



west virginia department of environmental protection

Executive Office
601 57th Street, SE
Charleston, WV 25304

Harold D. Ward, Cabinet Secretary
dep.wv.gov

February 4, 2025

Ms. Catherine A. Libertz
Deputy Regional Administrator, Region 3
United States Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103

Re: West Virginia Initial Designation Recommendations Under the 2024 Primary Annual PM_{2.5} NAAQS

Dear Deputy Administrator Libertz:

On February 7, 2024, the Environmental Protection Agency (EPA) promulgated a revised primary annual 2.5-micron particulate matter national ambient air quality standard (2024 Primary Annual PM_{2.5} NAAQS) [89 FR 16202]¹. With this action, the EPA strengthened the primary annual PM_{2.5} standard from 12.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 9.0 $\mu\text{g}/\text{m}^3$. Also with this action, the EPA retained: (1) the existing primary 24-hour coarse particle (PM₁₀) NAAQS at 150 $\mu\text{g}/\text{m}^3$; (2) the existing primary 24-hour PM_{2.5} NAAQS at 35 $\mu\text{g}/\text{m}^3$; and (3) all current secondary PM NAAQS. The EPA recommended states base their boundary and initial designation recommendations for the 2024 Annual PM_{2.5} NAAQS using certified air quality monitoring data from full calendar years 2021 – 2023, which are the three most recent years of complete certified data currently available. After February 7, 2025, the EPA intends to base its initial designations on certified monitoring data for full calendar years 2022 – 2024². The EPA made available to the public an internet-based interactive PM_{2.5} Designations Mapping Tool³ to assist states with initial designation boundaries and to determine monitor design values (DV).

In accordance with Section 107(d)(1)(A) of the Clean Air Act (CAA), the West Virginia Department of Environmental Protection (WVDEP) hereby submits on behalf of the State of West Virginia its initial designation recommendations for the 2024 Primary Annual PM_{2.5} NAAQS. Per the EPA's guidance and in the form of the revised Primary Annual PM_{2.5} NAAQS calculated from the three-year average DV, the three most recent years of available quality-assured monitoring data available from 2021 through 2023 were used to establish its attainment designation recommendations for West Virginia. Attachment 1 lists WVDEP's designation recommendations for each of the 55 counties in West Virginia. Attachment 2 is a table of PM_{2.5} monitors operated by the WVDEP throughout West Virginia with three or more years of quality-assured data, with quarterly and annual means for each monitor for each of the calendar years 2021 – 2023, and the corresponding DV. Attachment 3 consists of concentration plots for each monitor listed in Attachment 2 for calendar years 2021 – 2023⁴.

¹ <https://www.govinfo.gov/content/pkg/FR-2024-03-06/pdf/2024-02637.pdf>

² https://www.epa.gov/system/files/documents/2024-02/pm-naaqs-designations-memo_2.7.2024_-jg-signed.pdf

³ <https://www.arcgis.com/apps/mapviewer/index.html?webmap=4a570076236d4878b0e135ce11cfc0f1>

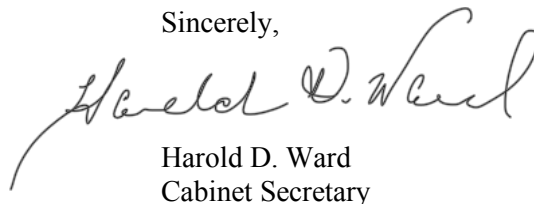
⁴ <https://www.epa.gov/outdoor-air-quality-data/air-data-concentration-plot>

