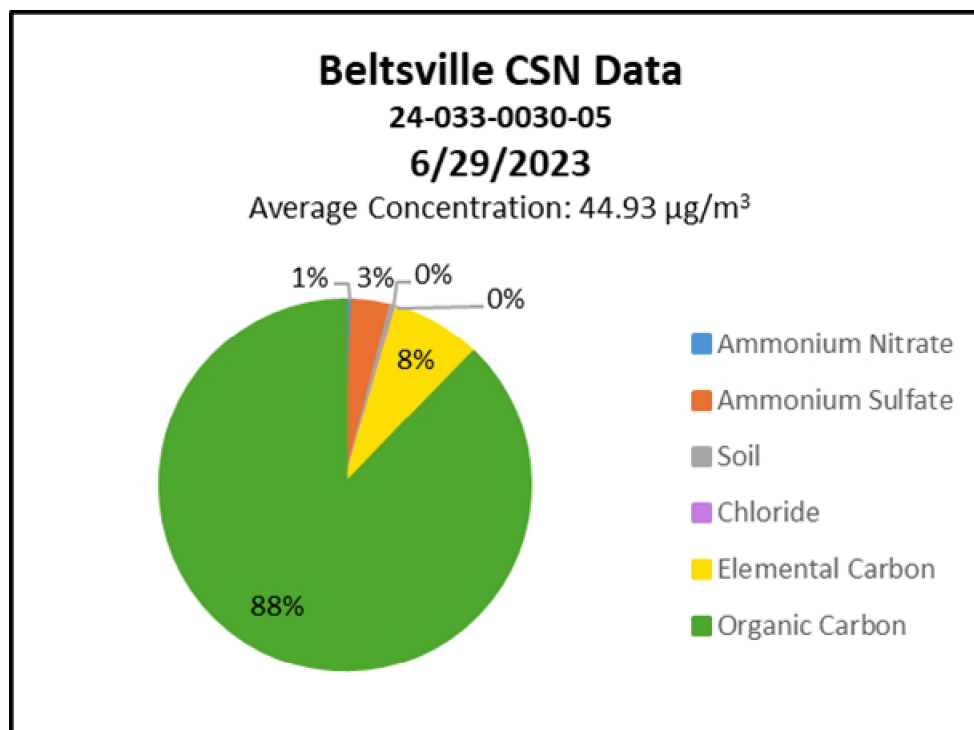


Figure 41: Beltsville, MD CSN Monitor (24-033-0030-05) Speciation Percentages on June 29, 2023



4.2.3 – Pennsylvania CSN Monitors

Figure 42: Lawrenceville, PA CSN Monitor (42-003-0008-01) Speciation Percentages on June 28, 2022

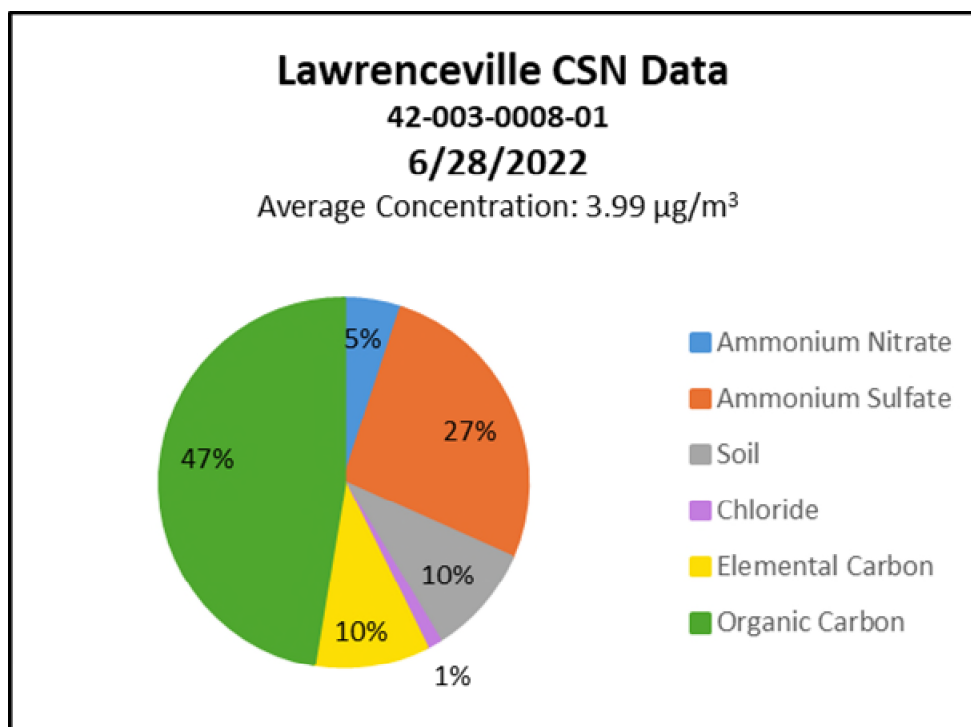


Figure 43: Lawrenceville, PA CSN Monitor (42-003-0008-01) Speciation Percentages on June 29, 2023

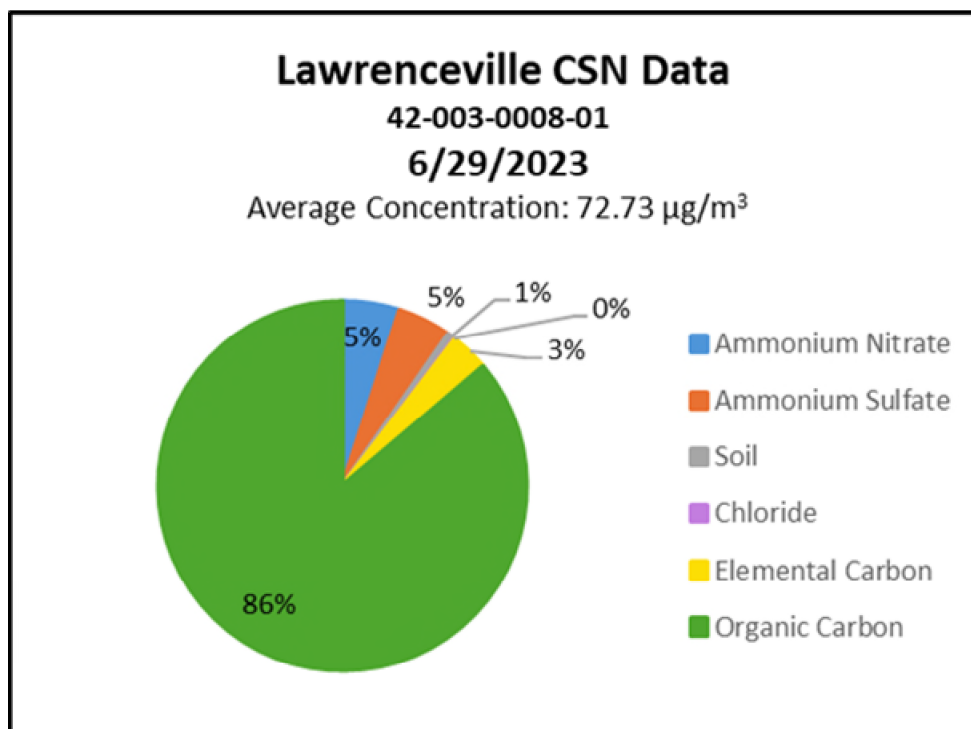


Figure 44: Lawrenceville, PA CSN Monitor (42-003-0008-06) Speciation Percentages on June 28, 2022

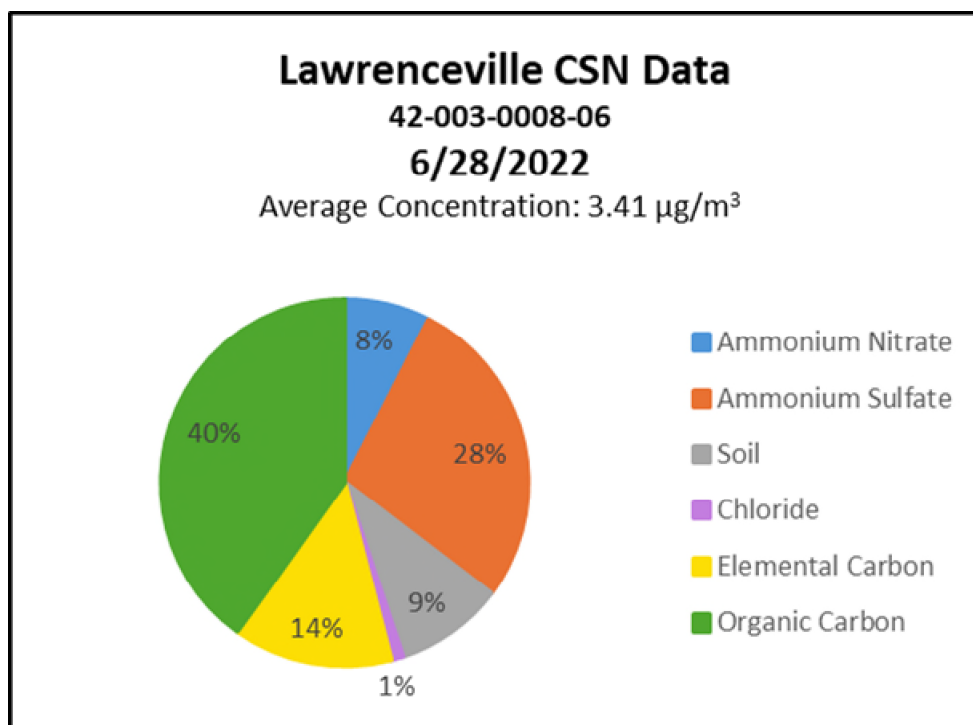


Figure 45: Lawrenceville, PA CSN Monitor (42-003-0008-06) Speciation Percentages on June 29, 2023

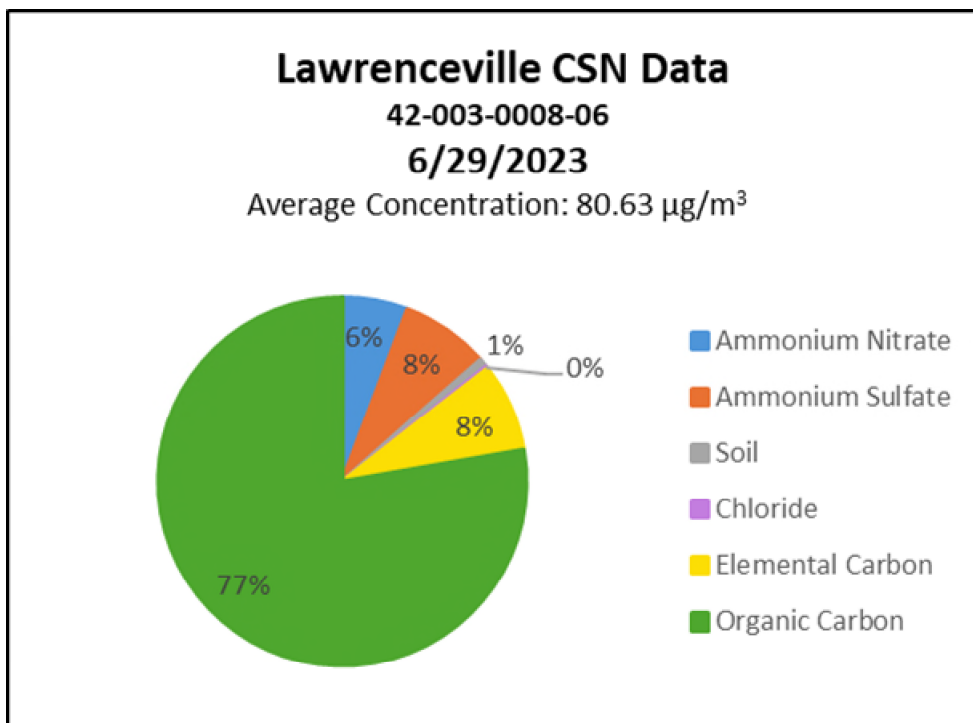


Figure 46: Liberty, PA CSN Monitor (42-003-0064-06) Speciation Percentages on June 28, 2022