The WVDEP operates West Virginia's PM_{2.5} ambient air monitor network per an EPA-approved annual network plan (ANP) as described in the *2024 Ambient Air Monitoring Annual Network Plan and SO₂ Data Requirement Rule Annual Report*.⁵ The WVDEP ambient air monitor network includes thirteen (13) PM_{2.5} federal reference monitors (FRM) located near high population density centers, within eight core-based statistical areas (CBSA) throughout West Virginia. Twelve (12) of the PM_{2.5} monitoring sites meet data completeness criteria over 2021 – 2023 for NAAQS determination, and these are illustrated in Attachment 2; these 12 monitoring sites are used in this initial designation. The Charleston NCore (Dixie Street, 54-039-0020) monitoring site DV calculations combine data generated from an FRM and data generated by a co-located continuous monitor for days the FRM does not collect data. The Fairmont monitor (54-049-00006) is not used in this initial designation because the site did not meet data completeness in 2021 due to restricted access related to COVID safety measures. However, the Fairmont monitor is attaining the 2024 Primary Annual PM_{2.5} NAAQS with an 11 quarter DV of 7.8 µg/m³.

On December 2, 2024, in accordance with EPA's Exceptional Events Rule [40 CFR 50.14(c)(3)], the WVDEP submitted the *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* (Martinsburg Exceptional Events Demonstration) to the EPA SPeCS for Exceptional Events system for the EPA's review and approval. In the Martinsburg Exceptional Events Demonstration, the WVDEP requested the EPA concur with exclusion of the regulatorily significant PM_{2.5} tier one data point of 83.8 µg/m³ measured at the Martinsburg monitor (54-003-0003) on June 29, 2023 from the Martinsburg DV calculation. Martinsburg is located in the Hagerstown-Martinsburg, MD-WV CBSA. The result of the exclusion of this single data point from a set of 339 points is considerable and reduces the Martinsburg monitor DV from the non-attaining value of 9.1 µg/m³ to the attaining value of 8.9 µg/m³. This is more than 2.5% of the inclusive DV and demonstrates the severity of the extremely unusual smoke concentrations transported from the historical Canadian wildfires thousands of miles distant. Therefore, the DV listed in the PM_{2.5} monitor table of Attachment 2 for the Martinsburg monitor does not include the June 29, 2023 data point in its calculation. The daily mean concentration plots of Attachment 3 also illustrate the significant PM_{2.5} spikes the West Virginia monitors measured during the late spring and early summer of 2023 attributable to the historic Canadian wildfires against a backdrop of consistently attaining and downward trending PM_{2.5} concentrations throughout the state.

The WVDEP respectfully requests the EPA review and concur with the West Virginia 2024 Primary Annual PM_{2.5} NAAQS initial attainment designation recommendation that all counties within the state of West Virginia should be classified as "attainment/unclassifiable". The WVDEP further respectfully requests the EPA expeditiously approve the associated supporting Martinsburg Exceptional Events Demonstration. Should the EPA have any questions or require additional information concerning this designation recommendation, please contact Laura Crowder of the WVDEP at (304) 414-1253 or at Laura.M.Crowder@wv.gov. Thank you for your consideration and prompt attention to this request.

Sincerely,



Harold D. Ward
Cabinet Secretary

Attachments

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

Attachment 1

State of West Virginia 2024 Primary Annual PM_{2.5} National Ambient Air Quality Standards Area Designation Recommendations February 2025