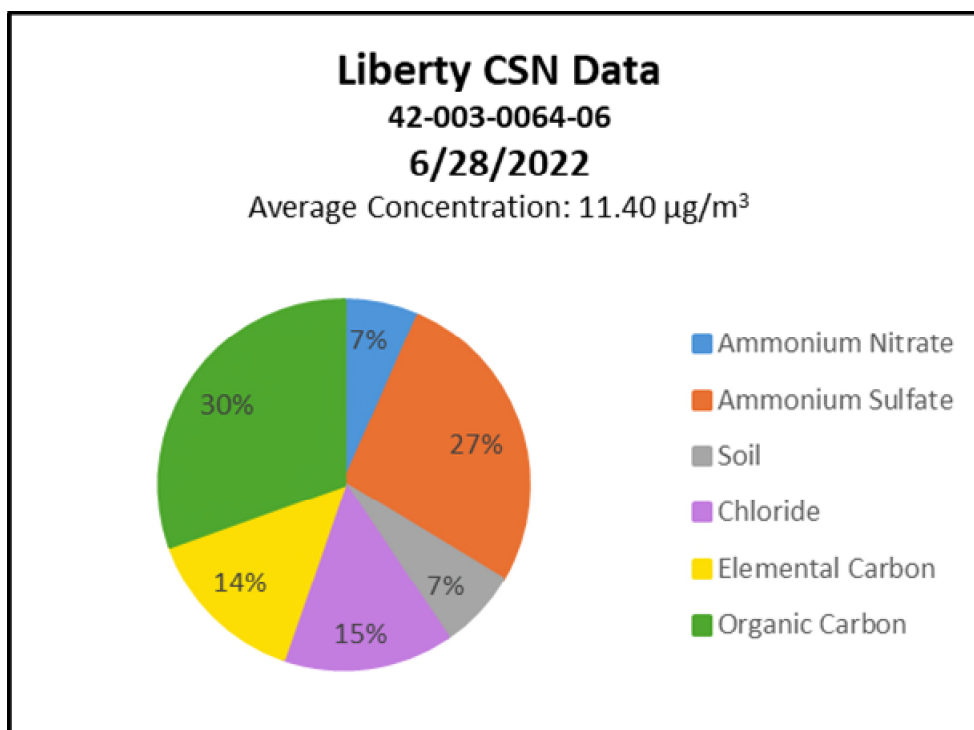


Figure 47: Liberty, PA CSN Monitor (42-003-0064-06) Speciation Percentages on June 29, 2023

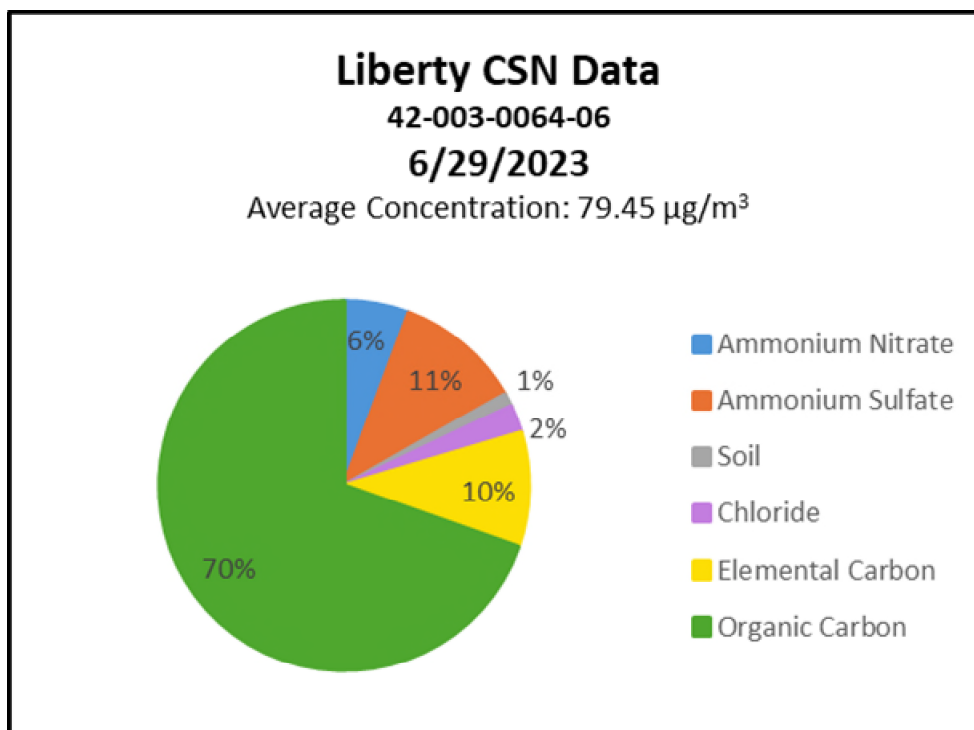


Figure 48: Florence, PA CSN Monitor (42-125-5001-05) Speciation Percentages on June 28, 2022

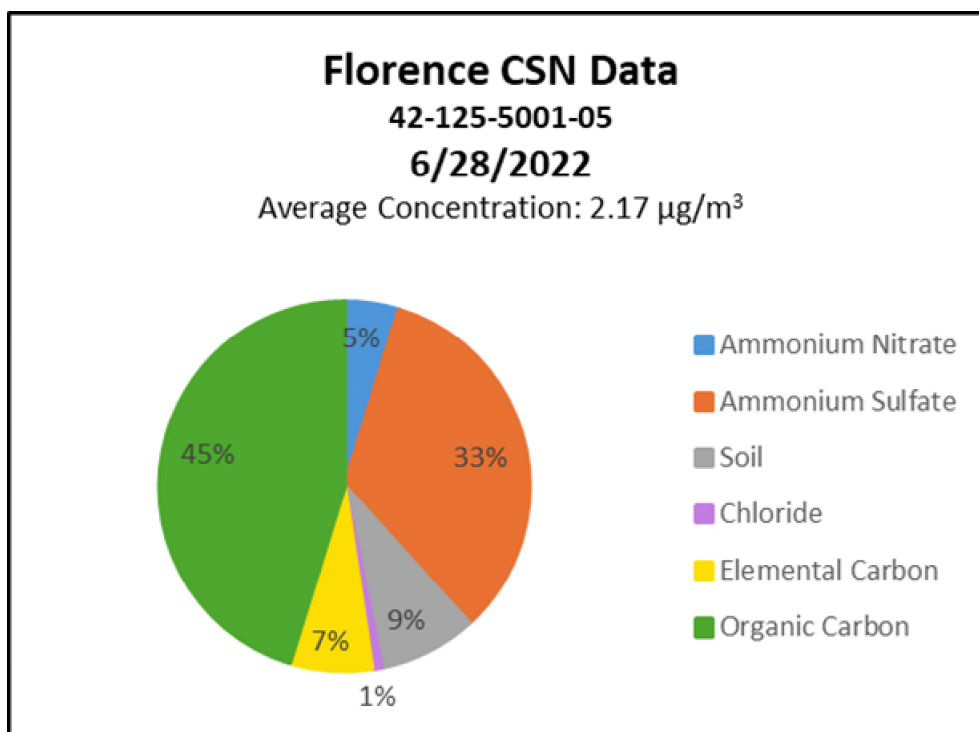
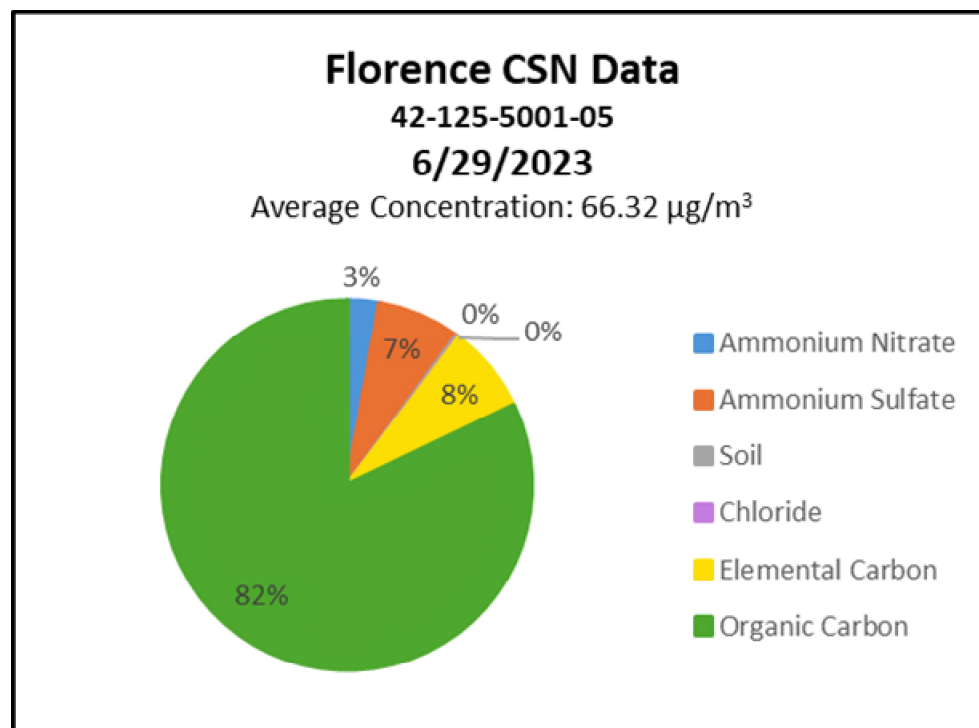


Figure 49: Florence, PA CSN Monitor (42-125-5001-05) Speciation Percentages on June 29, 2023



4.3 PM_{2.5} Tiering Tool for Exceptional Events Analysis

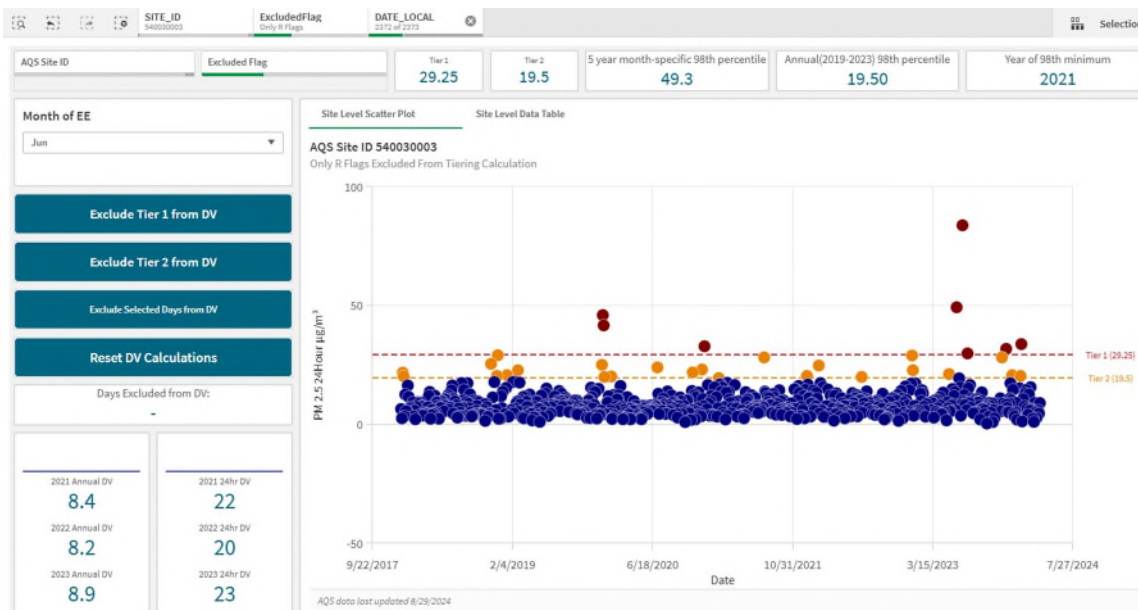
Figure 50 below displays the Tiering Graph from the EPA’s “PM_{2.5} Tiering Tool - for Exceptional Events Analysis”³⁰ (Tiering Tool) for the Martinsburg Monitor. The Tiering Tool indicates the 2023 DV for the Hagerstown-Martinsburg, MD-WV Metropolitan Statistical Area is 9.1 µg/m³, which is above the 9.0 µg/m³ standard.