Designated Area	Recommended Designation Status	Designated Area	Recommended Designation Status
Barbour County	Attainment/ Unclassifiable	Mineral County	Attainment/ Unclassifiable
Berkeley County	Attainment/ Unclassifiable	Mingo County	Attainment/ Unclassifiable
Boone County	Attainment/ Unclassifiable	Monongalia County	Attainment/ Unclassifiable
Braxton County	Attainment/ Unclassifiable	Monroe County	Attainment/ Unclassifiable
Brooke County	Attainment/ Unclassifiable	Morgan County	Attainment/ Unclassifiable
Cabell County	Attainment/ Unclassifiable	Nicholas County	Attainment/ Unclassifiable
Calhoun County	Attainment/ Unclassifiable	Ohio County	Attainment/ Unclassifiable
Clay County	Attainment/ Unclassifiable	Pendelton County	Attainment/ Unclassifiable
Doddridge County	Attainment/ Unclassifiable	Pleasants County	Attainment/ Unclassifiable
Fayette County	Attainment/ Unclassifiable	Pocahontas County	Attainment/ Unclassifiable
Gilmer County	Attainment/ Unclassifiable	Preston County	Attainment/ Unclassifiable
Grant County	Attainment/ Unclassifiable	Putnam County	Attainment/ Unclassifiable
Greenbrier County	Attainment/ Unclassifiable	Raleigh County	Attainment/ Unclassifiable
Hampshire County	Attainment/ Unclassifiable	Randolph County	Attainment/ Unclassifiable
Hancock County	Attainment/ Unclassifiable	Ritchie County	Attainment/ Unclassifiable
Hardy County	Attainment/ Unclassifiable	Roane County	Attainment/ Unclassifiable
Harrison County	Attainment/ Unclassifiable	Summers County	Attainment/ Unclassifiable
Jackson County	Attainment/ Unclassifiable	Taylor County	Attainment/ Unclassifiable
Jefferson County	Attainment/ Unclassifiable	Tucker County	Attainment/ Unclassifiable
Kanawha County	Attainment/ Unclassifiable	Tyler County	Attainment/ Unclassifiable
Lewis County	Attainment/ Unclassifiable	Upshur County	Attainment/ Unclassifiable
Lincoln County	Attainment/ Unclassifiable	Wayne County	Attainment/ Unclassifiable
Logan County	Attainment/ Unclassifiable	Webster County	Attainment/ Unclassifiable
Marion County	Attainment/ Unclassifiable	Wetzel County	Attainment/ Unclassifiable
Marshall County	Attainment/ Unclassifiable	Wirt County	Attainment/ Unclassifiable
Mason County	Attainment/ Unclassifiable	Wood County	Attainment/ Unclassifiable
McDowell County	Attainment/ Unclassifiable	Wyoming County	Attainment/ Unclassifiable
Mercer County	Attainment/ Unclassifiable		

Attachment 2

West Virginia Design Value Summary by Monitor for the 2024 Primary Annual PM_{2.5} NAAQS February 2025

PM _{2.5} Monitoring Site			2021					2022					2023					2021-2023 Design Value
Monitor ID	Monitor County	Monitor Name	Q1	Q2	Q3	Q4	Annual Mean	Q1	Q2	Q3	Q4	Annual Mean	Q1	Q2	Q3	Q4	Annual Mean	
54-029-0009	Hancock	Weirton - Summit Circle	9.2	9.2	10.5	6.7	8.9	7.8	7.8	7.6	6.5	7.4	7.0	12.0	8.8	6.1	8.5	8.3
54-009-0011	Brooke	Weirton - Marland Heights Elementary	9.3	9.6	10.4	7.0	9.1	7.9	7.1	7.7	6.3	7.2	7.0	12.3	9.1	6.6	8.8	8.4
54-009-0005	Brooke	Follansbee - Mahan Lane	10.5	10.0	10.9	7.2	9.7	8.9	7.4	7.7	6.5	7.6	7.3	12.1	9.1	6.4	8.7	8.7
54-069-0010	Ohio	Wheeling - Warwood Water Plant	9.2	8.5	10.4	6.3	8.6	7.8	7.1	7.7	6.9	7.4	7.5	12.3	9.1	6.5	8.9	8.3
54-051-1002	Marshall	Moundsville - National Guard Armory	11.2	8.1	10.2	7.2	9.2	9.6	7.5	7.7	8.5	8.3	8.1	12.0	8.9	7.6	9.1	8.9
54-061-0003	Monongalia	Morgantown - Airport	7.5	8.0	10.6	4.8	7.7	7.3	7.5	7.8	5.5	7.0	6.5	11.9	9.2	5.6	8.3	7.7
54-033-0003	Harrison	Clarksburg - Washington Irving Jr. High School	7.3	7.8	9.2	5.3	7.4	6.6	7.3	6.8	6.1	6.7	6.2	12.5	8.4	6.3	8.4	7.5
54-107-1002	Wood	Vienna - Neale Elementary School	8.1	7.8	10.1	5.7	7.9	8.2	7.2	7.6	6.7	7.4	7.0	11.7	9.6	7.4	8.9	8.1
54-011-0007	Cabell	Huntington - 1313 4th Street	8.2	7.4	9.9	5.8	7.8	6.9	6.8	7.1	6.5	6.8	6.2	10.7	9.3	6.6	8.2	7.6
54-039-0020	Kanawha	Charleston - Dixie Street (NCore)	8.3	8.0	10.0	6.4	8.2	8.0	7.8	6.6	6.0	7.1	6.2	10.0	7.6	7.2	7.7	7.7
54-039-1005	Kanawha	South Charleston - Public Library	8.1	8.2	9.9	6.4	8.2	7.7	7.4	7.6	6.6	7.3	7.1	11.5	9.0	7.8	8.8	8.1
54-003-0003	Berkeley	Martinsburg - Ball Field ⁶	9.7	7.5	9.4	8.5	8.8	9.0	7.4	7.8	8.7	8.2	8.7	10.7	8.8	10.3	9.6	8.9