Figure 50: EPA Tiering Tool for the Martinsburg Monitor, No Days Excluded



However, the Tiering Tool also demonstrates in **Figure 51** how the exclusion of the regulatorily significant data point of June 29, 2023 will lower the 2023 DV for the Hagerstown-Martinsburg, MD-WV Metropolitan Statistical Area to 8.9 µg/m³, which is the purpose of this exceptional events demonstration.

Figure 51: EPA Tiering Tool for the Martinsburg Monitor, June 29, 2023 Excluded



³⁰ <https://www.epa.gov/air-quality-analysis/pm25-tiering-tool-exceptional-events-analysis>

Section V. Not Reasonably Controllable or Not Reasonably Preventable

This section satisfies the following federal requirements:

The event was caused by a natural event (40 CFR 50.14 (c)(3)(iv)(A) and 40 CFR 50.1(j)),

An exceptional event is one that is not reasonably controllable or preventable (40 CFR 50.14 (a)(8)(vii) and 40 CFR 50.14(b)(4))

Section 40 CFR 50.14 (a)(8)(vii) provides that a state is not required to provide a case-specific justification to support the not reasonably controllable or preventable criterion when the emissions-generating event was outside the State, as was the case with the 2023 Canadian Wildfires. Specifically, Section 40 CFR 50.14 (a)(8)(vii) states:

The Administrator shall not require a State to provide case-specific justification to support the not reasonably controllable or preventable criterion for emissions-generating activity that occurs outside of the State's jurisdictional boundaries within which the concentration at issue was monitored.

Section VI. Human Activity Unlikely to Recur at a Particular Location or Natural Event

This section satisfies the following federal requirement:

A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.

The Exceptional Event Rule requires a demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event (40 CFR 50.14(c)(3)(iv)(E)). The definition of wildfire in the Exceptional Events Rule is: “...is any fire started by an unplanned ignition caused by lightning; ... A wildfire that predominately occurs on wildland is a natural event.” As stated in **Sections III and IV**, the origin and evolution of the 2023 Canadian Wildfires occurred across Canada. As shown in **Figure 2**, the fires burned in remote areas. In the Exceptional Event Rule, EPA clarifies that an event could be considered a natural event by applying the reasonable interpretation that the anthropogenic source had “little” direct causal role.

6.1 Wildfire is a Natural Event

Based on the documentation provided in **Section III and Section IV** of this demonstration, the event qualifies as a natural wildfire event since lightning caused the unplanned and unprecedented remote wildfires across Quebec in early June, and these wildfires spread and burned throughout the following several weeks³¹. The EPA generally considers the emissions of PM_{2.5} from wildfires on wildland to meet the regulatory definition of a natural event at 40 CFR 50.1(k), defined as one ‘in which human activity plays little or no direct causal role.’ These multiple wildfire events occurred on wildland as shown in **Figure 2**. NASA noted many of the Canadian fires were ignited by summer lightning storms (see **Section 3.1**). These wildfires largely burned in deeply wooded and remote inaccessible areas. Wildfires

³¹ <https://natural-resources.canada.ca/simply-science/canadas-record-breaking-wildfires-2023-fiery-wake-call/25303>

started by lightning during the first week of June 2023³² rapidly spread for the next few weeks and caused unprecedented smoke concentrations to impact the most of eastern North America, including the Martinsburg Monitor area. The WVDEP herein this report has demonstrated the 2023 Canadian Wildfires were a natural event and should be considered for treatment as an exceptional event.

Section VII. Public Notification

This section satisfies the following federal requirements:

- (A) In accordance with the mitigation requirement the State and the Local Programs within the state notified the public promptly whenever an event occurs or is reasonably anticipated to occur which may result in the exceedance of an applicable air quality standard. (40 CFR 51.930(a)(1))
- (B) Document that the State followed the public comment process and that the comment period was open for a minimum of 30 days, which could be concurrent the beginning of the Administrator's initial review period of the associated demonstration provided the State can meet all requirements in this paragraph;
- (C) Submit the public comments it received along with its demonstration to the Administrator; and
- (D) Address in the submission to the Administrator those comments disputing or contradicting factual evidence provided in the demonstration. (40 CFR 50.14(c)(3)(v)(A, B, C))

The WVDEP and other state and federal government agencies notified the public of the dangers and potential health impacts of excessive smoke from the 2023 Canadian Wildfires. These warnings were published on the WVDEP website, emailed to listserv recipients, published on respective federal agency websites (i.e., National Weather Service), and included in the Air Quality Index (AQI) displayed by many weather websites. Additionally, many local news providers produced, and broadcast or published news stories related to the wildfire smoke. Sensitive individuals were advised to avoid long-term outdoor exposure if possible.

7.1 Public Notification During Exceptional Event

The WVDEP notified the public of the excessive wildfire smoke transported to the state from the 2023 Canadian Wildfires which caused the abnormally high PM_{2.5} measurement at the Martinsburg Monitor on June 29, 2023. WVDEP published this information on its website^{33, 34, 35} and emailed information and webpage links to citizens subscribed to the WVDEP's public information office email listserv. Additionally, the WVDEP published related information to its social media accounts. Also, the National Weather Service (NWS) issued frequent alerts for areas

³² Government of Canada, Natural Resource Canada, "National Wildland Fire Situation Report," Government of Canada, Natural Resource Canada, (June [7, 14, 21, 28], 2023) <https://cwfis.cfs.nrcan.gc.ca/report>.

³³ <https://dep.wv.gov/news/Pages/WVDEP,-DHHR-issue-statewide-air-quality-advisory-due-to-smoke-from-Canadian-wildfires.aspx>

³⁴ <https://dep.wv.gov/news/Pages/Air-Quality-Update---WVDEP,-DHHR-statewide-air-quality-advisory-remains-in-effect.aspx>

³⁵ <https://dep.wv.gov/news/Pages/Air-Quality-Update---WVDEP,-DHHR-continue-statewide-air-quality-advisory.aspx>

heavily impacted by the smoke based on information provided by WVDEP³⁶. WVDEP press releases and NWS Alerts are contained in **Appendix A**.

7.2 Public Notice and Comment of Exceptional Event Demonstration

The West Virginia Department of Environmental Protection, Division of Air Quality will hold a 30-day public and EPA comment period to collect public comment regarding this Exceptional Event Demonstration from October 16, 2024 until November 15, 2024. Notification of the public comment period was posted on the West Virginia Department of Environmental Protection website and emailed to interested stakeholders (on date)³⁷. The Maryland Department of the Environment was also notified of the public notice and comment period of this demonstration on October 15, 2024.

7.3 Public Comments Received

Public and EPA comments on this exceptional events demonstration **will be** contained in **Appendix B**.

7.4 Responses to Public Comments

WVDEP responses to public and EPA comments on this exceptional events demonstration **will be** contained in **Appendix C**.

Section VIII. Conclusion

The WVDEP respectfully requests the EPA accept this exceptional events demonstration proves the June 29, 2023, 24-hour PM_{2.5} measurement value of 83.8 µg/m³ at the Martinsburg Monitor (54-003-0003) was a rare exceptional event caused by international wildfires beyond its control. The WVDEP further respectfully requests the EPA remove this regulatorily significant data point from the 2023 design value calculation for the Hagerstown-Martinsburg, MD-WV Metropolitan Statistical Area. This demonstration shows the measured value was an extreme anomaly attributable to the 2023 Canadian Wildfires combined with a passing low-pressure weather pattern which temporarily transported excess smoke to the area. The 2023 Canadian Wildfires were an extremely rare exceptional event which were naturally caused by lightning during thunderstorms. The WVDEP contends this demonstration meets all requirements of the Exceptional Events Rule for PM_{2.5} excursions beyond regulatory control.

³⁶ <https://alerts.weather.gov/>

³⁷ <https://dep.wv.gov/dag/publicnoticeandcomment/Pages/default.aspx>

Appendix A – WVDEP Press Releases and National Weather Service Alerts

Appendix A.1 – WVDEP Press Releases

DEP News: WVDEP, DHHR issue statewide air quality advisory due to smoke from Canadian wildfires³⁸

1 message

Fletcher, Terry A <terry.a.fletcher@wv.gov>

28 June 2023 at 12:37

To: dl-dep@wv.gov

FOR IMMEDIATE RELEASE

Wednesday, June 28, 2023

CONTACT: Terry Fletcher, 304-926-0499, Terry.A.Fletcher@wv.gov

WVDEP, DHHR issue statewide air quality advisory due to smoke from Canadian wildfires

Citizens are encouraged to check the [AirNow website](#) to see real time air quality data in their area and surrounding states

Charleston, W.Va. — The West Virginia Department of Environmental Protection's (WVDEP) Division of Air Quality and the state Department of Health and Human Resources' (DHHR) Bureau for Public Health (BPH) are issuing a statewide Air Quality Advisory for fine particulate matter as smoke from Canadian wildfires continues to impact air quality in the eastern United States.

According to [AirNow.gov](https://airnow.gov), unofficial air monitors indicate counties in West Virginia's Northern Panhandle (Air Quality Index score of 201-300), the Morgantown-Clarksburg-Fairmont area (151-200), and the Charleston area (101-150) are currently the most impacted in the state.

Citizens are encouraged to check the [AirNow website](#) to see real time air quality data in their area and surrounding states.

³⁸ <https://dep.wv.gov/news/Pages/WVDEP,-DHHR-issue-statewide-air-quality-advisory-due-to-smoke-from-Canadian-wildfires.aspx>

Air Quality Index		
AQI Category and Color	Index Value	Description of Air Quality
Good Green	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Moderate Yellow	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups Orange	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Unhealthy Red	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy Purple	201 to 300	Health alert: The risk of health effects is increased for everyone.
Hazardous Maroon	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

According to the U.S. Environmental Protection Agency (EPA), AQI scores in the 201-300 range (purple) indicate an increased risk of health effects for everyone. Scores in the 151-200 range (red) indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Areas with scores in the 101-150 range (orange) will primarily impact those who are sensitive to air pollution.

Per the EPA, citizens in areas with poor air quality are encouraged to limit their time outdoors and avoid strenuous activities. N-95 masks can help reduce smoke inhalation and potential health risks.

More information about the AQI, including activity guides for when air quality reaches unhealthy levels, is available [here](#).

Click [here](#) for information from the Centers for Disease Control and Prevention on protecting yourself from wildfire smoke.

For more WVDEP news and information, go to <https://dep.wv.gov>. Also, connect with the agency on all social media platforms. Follow [@DEPWV](#) on Twitter, Like us on Facebook at <https://facebook.com/depwv/>, and find us on YouTube at [Environment Matters](#).

#



Terry Fletcher

Chief Communications Officer

West Virginia Department of Environmental Protection

[601 57th St. SE, Charleston, WV 25304](#)

304-926-0499 | www.dep.wv.gov

DEP News: Air Quality Update: WVDEP, DHHR statewide air quality advisory remains in effect³⁹

1 message

Fletcher, Terry A <terry.a.fletcher@wv.gov>

29 June 2023 at 12:41

To: dl-dep@wv.gov

FOR IMMEDIATE RELEASE

Thursday, June 29, 2023

CONTACT: Terry Fletcher, 304-926-0499, Terry.A.Fletcher@wv.gov

Air Quality Update: WVDEP, DHHR statewide air quality advisory remains in effect

Citizens are encouraged to check the [AirNow website](#) to see real time air quality data in their area and surrounding states

Charleston, W.Va. – The West Virginia Department of Environmental Protection's (WVDEP) Division of Air Quality and the state Department of Health and Human Resources' (DHHR) Bureau for Public Health's (BPH) statewide Air Quality Advisory for fine particulate matter issued Wednesday remains in effect as smoke from Canadian wildfires continues to impact air quality.

According to [AirNow.gov](#), Air Quality Index (AQI) scores for most of West Virginia are in the 151-200 range (Red), which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly.

Per the U.S. Environmental Protection Agency, citizens in areas with poor air quality are encouraged to limit their time outdoors and avoid strenuous activities. N-95 masks can help reduce smoke inhalation and potential health risks.

Citizens are encouraged to check the [AirNow website](#) to see real time air quality data in their area and surrounding states. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

³⁹ <https://dep.wv.gov/news/Pages/Air-Quality-Update---WVDEP,-DHHR-statewide-air-quality-advisory-remains-in-effect.aspx>

More information about the AQI, including activity guides for when air quality reaches unhealthy levels, is available [here](#).

Click [here](#) for information from the Centers for Disease Control and Prevention on protecting yourself from wildfire smoke.

For more WVDEP news and information, go to <https://dep.wv.gov>. Also, connect with the agency on all social media platforms. Follow [@DEPWV](#) on Twitter, Like us on Facebook at <https://facebook.com/depwv/>, and find us on YouTube at [Environment Matters](#).

#



Terry Fletcher

Chief Communications Officer

West Virginia Department of Environmental Protection

[601 57th St. SE, Charleston, WV 25304](#)

304-926-0499 | www.dep.wv.gov

DEP News: Air Quality Update: WVDEP, DHHR continue statewide air quality advisory⁴⁰

1 message

Fletcher, Terry A <terry.a.fletcher@wv.gov>

30 June 2023 at 12:35

To: dl-dep@wv.gov

FOR IMMEDIATE RELEASE

Friday, June 30, 2023

CONTACT: Terry Fletcher, 304-926-0499, Terry.A.Fletcher@wv.gov

Air Quality Update: WVDEP, DHHR continue statewide air quality advisory

Citizens are encouraged to check the [AirNow website](#) to see real time air quality data in their area and surrounding states

Charleston, W.Va. – The West Virginia Department of Environmental Protection's (WVDEP) Division of Air Quality and the state Department of Health and Human Resources' (DHHR) Bureau for Public Health (BPH) are continuing the statewide air quality advisory as smoke from Canadian wildfires continues to adversely impact air quality. The advisory is extended through Friday, June 30, 2023.

According to [AirNow.gov](#), the Air Quality Index for most of West Virginia is in the "Unhealthy for Sensitive Groups" (Orange) to "Unhealthy" (Red) ranges. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly.

The National Weather Services' Charleston branch expects new weather patterns will help move the wildfire smoke and particulate matter out of the southern West Virginia area by Saturday evening. West Virginia's northern panhandle, north central region, and eastern panhandle are expected to see meteorological conditions related to particulate matter improve by Friday afternoon.

Per the U.S. Environmental Protection Agency, citizens in areas with poor air quality are encouraged to limit their time outdoors and avoid strenuous activities. N-95 masks can help reduce smoke inhalation and potential health risks.

⁴⁰ <https://dep.wv.gov/news/Pages/Air-Quality-Update---WVDEP,-DHHR-continue-statewide-air-quality-advisory.aspx>

Citizens are encouraged to check the [AirNow website](#) to see real time air quality data in their area and surrounding states. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

More information about the AQI, including activity guides for when air quality reaches unhealthy levels, is available [here](#).

Click [here](#) for information from the Centers for Disease Control and Prevention on protecting yourself from wildfire smoke.

For more WVDEP news and information, go to <https://dep.wv.gov>. Also, connect with the agency on all social media platforms. Follow [@DEPWV](#) on Twitter, Like us on Facebook at <https://facebook.com/depwv/>, and find us on YouTube at [Environment Matters](#).

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Terry Fletcher

Chief Communications Officer

West Virginia Department of Environmental Protection

[601 57th St. SE, Charleston, WV 25304](#)

304-926-0499 | www.dep.wv.gov

Appendix A.2 – National Weather Service Alerts

Baltimore-DC NWS Alerts

471 AEUS71 KLWX 282047 AQALWX

Air Quality Alert Message

MD Dept of Environment and VA Dept of Environmental Quality Relayed by
National Weather Service Baltimore MD/Washington DC

440 PM EDT Wed Jun 28 2023

DCZ001-300400-

District of Columbia-

440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Metropolitan Washington Council of Governments and District Department of Environment has issued a Code RED Air Quality Alert Thursday for the District of Columbia.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site <https://www.mwcog.org/environment/air/forecast/>.

\$\$

VAZ053-054-505-506-526-527-300400-

Fairfax-Western Loudoun-Eastern Loudoun-Northwest Prince William-
Central and Southeast Prince William/Manassas/Manassas Park-
Arlington/Falls Church/Alexandria-

440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Virginia Department of Environmental Quality has issued a Code RED Air Quality Alert Thursday for Northern Virginia.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov.

\$\$

MDZ013-504-506-300400-

Central and Southeast Montgomery-Central and Southeast Howard-
Prince Georges-

440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Maryland suburban DC region.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

\$\$

MDZ011-014-300400-
Southern Baltimore-Anne Arundel-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Baltimore City Metro and Annapolis region.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ004-005-503-505-300400-
Frederick-Carroll-Northwest Montgomery-Northwest Howard-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Maryland Piedmont region.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site

www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ006-507-300400-
Northern Baltimore-Northern Harford-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Northern Baltimore.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ008-508-300400-
Southern Harford-Cecil-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Northeast Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ016>018-300400-
Charles-St. Marys-Calvert-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Southern Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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VAZ028-031-WVZ051>053-300400-
Frederick-Clarke-Morgan-Berkeley-Jefferson-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Virginia Department of Environmental Quality has issued a Code RED Air Quality Alert Thursday for Winchester and the eastern West Virginia Panhandle.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov.

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MDZ003-300400-
Washington-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Hagerstown area.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ001-501-502-300400-
Garrett-Allegany-
440 PM EDT Wed Jun 28 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Western Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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770
AEUS71 KLWX 291607
AQALWX

Air Quality Alert Message
MD Dept of Environment and VA Dept of Environmental Quality Relayed by
National Weather Service Baltimore MD/Washington DC
1118 AM EDT Thu Jun 29 2023

DCZ001-300400-
District of Columbia-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Metropolitan Washington Council of Governments and District Department of Environment has issued a Code RED Air Quality Alert Thursday for the District of Columbia.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
<https://www.mwcog.org/environment/air/forecast/>

\$\$

VAZ053-054-505-506-526-527-300400-
Fairfax-Western Loudoun-Eastern Loudoun-Northwest Prince William- Central
and Southeast Prince William/Manassas/Manassas Park- Arlington/Falls
Church/Alexandria-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Virginia Department of Environmental Quality has issued a Code RED Air Quality Alert Thursday for Northern Virginia.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov

\$\$

MDZ013-504-506-300400-
Central and Southeast Montgomery-Central and Southeast Howard-
Prince Georges-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Maryland suburban DC region.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

\$\$

MDZ011-014-300400-
Southern Baltimore-Anne Arundel-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Baltimore City Metro and Annapolis region.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

\$\$

MDZ004-005-503-505-300400-
Frederick-Carroll-Northwest Montgomery-Northwest Howard-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Maryland Piedmont region.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site

www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

\$\$

MDZ006-507-300400-
Northern Baltimore-Northern Harford-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Northern Baltimore.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site

www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ008-508-300400-
Southern Harford-Cecil-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Northeast Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ016>018-300400-
Charles-St. Marys-Calvert-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Southern Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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VAZ028-031-WVZ051>053-300400-
Frederick-Clarke-Morgan-Berkeley-Jefferson-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Virginia Department of Environmental Quality has issued a Code RED Air Quality Alert Thursday for Winchester and the eastern West Virginia Panhandle.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov

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MDZ003-300400-
Washington-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Hagerstown area.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ001-501-502-300400-
Garrett-Allegany-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Western Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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WVZ048-055-0501>506-300400-
Eastern Grant-Western Grant-Hampshire-Hardy-Eastern Mineral-
Western Mineral-Eastern Pendleton-Western Pendleton-
1118 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT tonight.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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816

AEUS71 KLWX 291634

AQALWX

Air Quality Alert Message

MD Dept of Environment and VA Dept of Environmental Quality Relayed by
National Weather Service Baltimore MD/Washington DC

1234 PM EDT Thu Jun 29 2023

DCZ001-300400-

District of Columbia-

1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Metropolitan Washington Council of Governments and District Department of Environment has issued a Code RED Air Quality Alert Thursday for the District of Columbia.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site

<https://www.mwcog.org/environment/air/forecast/>

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VAZ053-054-505-506-526-527-300400-

Fairfax-Western Loudoun-Eastern Loudoun-Northwest Prince William-
Central and Southeast Prince William/Manassas/Manassas Park-
Arlington/Falls Church/Alexandria-

1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Virginia Department of Environmental Quality has issued a Code RED Air Quality Alert Thursday for Northern Virginia.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov

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MDZ013-504-506-300400-

Central and Southeast Montgomery-Central and Southeast Howard-
Prince Georges-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air
Quality Alert Thursday for the Maryland suburban DC region.

A Code Red Air Quality Alert means that air pollution concentrations
within the region are unhealthy for the general population. The effects of
air pollution can be minimized by avoiding strenuous activity or exercise
outdoors.

For more information on ground-level ozone and fine particles visit the
web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ011-014-300400-
Southern Baltimore-Anne Arundel-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air
Quality Alert Thursday for the Baltimore City Metro and Annapolis region.

A Code Red Air Quality Alert means that air pollution concentrations
within the region are unhealthy for the general population. The effects of
air pollution can be minimized by avoiding strenuous activity or exercise
outdoors.

For more information on ground-level ozone and fine particles visit the
web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ004-005-503-505-300400-
Frederick-Carroll-Northwest Montgomery-Northwest Howard-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air
Quality Alert Thursday for the Maryland Piedmont region.

A Code Red Air Quality Alert means that air pollution concentrations
within the region are unhealthy for the general population. The effects of
air pollution can be minimized by avoiding strenuous activity or exercise
outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ006-507-300400-
Northern Baltimore-Northern Harford-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Northern Baltimore.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ008-508-300400-
Southern Harford-Cecil-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Northeast Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ016>018-300400-
Charles-St. Marys-Calvert-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Southern Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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VAZ028-031-WVZ051>053-300400-
Frederick-Clarke-Morgan-Berkeley-Jefferson-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Virginia Department of Environmental Quality has issued a Code RED Air Quality Alert Thursday for Winchester and the eastern West Virginia Panhandle.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at
www.deq.virginia.gov

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MDZ003-300400-
Washington-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for the Hagerstown area.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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MDZ001-501-502-300400-

Garrett-Allegany-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The Maryland Department of the Environment has issued a Code RED Air Quality Alert Thursday for Western Maryland.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site

www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx

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WVZ050-055-501>506-300400-
Eastern Grant-Western Grant-Hampshire-Hardy-Eastern Mineral-
Western Mineral-Eastern Pendleton-Western Pendleton-
1234 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR THURSDAY JUNE 29 2023...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT tonight.