⁶ The Martinsburg monitor 2023Q2 mean, 2023 annual mean, and 2021-2023 design value do not include the regulatorily significant exceptional event related tier one data point of June 29, 2023.

Attachment 3

West Virginia Daily Mean PM_{2.5} Monitor Concentration Plots Calendar Years 2021 – 2023

Daily Mean PM_{2.5} Concentrations from 01/01/21 to 12/31/23

Parameter: PM_{2.5} – Local Conditions (Applicable standard is 35 ug/m³)

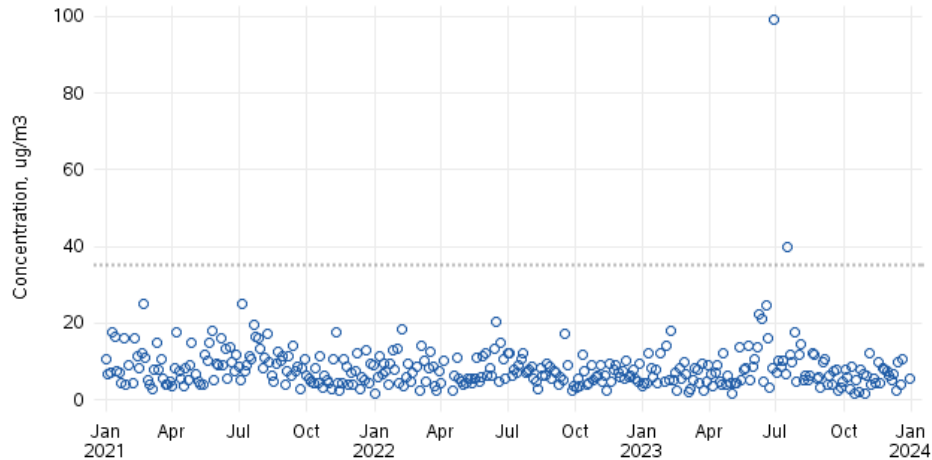
CBSA: Weirton-Steubenville, WV-OH

County: Hancock

State: West Virginia

AQS Site ID: 540290009, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM_{2.5} Concentrations from 01/01/21 to 12/31/23

Parameter: PM_{2.5} – Local Conditions (Applicable standard is 35 ug/m³)