A Code Red Air Quality Alert means that air pollution concentrations within the region are unhealthy for the general population. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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467
AEUS71 KLWX 292046
AQALWX

Air Quality Alert Message
MD Dept of Environment and VA Dept of Environmental Quality
Relayed by National Weather Service Baltimore MD/Washington DC
440 PM EDT Thu Jun 29 2023

DCZ001-010400-
District of Columbia-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Metropolitan Washington Council of Governments and District Department of Environment has issued a Code ORANGE Air Quality Alert Friday for the District of Columbia.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
<https://www.mwcog.org/environment/air/forecast/>.

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VAZ053-054-505-506-526-527-010400-
Fairfax-Western Loudoun-Eastern Loudoun-Northwest Prince William-
Central and Southeast Prince William/Manassas/Manassas Park-
Arlington/Falls Church/Alexandria-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Virginia Department of Environmental Quality has issued a Code ORANGE Air Quality Alert Friday for Northern Virginia.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov.

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MDZ013-504-506-010400-
Central and Southeast Montgomery-Central and Southeast Howard-
Prince Georges-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for the Maryland suburban DC region.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or

other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ011-014-010400-
Southern Baltimore-Anne Arundel-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for the Baltimore City Metro and Annapolis region.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ004-005-503-505-010400-
Frederick-Carroll-Northwest Montgomery-Northwest Howard-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for the Maryland Piedmont region.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ006-507-010400-
Northern Baltimore-Northern Harford-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for Northern Baltimore.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ008-508-010400-
Southern Harford-Cecil-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for Northeast Maryland.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ016>018-010400-
Charles-St. Marys-Calvert-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for Southern Maryland.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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VAZ028-031-WVZ051>053-010400-
Frederick-Clarke-Morgan-Berkeley-Jefferson-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Virginia Department of Environmental Quality has issued a Code ORANGE Air Quality Alert Friday for Winchester and the eastern West Virginia Panhandle.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site Virginia DEQ air quality web site at www.deq.virginia.gov.

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MDZ003-010400-
Washington-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for the Hagerstown area.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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MDZ001-501-502-010400-
Garrett-Allegany-
440 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IS IN EFFECT FOR FRIDAY JUNE 30 2023...

The Maryland Department of the Environment has issued a Code ORANGE Air Quality Alert Friday for Western Maryland.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For more information on ground-level ozone and fine particles visit the web site
www.mde.maryland.gov/programs/air/AirQualityMonitoring/Pages/index.aspx.

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090

AEUS71 KLWX 292110

AQALWX

Air Quality Alert Message

Relayed by National Weather Service Baltimore MD/Washington DC

510 PM EDT Thu Jun 29 2023

WVZ050-055-501>506-010400-

Hampshire-Hardy-Western Grant-Eastern Grant-Western Mineral-

Eastern Mineral-Western Pendleton-Eastern Pendleton-

Including the cities of Romney, Moorefield, Bayard, Mount Storm,

Petersburg, Elk Garden, Antioch, Keyser, New Creek, Ridgeville,

Russelldale, Headsville, Fort Ashby, Riverton, Brandywine, Franklin,

Oak Flat, Ruddle, and Sugar Grove

510 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT FOR FRIDAY JUNE 30 2023...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter for Friday June 30.

A Code Orange Air Quality Alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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Blacksburg NWS Alerts

308

AEUS71 KRNK 291431

AQARNK

Air Quality Alert Message

Relayed by National Weather Service Blacksburg VA

1031 AM EDT Thu Jun 29 2023

VAZ022-023-300415-

Roanoke-Botetourt-

Including the cities of Roanoke, Salem, and Fincastle

1031 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL 9 PM EDT THIS EVENING...

The Virginia Department of Environmental Quality has issued a Code Orange Air Quality Action Day for Fine Particulates, until 9 PM EDT this evening.

A Code Orange Air Quality Action Day means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children...people suffering from asthma or other lung diseases...heart disease...and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For additional information...please visit the Virginia Department of Environmental Quality at www.deq.virginia.gov/our-programs/air/monitoring-assessments/air-quality-forecast

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NCZ001>006-018>020-300415-

Ashe-Alleghany NC-Surry-Stokes-Rockingham-Caswell-Watauga-Wilkes-Yadkin-

Including the cities of West Jefferson, Sparta, Dobson, Danbury, Eden, Yanceyville, Boone, Wilkesboro, and Yadkinville

1031 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Orange Air Quality Action Day for Fine Particulates, until midnight EDT tonight.

A Code Orange Air Quality Action Day means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children...people suffering from asthma or other lung diseases...heart disease...and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors.

For additional information, please visit the Forsyth County Office of Environmental Assistance and Protection Web site at www.co.forsyth.nc.us/eap/

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WVZ042>044-507-508-300415-
Mercer-Summers-Monroe-Eastern Greenbrier-Western Greenbrier-
Including the cities of Bluefield, Flat Top, Hinton, Hix, Union,
Lewisburg, White Sulphur Springs, Alderson, Quinwood, Duo, and Rainelle
1031 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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448
AEUS71 KRNK 300359
AQARNK

Air Quality Alert Message
Relayed by National Weather Service Blacksburg VA
1159 PM EDT Thu Jun 29 2023

NCZ001>006-018>020-010400-
Ashe-Alleghany NC-Surry-Stokes-Rockingham-Caswell-Watauga-Wilkes-
Yadkin-
Including the cities of West Jefferson, Sparta, Dobson, Danbury, Eden,
Yanceyville, Boone, Wilkesboro, and Yadkinville
1159 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT FRIDAY NIGHT...

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Orange Air Quality Action Day for Fine Particulates, until midnight EDT Friday night.

An Air Quality Action Day means that Fine Particulates concentrations within the region may approach or exceed unhealthy standards. For additional information, please visit the North Carolina Division of Air Quality Web site at <https://airquality.climate.ncsu.edu/>.

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WVZ042>044-507-508-010400-
Mercer-Summers-Monroe-Eastern Greenbrier-Western Greenbrier-
Including the cities of Bluefield, Flat Top, Hinton, Hix, Union,
Lewisburg, White Sulphur Springs, Alderson, Quinwood, Duo, and Rainelle
1159 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT FRIDAY NIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>.

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187
AEUS71 KRNK 292028
AQARNK

Air Quality Alert Message
Relayed by National Weather Service Blacksburg VA
428 PM EDT Thu Jun 29 2023

NCZ001>006-018>020-302030-
Ashe-Alleghany NC-Surry-Stokes-Rockingham-Caswell-Watauga-Wilkes-
Yadkin-
Including the cities of West Jefferson, Sparta, Dobson, Danbury,
Eden, Yanceyville, Boone, Wilkesboro, and Yadkinville
428 PM EDT Thu Jun 29 2023

...CODE RED AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT TONIGHT...

...CODE ORANGE AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT FRIDAY
NIGHT...

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Red Air Quality Action Day for Fine

Particulates, until midnight tonight for Caswell, Rockingham, and Stokes Counties.

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Orange Air Quality Action Day for Fine Particulates, until midnight EDT Friday night for Ashe, Alleghany, Caswell, Stokes, Surry, Watauga, Wilkes, and Yadkin Counties.

An Air Quality Action Day means that Fine Particulates concentrations within the region may approach or exceed unhealthy standards. For additional information, please visit the North Carolina Division of Air Quality Web site at <https://airquality.climate.ncsu.edu/>.

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VAZ022-023-302030-
Roanoke-Botetourt-
Including the cities of Roanoke, Salem, and Fincastle
428 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL 9 PM EDT THIS EVENING...

The Virginia Department of Environmental Quality has issued a Code Orange Air Quality Action Day for Fine Particulates, until 9 PM EDT this evening.

A Code Orange Air Quality Action Day means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children...people suffering from asthma or other lung diseases...heart disease...and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors. For additional information...please visit the Virginia Department of Environmental Quality at www.deq.virginia.gov/our-programs/air/monitoring-assessments/air-quality-forecast

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WVZ042>044-507-508-302030-
Mercer-Summers-Monroe-Eastern Greenbrier-Western Greenbrier-
Including the cities of Bluefield, Flat Top, Hinton, Hix, Union,
Lewisburg, White Sulphur Springs, Alderson, Quinwood, Duo, and Rainelle
428 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT TONIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the

elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>.

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869

AEUS71 KRNK 292112

AQARNK

Air Quality Alert Message

Relayed by National Weather Service Blacksburg VA

512 PM EDT Thu Jun 29 2023

NCZ001>006-018>020-302115-

Ashe-Alleghany NC-Surry-Stokes-Rockingham-Caswell-Watauga-Wilkes-Yadkin-

Including the cities of West Jefferson, Sparta, Dobson, Danbury, Eden, Yanceyville, Boone, Wilkesboro, and Yadkinville

512 PM EDT Thu Jun 29 2023

...CODE RED AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT TONIGHT...

...CODE ORANGE AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT FRIDAY NIGHT...

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Red Air Quality Action Day for Fine Particulates, until midnight tonight for Caswell, Rockingham, and Stokes Counties.

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Orange Air Quality Action Day for Fine Particulates, until midnight Friday night for Ashe, Alleghany, Caswell, Stokes, Surry, Watauga, Wilkes, and Yadkin Counties.

An Air Quality Action Day means that Fine Particulates concentrations within the region may approach or exceed unhealthy standards. For additional information, please visit the North Carolina Division of Air Quality Web site at <https://airquality.climate.ncsu.edu/>.

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VAZ022-023-302115-

Roanoke-Botetourt-

Including the cities of Roanoke, Salem, and Fincastle

512 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL 9 PM EDT THIS EVENING...

The Virginia Department of Environmental Quality has issued a Code Orange Air Quality Action Day for Fine Particulates, until 9 PM EDT this evening.

A Code Orange Air Quality Action Day means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children...people suffering from asthma or other lung diseases...heart disease...and the elderly. The effects of air pollution can be minimized by avoiding strenuous activity or exercise outdoors. For additional information...please visit the Virginia Department of Environmental Quality at www.deq.virginia.gov/our-programs/air/monitoring-assessments/air-quality-forecast

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WVZ042>044-507-508-302115-
Mercer-Summers-Monroe-Eastern Greenbrier-Western Greenbrier-
Including the cities of Bluefield, Flat Top, Hinton, Hix, Union,
Lewisburg, White Sulphur Springs, Alderson, Quinwood, Duo,
and Rainelle
512 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT FRIDAY NIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>.

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644
AEUS71 KRNK 300129
AQARNK

Air Quality Alert Message
Relayed by National Weather Service Blacksburg VA
929 PM EDT Thu Jun 29 2023

NCZ001>006-018>020-010130-
Ashe-Alleghany NC-Surry-Stokes-Rockingham-Caswell-Watauga-Wilkes-
Yadkin-
Including the cities of West Jefferson, Sparta, Dobson, Danbury, Eden,
Yanceyville, Boone, Wilkesboro, and Yadkinville
929 PM EDT Thu Jun 29 2023

...CODE RED AIR QUALITY ALERT REMAINS IN EFFECT UNTIL MIDNIGHT TONIGHT...

...CODE ORANGE AIR QUALITY ALERT REMAINS IN EFFECT UNTIL MIDNIGHT FRIDAY NIGHT...

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Red Air Quality Action Day for Fine Particulates, until midnight tonight for Caswell, Rockingham, and Stokes Counties.

The North Carolina Department of Environmental and Natural Resources in Raleigh NC has issued a Code Orange Air Quality Action Day for Fine Particulates, until midnight Friday night for Ashe, Alleghany, Caswell, Stokes, Surry, Watauga, Wilkes, and Yadkin Counties.

An Air Quality Action Day means that Fine Particulates concentrations within the region may approach or exceed unhealthy standards. For additional information, please visit the North Carolina Division of Air Quality Web site at <https://airquality.climate.ncsu.edu/>.