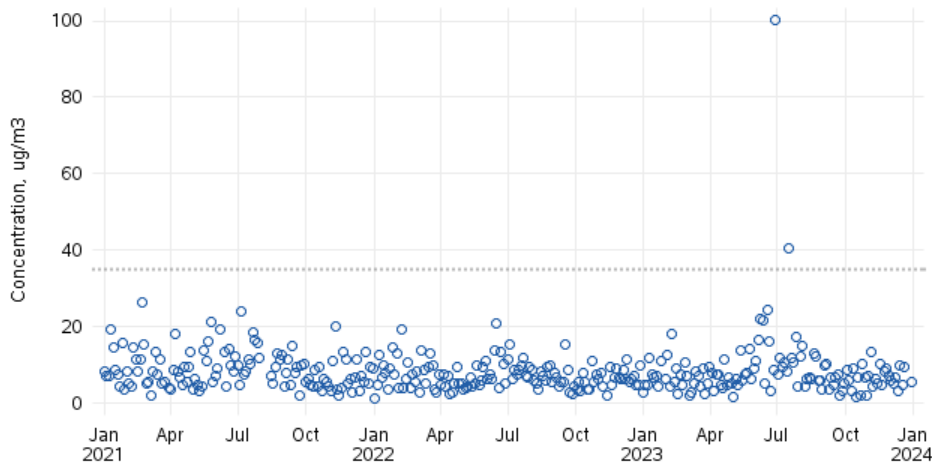
CBSA: Weirton-Steubenville, WV-OH

County: Brooke

State: West Virginia

AQS Site ID: 540090011, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 15, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

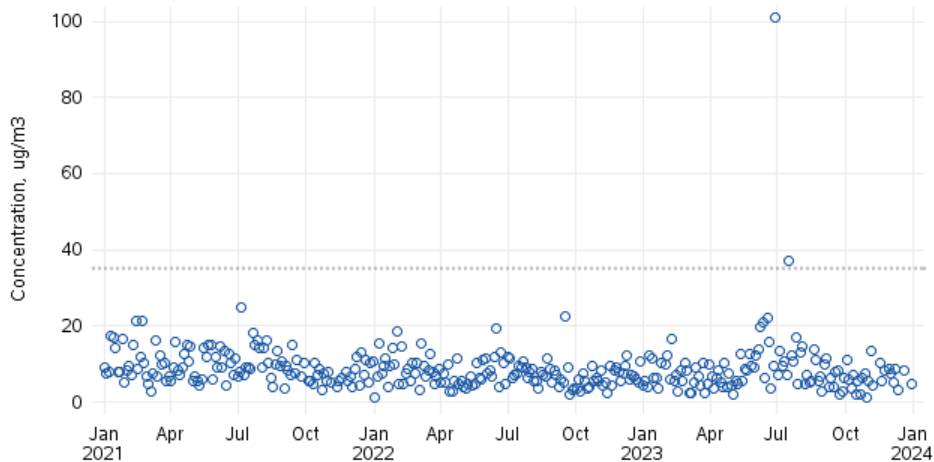
CBSA: Weirton-Steubenville, WV-OH

County: Brooke

State: West Virginia

AQS Site ID: 540090005, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 15, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