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WVZ042>044-507-508-010130-

Mercer-Summers-Monroe-Eastern Greenbrier-Western Greenbrier-
Including the cities of Bluefield, Flat Top, Hinton, Hix, Union,
Lewisburg, White Sulphur Springs, Alderson, Quinwood, Duo,
and Rainelle

929 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT REMAINS IN EFFECT UNTIL MIDNIGHT FRIDAY NIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>.

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Charleston NWS Alerts

710

AEUS71 KRLX 291420

AQARLX

Air Quality Alert Message

Relayed by National Weather Service Charleston WV

1020 AM EDT Thu Jun 29 2023

KYZ101>103-105-301430-

Greenup-Carter-Boyd-Lawrence KY-

Including the cities of Flatwoods, Raceland, Russell, Grayson, Olive Hill, Carter Caves State Park, Grayson Lake State Park, Ashland, Cannonsburg, Louisa, and Yatesville Lake State Park

1020 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Kentucky Energy and Environmental Cabinet has requested an Air Quality Alert be issued for the state of Kentucky.

Everyone may experience health effects. Members of sensitive groups may experience more serious health effects. Sensitive groups include the elderly...children...persons with asthma or other breathing problems...and persons with lung and heart disease. People in these groups are advised to greatly limit their outdoor activities to reduce their exposure to particulate pollution from Canadian Wildfire Smoke.

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OHZ066-067-075-076-083>087-301430-

Perry-Morgan-Athens-Washington-Jackson OH-Vinton-Meigs-Gallia-Lawrence OH-

Including the cities of New Lexington, Crooksville, Somerset, McConnelsville, Stockport, Athens, Marietta, Belpre, Jackson, Wellston, Oak Hill, McArthur, Hamden, Pomeroy, Gallipolis, Ironton, Lake Vesuvius, and South Point

1020 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Ohio Environmental Protection Agency has issued an Air Quality Advisory for the entire state of Ohio, until midnight EDT tonight.

Smoke from the Canadian wildfires continues to adversely impact air quality. The Agency expects the Air Quality Index to be in the 'unhealthy for sensitive groups' range.

For additional information, please visit the Ohio Environmental Protection Agency's web site at epa.ohio.gov.

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WVZ005>011-013>020-024>034-039-040-515>526-301430-Wayne-Cabell-Mason-Jackson WV-Wood-Pleasants-Tyler-Lincoln-Putnam-Kanawha-Roane-Wirt-Calhoun-Ritchie-Doddridge-Mingo-Logan-Boone-Clay-Braxton-Gilmer-Lewis-Harrison-Taylor-McDowell-Wyoming-Upshur-Barbour-Northwest Raleigh-Southeast Raleigh-Northwest Fayette-Southeast Fayette-Northwest Nicholas-Southeast Nicholas-Northwest Webster-Southeast Webster-Northwest Pocahontas-Southeast Pocahontas-Northwest Randolph-Southeast Randolph-Including the cities of Kenova, Ceredo, Wayne, Huntington, Point Pleasant, New Haven, Ravenswood, Ripley, Parkersburg, Vienna, St. Marys, Belmont, Paden City, Sistersville, Middlebourne, Harts, Alum Creek, Hamlin, Teays Valley, Hurricane, Charleston, South Charleston, Saint Albans, Spencer, Elizabeth, Grantsville, Harrisville, Pennsboro, West Union, Williamson, Logan, Chapmanville, Man, Madison, Clay, Sutton, Gassaway, Burnsville, Glenville, Weston, Clarksburg, Bridgeport, Grafton, Welch, Gary, War, Mullens, Oceana, Pineville, Buckhannon, Philippi, Belington, Bradley, Prosperity, Sophia, Beckley, Oak Hill, Fayetteville, Montgomery, Meadow Bridge, Summersville, Craigsville, Birch River, Richwood, Holly River State, Webster Springs, Cowen, Snowshoe, Marlinton, Elkins, and Harman
1020 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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ROCHE
864
AEUS71 KRLX 292135
AQARLX

Air Quality Alert Message
Relayed by National Weather Service Charleston WV
535 PM EDT Thu Jun 29 2023

KYZ101>103-105-300400-
Greenup-Carter-Boyd-Lawrence KY-

Including the cities of Flatwoods, Raceland, Russell, Grayson, Olive Hill, Carter Caves State Park, Grayson Lake State Park, Ashland, Cannonsburg, Louisa, and Yatesville Lake State Park
535 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT REMAINS IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Kentucky Energy and Environmental Cabinet has requested an Air Quality Alert be issued for the state of Kentucky.

Everyone may experience health effects. Members of sensitive groups may experience more serious health effects. Sensitive groups include the elderly...children...persons with asthma or other breathing problems...and persons with lung and heart disease. People in these groups are advised to greatly limit their outdoor activities to reduce their exposure to particulate pollution from Canadian Wildfire Smoke.

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OHZ066-067-075-076-083>087-300400-
Perry-Morgan-Athens-Washington-Jackson OH-Vinton-Meigs-Gallia-Lawrence OH-
Including the cities of New Lexington, Crooksville, Somerset, McConnelsville, Stockport, Athens, Marietta, Belpre, Jackson, Wellston, Oak Hill, McArthur, Hamden, Pomeroy, Gallipolis, Ironton, Lake Vesuvius, and South Point
535 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT REMAINS IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Ohio Environmental Protection Agency has issued an Air Quality Advisory for the entire state of Ohio, until midnight EDT tonight.

Smoke from the Canadian wildfires continues to adversely impact air quality. The Agency expects the Air Quality Index to be in the 'unhealthy for sensitive groups' range.

For additional information, please visit the Ohio Environmental Protection Agency's web site at epa.ohio.gov.

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WVZ005>011-013>020-024>034-039-040-515>526-300400-
Wayne-Cabell-Mason-Jackson WV-Wood-Pleasants-Tyler-Lincoln-Putnam-Kanawha-Roane-Wirt-Calhoun-Ritchie-Doddridge-Mingo-Logan-Boone-Clay-Braxton-Gilmer-Lewis-Harrison-Taylor-McDowell-Wyoming-Upshur-Barbour-Northwest Raleigh-Southeast Raleigh-Northwest Fayette-Southeast Fayette-Northwest Nicholas-Southeast Nicholas-Northwest Webster-Southeast Webster-Northwest Pocahontas-Southeast Pocahontas-Northwest Randolph-Southeast Randolph-Including the cities of Kenova, Ceredo, Wayne, Huntington, Point Pleasant, New Haven, Ravenswood, Ripley, Parkersburg, Vienna, St. Marys, Belmont, Paden City, Sistersville, Middlebourne, Harts, Alum Creek, Hamlin, Teays Valley, Hurricane, Charleston, South Charleston, Saint Albans, Spencer, Elizabeth, Grantsville, Harrisville, Pennsboro, West

Union, Williamson, Logan, Chapmanville, Man, Madison, Clay, Sutton, Gassaway, Burnsville, Glenville, Weston, Clarksburg, Bridgeport, Grafton, Welch, Gary, War, Mullens, Oceana, Pineville, Buckhannon, Philippi, Belington, Bradley, Prosperity, Sophia, Beckley, Oak Hill, Fayetteville, Montgomery, Meadow Bridge, Summersville, Craigsville, Birch River, Richwood, Holly River State, Webster Springs, Cowen, Snowshoe, Marlinton, Elkins, and Harman

535 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT NOW IN EFFECT UNTIL MIDNIGHT EDT FRIDAY NIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT Friday night.

For today, Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects.

For Friday, Air Quality Index scores for the Northern and Eastern panhandles are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. The central and southern regions of the state are expected to have AQI scores in the 101-150 range, which can cause health effects in sensitive groups.

Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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994

AEUS71 KRLX 300405

AQARLX

Air Quality Alert Message

Relayed by National Weather Service Charleston WV

1205 AM EDT Fri Jun 30 2023

WVZ005>011-013>020-024>034-039-040-515>526-010400-

Wayne-Cabell-Mason-Jackson WV-Wood-Pleasants-Tyler-Lincoln-Putnam-Kanawha-Roane-Wirt-Calhoun-Ritchie-Doddridge-Mingo-Logan-Boone-Clay-Braxton-Gilmer-Lewis-Harrison-Taylor-McDowell-Wyoming-Upshur-Barbour-Northwest Raleigh-Southeast Raleigh-Northwest Fayette-Southeast Fayette-Northwest Nicholas-Southeast Nicholas-Northwest Webster-Southeast Webster-

Northwest Pocahontas-Southeast Pocahontas-Northwest Randolph-Southeast Randolph-

Including the cities of Kenova, Ceredo, Wayne, Huntington, Point Pleasant, New Haven, Ravenswood, Ripley, Parkersburg, Vienna, St. Marys, Belmont, Paden City, Sistersville, Middlebourne, Harts, Alum Creek, Hamlin, Teays Valley, Hurricane, Charleston, South Charleston, Saint Albans, Spencer, Elizabeth, Grantsville, Harrisville, Pennsboro, West Union, Williamson, Logan, Chapmanville, Man, Madison, Clay, Sutton, Gassaway, Burnsville, Glenville, Weston, Clarksburg, Bridgeport, Grafton, Welch, Gary, War, Mullens, Oceana, Pineville, Buckhannon, Philippi, Belington, Bradley, Prosperity, Sophia, Beckley, Oak Hill, Fayetteville, Montgomery, Meadow Bridge, Summersville, Craigsville, Birch River, Richwood, Holly River State, Webster Springs, Cowen, Snowshoe, Marlinton, Elkins, and Harman

1205 AM EDT Fri Jun 30 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT FRIDAY NIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT Friday night.

For Friday, Air Quality Index scores for the northern and eastern parts of the state are expected to be in the 151 to 200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. The central and southern regions of the state are expected to have Air Quality Index scores in the 101 to 150 range, which can cause health effects in sensitive groups.

Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter.

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Pittsburgh NWS Alerts

013

AEUS71 KPBZ 291427

AQAPBZ

Air Quality Alert Message

Relayed by National Weather Service Pittsburgh PA

1027 AM EDT Thu Jun 29 2023

OHZ039>041-048>050-057>059-068-069-300400-

Tuscarawas-Carroll-Columbiana-Coshocton-Harrison-Jefferson OH-

Muskingum-Guernsey-Belmont-Noble-Monroe-

Including the cities of New Philadelphia, Dover, Carrollton, Malvern, East Liverpool, Salem, Columbiana, Coshocton, Cadiz, Steubenville, Zanesville, Cambridge, Martins Ferry, St. Clairsville, Caldwell, and Woodsfield

1027 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Ohio Environmental Protection Agency has issued an Air Quality Advisory for the entire state of Ohio, until midnight EDT tonight.

Smoke from the Canadian wildfires continues to adversely impact air quality. The Agency expects the Air Quality Index to be in the 'unhealthy to very unhealthy for sensitive groups' range.

For additional information, please visit the Ohio Environmental Protection Agency's web site at epa.ohio.gov.

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PAZ007>009-013>016-020>022-029-031-073>078-300400-

Mercer-Venango-Forest-Lawrence-Butler-Clarion-Jefferson PA-Beaver-

Allegheny-Armstrong-Washington-Greene-Westmoreland-Higher Elevations of Westmoreland-Fayette-Higher Elevations of Fayette-Indiana-Higher Elevations of Indiana-

Including the cities of Sharon, Hermitage, Grove City, Oil City, Franklin, Tionesta, New Castle, Ellwood City, Butler, Clarion, Punxsutawney, Brookville, Aliquippa, Beaver Falls, Ambridge, Monaca, Pittsburgh Metro Area, Kittanning, Ford City, Washington, Canonsburg, Waynesburg, Murrysburg, Greensburg, New Kensington, Lower Burrell, Latrobe, Monessen, Ligonier, Donegal, Uniontown, Champion, Ohio, Indiana, and Armagh

1027 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Pennsylvania Department of Environmental Protection has issued a Code Red Air Quality Alert for Ground Level Ozone, until midnight EDT tonight.