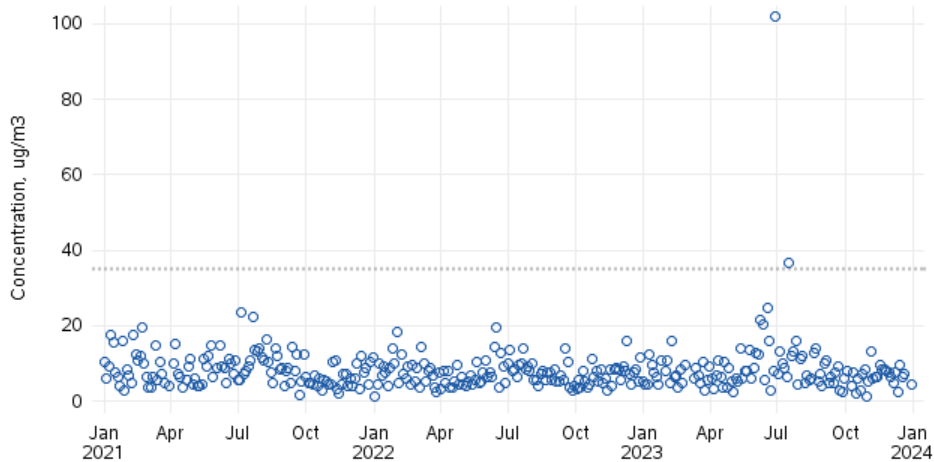
CBSA: Wheeling, WV-OH

County: Ohio

State: West Virginia

AQS Site ID: 540690010, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

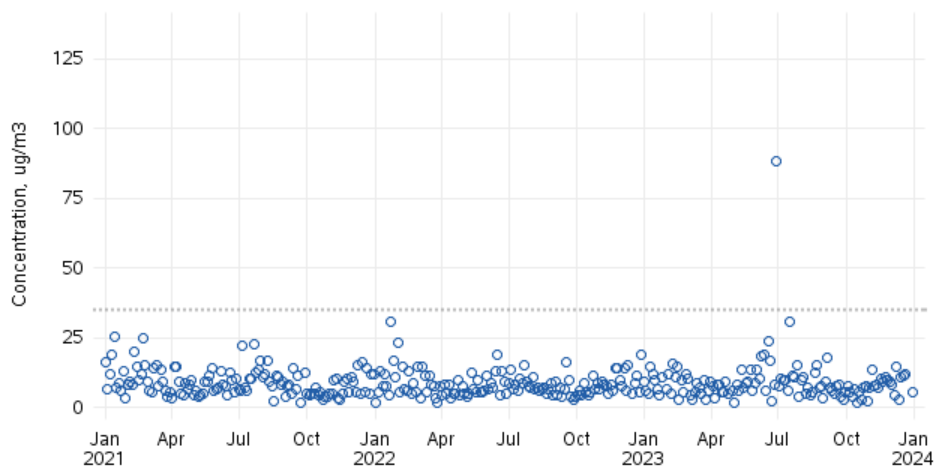
CBSA: Wheeling, WV-OH

County: Marshall

State: West Virginia

AQS Site ID: 540511002, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

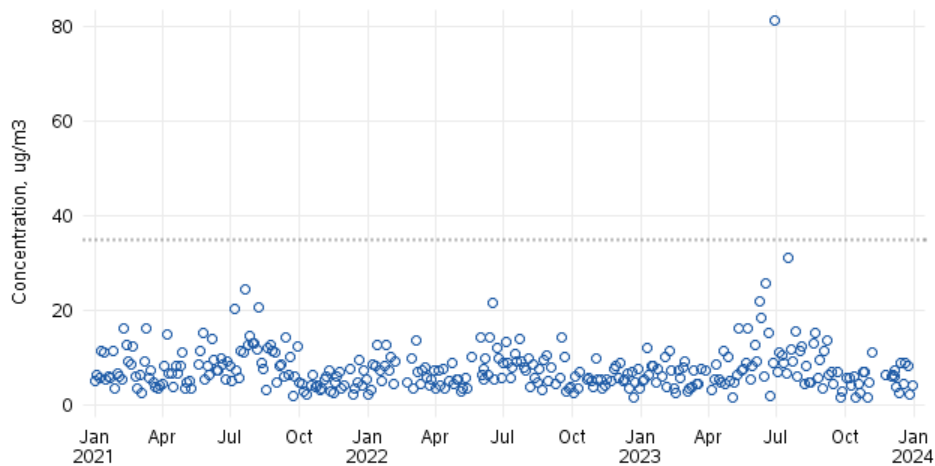
CBSA: Morgantown, WV

County: Monongalia

State: West Virginia

AQS Site ID: 540610003, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 – Local Conditions (Applicable standard is 35 ug/m3)