A code RED air quality alert means that air pollution concentrations within the local region are unhealthful for the general population. The

effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity.

For more information on ground-level ozone and fine particles, visit <http://www.airnow.gov> and <https://www.ahs.dep.pa.gov/AQPartnersWeb/>

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WVZ001>004-012-021-509>514-300400-
Hancock-Brooke-Ohio-Marshall-Wetzel-Marion-Monongalia-
Ridges of Eastern Monongalia and Northwestern Preston-Preston-
Eastern Preston-Western Tucker-Eastern Tucker-
Including the cities of Weirton, Follansbee, Wellsburg, Wheeling,
Moundsville, New Martinsville, Fairmont, Morgantown, Coopers Rock,
Kingwood, Bruceton Mills, Terra Alta, Rowlesburg, Hazelton, Parsons,
Hendricks, Saint George, Davis, Thomas, and Canaan Valley
1027 AM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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457
AEUS71 KPBZ 291747 CCA
AQAPBZ

Air Quality Alert Message...CORRECTED
Relayed by National Weather Service Pittsburgh PA
147 PM EDT Thu Jun 29 2023

OHZ039>041-048>050-057>059-068-069-300400-
Tuscarawas-Carroll-Columbiana-Coshocton-Harrison-Jefferson OH-
Muskingum-Guernsey-Belmont-Noble-Monroe-
Including the cities of New Philadelphia, Dover, Carrollton, Malvern, East
Liverpool, Salem, Columbiana, Coshocton, Cadiz, Steubenville, Zanesville,
Cambridge, Martins Ferry, St. Clairsville, Caldwell, and Woodsfield
147 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Ohio Environmental Protection Agency has issued an Air Quality Advisory for the entire state of Ohio, until midnight EDT tonight.

Smoke from the Canadian wildfires continues to adversely impact air quality. The Agency expects the Air Quality Index to be in the 'unhealthy to very unhealthy for sensitive groups' range.

For additional information, please visit the Ohio Environmental Protection Agency's web site at epa.ohio.gov.

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PAZ007>009-013>016-020>022-029-031-073>078-300400-
Mercer-Venango-Forest-Lawrence-Butler-Clarion-Jefferson PA-Beaver-
Allegheny-Armstrong-Washington-Greene-Westmoreland-Higher Elevations of
Westmoreland-Fayette-Higher Elevations of Fayette-Indiana-Higher
Elevations of Indiana-
Including the cities of Sharon, Hermitage, Grove City, Oil City, Franklin,
Tionesta, New Castle, Ellwood City, Butler, Clarion, Punxsutawney,
Brookville, Aliquippa, Beaver Falls, Ambridge, Monaca, Pittsburgh Metro
Area, Kittanning, Ford City, Washington, Canonsburg, Waynesburg,
Murrysville, Greensburg, New Kensington, Lower Burrell, Latrobe, Monessen,
Ligonier, Donegal, Uniontown, Champion, Ohiopyle, Indiana, and Armagh
147 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Pennsylvania Department of Environmental Protection has issued a Code Red Air Quality Alert for Fine Particulates, until midnight EDT tonight.

A code RED air quality alert means that air pollution concentrations within the local region are unhealthful for the general population. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity.

For more information on ground-level ozone and fine particles, visit <http://www.airnow.gov> and <https://www.ahs.dep.pa.gov/AQPartnersWeb/>

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WVZ001>004-012-021-509>514-300400-
Hancock-Brooke-Ohio-Marshall-Wetzel-Marion-Monongalia-Ridges of Eastern
Monongalia and Northwestern Preston-Preston-Eastern Preston-Western
Tucker-Eastern Tucker-
Including the cities of Weirton, Follansbee, Wellsburg, Wheeling,
Moundsville, New Martinsville, Fairmont, Morgantown, Coopers Rock,
Kingwood, Bruceton Mills, Terra Alta, Rowlesburg, Hazelton, Parsons,
Hendricks, Saint George, Davis, Thomas, and Canaan Valley
147 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT tonight.

Air Quality Index scores for most of West Virginia are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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067

AEUS71 KPBZ 292112

AQAPBZ

Air Quality Alert Message

Relayed by National Weather Service Pittsburgh PA

512 PM EDT Thu Jun 29 2023

OHZ039>041-048>050-057>059-068-069-300400-

Tuscarawas-Carroll-Columbiana-Coshocton-Harrison-Jefferson OH-Muskingum-Guernsey-Belmont-Noble-Monroe-

Including the cities of New Philadelphia, Dover, Carrollton, Malvern, East Liverpool, Salem, Columbiana, Coshocton, Cadiz, Steubenville, Zanesville, Cambridge, Martins Ferry, St. Clairsville, Caldwell, and Woodsfield

512 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Ohio Environmental Protection Agency has issued an Air Quality Advisory for the entire state of Ohio, until midnight EDT tonight.

Smoke from the Canadian wildfires continues to adversely impact air quality. The Agency expects the Air Quality Index to be in the 'unhealthy to very unhealthy for sensitive groups' range.

For additional information, please visit the Ohio Environmental Protection Agency's web site at epa.ohio.gov.

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PAZ007>009-013>016-020>022-029-031-073>078-300400-

Mercer-Venango-Forest-Lawrence-Butler-Clarion-Jefferson PA-Beaver-

Allegheny-Armstrong-Washington-Greene-Westmoreland-Higher Elevations of Westmoreland-Fayette-Higher Elevations of Fayette-Indiana-Higher Elevations of Indiana- Including the cities of Sharon, Hermitage, Grove City, Oil City, Franklin, Tionesta, New Castle, Ellwood City, Butler, Clarion, Punxsutawney, Brookville, Aliquippa, Beaver Falls, Ambridge, Monaca, Pittsburgh Metro Area, Kittanning, Ford City, Washington, Canonsburg, Waynesburg, Murrysburg, Greensburg, New Kensington, Lower Burrell, Latrobe, Monessen, Ligonier, Donegal, Uniontown, Champion, Ohiopyle, Indiana, and Armagh
512 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT FRIDAY NIGHT...

The Pennsylvania Department of Environmental Protection has issued a Code Red Air Quality Alert for Fine Particulates, until midnight EDT tonight, and a Code Orange Air Quality Alert from midnight tonight through midnight EDT Friday night. This is in effect for the entire state of Pennsylvania.

A code RED air quality alert means that air pollution concentrations within the local region are unhealthful for the general population. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity.

A code ORANGE air quality alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, the elderly, and people suffering from asthma, heart disease, or other lung diseases. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity.

For more information on ground-level ozone and fine particles, visit <http://www.airnow.gov> and <https://www.ahs.dep.pa.gov/AQPartnersWeb/>

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WVZ001>004-012-021-509>514-300400- Hancock-Brooke-Ohio-Marshall-Wetzel-Marion-Monongalia-Ridges of Eastern Monongalia and Northwestern Preston-Preston-Eastern Preston-Western Tucker-Eastern Tucker- Including the cities of Weirton, Follansbee, Wellsburg, Wheeling, Moundsville, New Martinsville, Fairmont, Morgantown, Coopers Rock, Kingwood, Bruceton Mills, Terra Alta, Rowlesburg, Hazelton, Parsons, Hendricks, Saint George, Davis, Thomas, and Canaan Valley
512 PM EDT Thu Jun 29 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT FRIDAY NIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT Friday night. This is in effect for the state of West Virginia.

Air Quality Index scores for the Northern and Eastern Panhandles are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. The central and southern regions

of the state are expected to have AQI scores in the 101-150 range, which can cause health effects in sensitive groups.

Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

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WM
015
AEUS71 KPZ 300425
AQAPBZ

Air Quality Alert Message
Relayed by National Weather Service Pittsburgh PA
1225 AM EDT Fri Jun 30 2023

PAZ007>009-013>016-020>022-029-031-073>078-010430-
Mercer-Venango-Forest-Lawrence-Butler-Clarion-Jefferson PA-Beaver-
Allegheny-Armstrong-Washington-Greene-Westmoreland-Higher Elevations of
Westmoreland-Fayette-Higher Elevations of Fayette-Indiana-Higher
Elevations of Indiana-
Including the cities of Sharon, Hermitage, Grove City, Oil City, Franklin,
Tionesta, New Castle, Ellwood City, Butler, Clarion, Punxsutawney,
Brookville, Aliquippa, Beaver Falls, Ambridge, Monaca, Pittsburgh Metro
Area, Kittanning, Ford City, Washington, Canonsburg, Waynesburg,
Murrysville, Greensburg, New Kensington, Lower Burrell, Latrobe, Monessen,
Ligonier, Donegal, Uniontown, Champion, Ohiopyle, Indiana, and Armagh
1225 AM EDT Fri Jun 30 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The Pennsylvania Department of Environmental Protection has issued a Code Orange Air Quality Alert for Fine Particulates, until midnight EDT tonight.

A code ORANGE air quality alert means that air pollution concentrations within the region may become unhealthy for sensitive groups. Sensitive groups include children, the elderly, and people suffering from asthma, heart disease, or other lung diseases. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity.

For more information on ground-level ozone and fine particles, visit <http://www.airnow.gov> and <https://www.ahs.dep.pa.gov/AQPartnersWeb/>

\$\$

WVZ001>004-012-021-509>514-010430-
Hancock-Brooke-Ohio-Marshall-Wetzel-Marion-Monongalia-Ridges of Eastern
Monongalia and Northwestern Preston-Preston-Eastern Preston-Western
Tucker-Eastern Tucker-
Including the cities of Weirton, Follansbee, Wellsburg, Wheeling,
Moundsville, New Martinsville, Fairmont, Morgantown, Coopers Rock,
Kingwood, Bruceton Mills, Terra Alta, Rowlesburg, Hazelton, Parsons,
Hendricks, Saint George, Davis, Thomas, and Canaan Valley
1225 AM EDT Fri Jun 30 2023

...AIR QUALITY ALERT IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The West Virginia Department of Environmental Protection has issued a
statewide air quality advisory for fine particulate matter until midnight
EDT Friday night. This is in effect for the state of West Virginia.

Air Quality Index scores for the Northern and Eastern Panhandles are in
the 151-200 range, which indicate that some members of the general public
may experience health effects and members of sensitive groups may
experience more serious health effects. The central and southern regions
of the state are expected to have AQI scores in the 101-150 range, which
can cause health effects in sensitive groups.

Sensitive groups include children, people suffering from asthma, heart
disease or other lung diseases, and the elderly. The effects of air
pollution can be minimized by avoiding outdoor exercise or strenuous
activity. N-95 masks can help reduce smoke inhalation and potential health
risks.

For more information about air quality in your area, visit
<https://www.airnow.gov/>. Please make sure you are viewing the interactive
map for your area using the "contours" setting for Ozone and Particulate
Matter (PM).

\$\$

623

AEUS71 KPBZ 301840

AQAPBZ

Air Quality Alert Message

Relayed by National Weather Service Pittsburgh PA

240 PM EDT Fri Jun 30 2023

PAZ007>009-013>016-020>022-029-031-073>078-011845-
Mercer-Venango-Forest-Lawrence-Butler-Clarion-Jefferson PA-Beaver-
Allegheny-Armstrong-Washington-Greene-Westmoreland-Higher Elevations of
Westmoreland-Fayette-Higher Elevations of Fayette-Indiana-Higher
Elevations of Indiana-
Including the cities of Sharon, Hermitage, Grove City, Oil City, Franklin,
Tionesta, New Castle, Ellwood City, Butler, Clarion, Punxsutawney,
Brookville, Aliquippa, Beaver Falls, Ambridge, Monaca, Pittsburgh Metro
Area, Kittanning, Ford City, Washington, Canonsburg, Waynesburg,

Murrysville, Greensburg, New Kensington, Lower Burrell, Latrobe, Monessen, Ligonier, Donegal, Uniontown, Champion, Ohio, Indiana, and Armagh
240 PM EDT Fri Jun 30 2023

...AIR QUALITY ALERT IN EFFECT FOR WESTERN PENNSYLVANIA UNTIL
MIDNIGHT EDT TONIGHT...

The Pennsylvania Department of Environmental Protection has issued a Code Red Air Quality Alert for Fine Particulates, until midnight EDT tonight.

A code RED air quality alert means that air pollution concentrations within the local region are unhealthful for the general population. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity.

For more information on ground-level ozone and fine particles, visit <http://www.airnow.gov> and <https://www.ahs.dep.pa.gov/AQPartnersWeb/>

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WVZ001>004-012-021-509>514-011845-
Hancock-Brooke-Ohio-Marshall-Wetzel-Marion-Monongalia-Ridges of Eastern Monongalia and Northwestern Preston-Preston-Eastern Preston-Western Tucker-Eastern Tucker-Including the cities of Weirton, Follansbee, Wellsburg, Wheeling, Moundsville, New Martinsville, Fairmont, Morgantown, Coopers Rock, Kingwood, Bruceton Mills, Terra Alta, Rowlesburg, Hazelton, Parsons, Hendricks, Saint George, Davis, Thomas, and Canaan Valley
240 PM EDT Fri Jun 30 2023

...AIR QUALITY ALERT IN EFFECT FOR NORTHERN WEST VIRGINIA UNTIL
MIDNIGHT EDT TONIGHT...

The West Virginia Department of Environmental Protection has issued a statewide air quality advisory for fine particulate matter until midnight EDT Friday night. This is in effect for the state of West Virginia.

Air Quality Index scores for the Northern and Eastern Panhandles are in the 151-200 range, which indicate that some members of the general public may experience health effects and members of sensitive groups may experience more serious health effects. The central and southern regions of the state are expected to have AQI scores in the 101-150 range, which can cause health effects in sensitive groups.

Sensitive groups include children, people suffering from asthma, heart disease or other lung diseases, and the elderly. The effects of air pollution can be minimized by avoiding outdoor exercise or strenuous activity. N-95 masks can help reduce smoke inhalation and potential health risks.

For more information about air quality in your area, visit <https://www.airnow.gov/>. Please make sure you are viewing the interactive map for your area using the "contours" setting for Ozone and Particulate Matter (PM).

\$\$

Shallenberger
994
AEUS71 KPBZ 010731 AAA
AQAPBZ

Air Quality Alert Message...UPDATED
Relayed by National Weather Service Pittsburgh PA
331 AM EDT Sat Jul 1 2023

PAZ007>009-013>016-020>022-029-031-073>078-WVZ001>004-012-021-
509>514-010845-
Mercer-Venango-Forest-Lawrence-Butler-Clarion-Jefferson PA-Beaver-
Allegheny-Armstrong-Washington-Greene-Westmoreland-Higher Elevations of
Westmoreland-Fayette-Higher Elevations of Fayette-Indiana-Higher
Elevations of Indiana-Hancock-Brooke-Ohio-Marshall-Wetzel-Marion-
Monongalia-Ridges of Eastern Monongalia and Northwestern Preston-Preston-
Eastern Preston-Western Tucker-Eastern Tucker-
Including the cities of Sharon, Hermitage, Grove City, Oil City, Franklin,
Tionesta, New Castle, Ellwood City, Butler, Clarion, Punxsutawney,
Brookville, Aliquippa, Beaver Falls, Ambridge, Monaca, Pittsburgh Metro
Area, Kittanning, Ford City, Washington, Canonsburg, Waynesburg,
Murrysville, Greensburg, New Kensington, Lower Burrell, Latrobe, Monessen,
Ligonier, Donegal, Uniontown, Champion, Ohio-Pyle, Indiana, Armagh,
Weirton, Follansbee, Wellsburg, Wheeling, Moundsville, New Martinsville,
Fairmont, Morgantown, Coopers Rock, Kingwood, Bruceton Mills, Terra Alta,
Rowlesburg, Hazelton, Parsons, Hendricks, Saint George, Davis, Thomas,
and Canaan Valley
331 AM EDT Sat Jul 1 2023

...AIR QUALITY ALERT EXPIRED AT MIDNIGHT...

The Air Quality Alerts for Western Pennsylvania and Northern West Virginia
expired at midnight EDT.

For more information on ground-level ozone and fine particles, visit
<http://www.airnow.gov>

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Appendix B – Public Comments

(Placeholder page for public comments.)

Appendix C – Responses to Public Comments

(Placeholder page for WVDEP responses to public comments.)

Appendix D – WVDEP Initial Notification of Exceptional Events Demonstration to EPA and EPA Response



Shrewsbury, Todd H <todd.h.shrewsbury@wv.gov>

WV DEP DAQ Exception Events PM Initial Notification

1 message

Crowder, Laura M <laura.m.crowder@wv.gov>

31 July 2024 at 14:47

To: "Fernandez, Cristina" <Fernandez.Cristina@epa.gov>

Cc: Verena <joeberger.verena@epa.gov>, Laura Jennings <laura.m.jennings@wv.gov>

Bcc: todd.h.shrewsbury@wv.gov

Cristina,

Please accept the attached West Virginia Department of Environmental Protection Division of Air Quality's initial notification for an exceptional event demonstration at the Martinsburg, WV monitor (5400030003) for PM2.5 on June 29, 2023 due to the Canadian Wildfires.

Your staff has provided timely comments, which were helpful in developing this initial notification. We anticipate continuing early engagement as we work through this process. Please note upon submission of this document we will update the AQS flag for this date and monitor.

Best regards,

Laura

Laura M. Crowder

Director


WV Division of Air Quality

601 57th Street, SE

Charleston, WV 25304

Phone: 304-414-1253

Email: Laura.M.Crowder@wv.gov

 **PM2.5_MARTINSBURG_R3_EE_IN_20240328 2023-06-29.pdf**
182K

EPA Region 3 Exceptional Events PM Initial Notification (IN) Summary Information

Directions: For Initial Notifications for attainment date extensions, please fill out **A, D, E, and F**. For all other requests, please fill out **A, B, C, and F**.

Submitting Agency: West Virginia Department of Environmental Protection

Agency Contact: Laura M. Crowder, Director

Date Submitted: July 31, 2024

Applicable NAAQS (e.g., 2024 Annual PM_{2.5}): 2024 Primary Annual PM_{2.5}

Affected Regulatory Decision¹: Initial Attainment Designation

(For classification decisions, specify level of the classification with/without EE concurrence)

Area Name/Designation Status: Hagerstown-Martinsburg, MD-WV MSA / Attainment

Design Value Period (list three-year period): 2021-2023

¹ Designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call.

A) Information Specific to Each Flagged Monitor Day (or attach separate spreadsheet)

Date of Event	Type of Event (high wind, wildfires/prescribed fire, other ²)	AQS Flag	Monitor AQS ID (and POC)	Site Name	Exceedance Concentration	Units (µg/m ³)	Event Name	Notes (e.g., links to other events)
2023-06-29	Wildfire	IF	540030003	Martinsburg/ Ball Field	83.8	ug/m ³	Canadian Wildfires of June/July 2023	Monitor Lat/Long: 39.448001, -77.964130 Exceeds Tier 1 Level of 29.5 ug/m ³

B) Violating Sites Information

(List all violating sites in the planning area³, regardless of operating agency, and regardless of whether they are impacted by EEs)

Site/monitor	AQS ID	Design Value (<u>without</u> EPA concurrence on any of the events listed in Section A)	Design Value (<u>with</u> EPA concurrence on all events listed in Section A)
None			

² Provide additional information for types of events described as "other."

³ For initial area designations, the "planning area" should be defined as the relevant boundary a State or Tribe is proposing in the initial area designation process.

C) Summary of Maximum Design Value (DV) Site Information (Effect of EPA Concurrence on Maximum Design Value Site Determination)
(Highest value from Table B)

Maximum DV site (AQS ID) <u>without</u> EPA concurrence on any of the events listed in A or the attached spreadsheet	Design Value	Design Value Site (AQS ID)	Comment
540030003	9.1	Martinsburg/Ball Field	DV includes 6/29/2023
Maximum DV site (AQS ID) <u>with</u> EPA concurrence on all events listed in A or the attached spreadsheet	Design Value	Design Value Site (AQS ID)	Comment
540030003	8.9	Martinsburg/Ball Field	DV does not include 6/29/2023

D) Concentration of Monitors that Exceed the Standard in Applicable Year (or attach separate spreadsheet)

(List all "concentration"⁴ exceeding sites in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs)

Site/monitor	AQS ID	Concentration ³ (Concentration <u>without</u> EPA concurrence on any events listed in section A)	Concentration ³ (Concentration <u>with</u> EPA concurrence on all events listed in section A)
N/A			

⁴ For the 24-hour standard use the 98th percentile 24-hour concentration value; for the annual standard use the annual average concentration value.

E) Summary of Highest Concentration Site Information (Effect of EPA Concurrence on Concentration Site Determination)

Maximum concentration ⁴ site (AQS ID) without EPA concurrence on any of the events listed in section A	Concentration ⁴	Site (AQS ID)	Comment
Maximum concentration ⁴ site (AQS ID) with EPA concurrence on all events listed in section A	Concentration ⁴	Site (AQS ID)	Comment

F) List of any sites (AQS ID) within planning area with invalid design values (e.g., due to data incompleteness)

None based on AQS Design Value Report



REGION 3
PHILADELPHIA, PA 19103

August 27, 2024

Ms. Laura Crowder, Director
Division of Air Quality
West Virginia Department of Environmental
Protection
601 57th Street, SE
Charleston, WV 25304

Dear Ms. Crowder:

This letter provides a response to the West Virginia Department of Environmental Protection's (WVDEP) exceptional event (EE) initial notification (IN) submittal, dated July 31, 2024, regarding fine particulate matter (PM_{2.5}) data affected by an EE. The IN stated that emissions from wildfires based in Canada caused an exceedance of the 2024 primary annual PM_{2.5} National Ambient Air Quality Standards (NAAQS) on June 29, 2023, at the following monitoring site within the Hagerstown-Martinsburg, MD-WV Metropolitan Statistical Area: Martinsburg (AQS ID: 54-003-0003). The IN indicated that the design value for the Martinsburg monitor would change from exceeding the NAAQS to not exceeding the NAAQS based on exclusion of the data for the date indicated in the IN.

Based on the information provided in WVDEP's IN submittal, EPA has determined that PM_{2.5} data from June 29, 2023, at the Martinsburg site may affect EPA's initial area designations for the 2024 primary annual PM_{2.5} NAAQS and the exceedance could be considered for exclusion under the Exceptional Events Rule.

EPA has been in communication with WVDEP regarding this request. Based on the nature of the event and to ensure that exceptional events claims are fully considered, as appropriate, in EPA's final designations decisions for the 2024 primary annual PM_{2.5} NAAQS, EPA requests that the demonstration be formally submitted to EPA no later than February 7, 2025.

EPA encourages continued communication throughout the development and submittal of this EE demonstration. If you have any questions, please do not hesitate to contact me, or have your staff contact Alice Chow (215) 814-2144, or staff lead, Verena Joerger Air and Radiation Division, 1600 John F. Kennedy Boulevard, Philadelphia, Pennsylvania (or PA) 19103 at, (215) 814-2218, joerger.verena@epa.gov. We appreciate your partnership in working through implementation of the Exceptional Events Rule.

Sincerely,

CRISTINA Digitally signed by
FERNANDEZ CRISTINA FERNANDEZ
Date: 2024.08.27
17:03:03 -0400

Cristina Fernández
Air & Radiation Division

cc: Laura Jennings
Alice Chow
Dave Talley
Verena Joerger