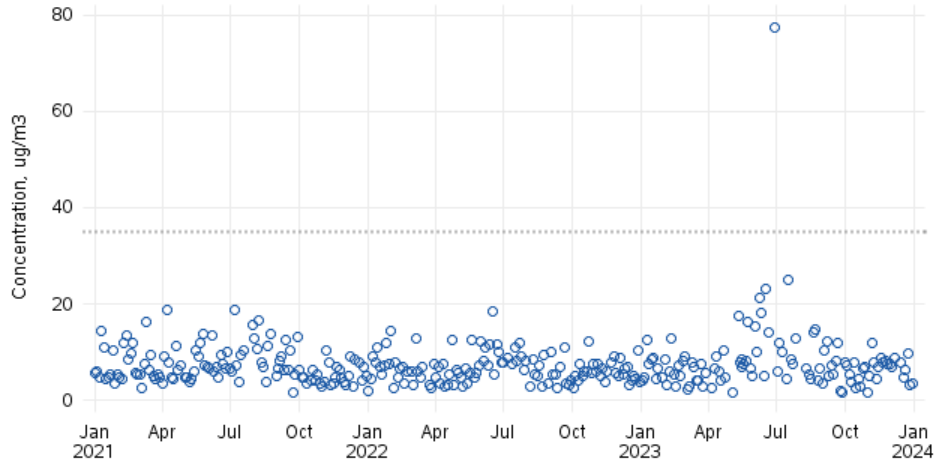
CBSA: Clarksburg, WV

County: Harrison

State: West Virginia

AQS Site ID: 540330003, poc 1

Local Site Name: WASHINGTON IRVING JUNIOR HIGH SCHOOL



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 – Local Conditions (Applicable standard is 35 ug/m3)

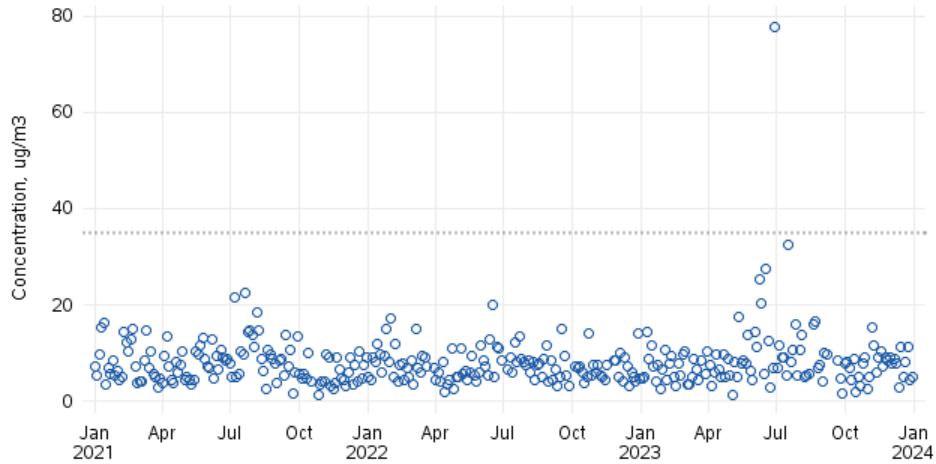
CBSA: Parkersburg-Vienna, WV

County: Wood

State: West Virginia

AQS Site ID: 541071002, poc 1

Local Site Name: Neale Elementary School



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

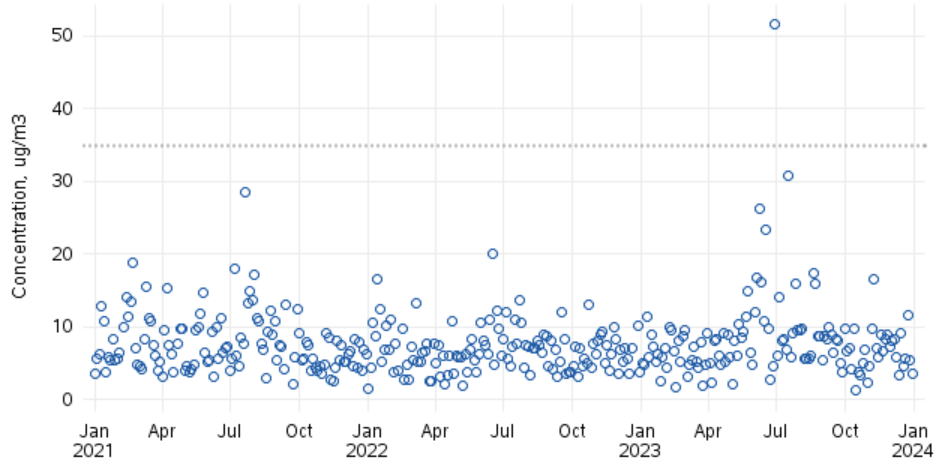
CBSA: Huntington-Ashland, WV-KY-OH

County: Cabell

State: West Virginia

AQS Site ID: 540110007, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 15, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

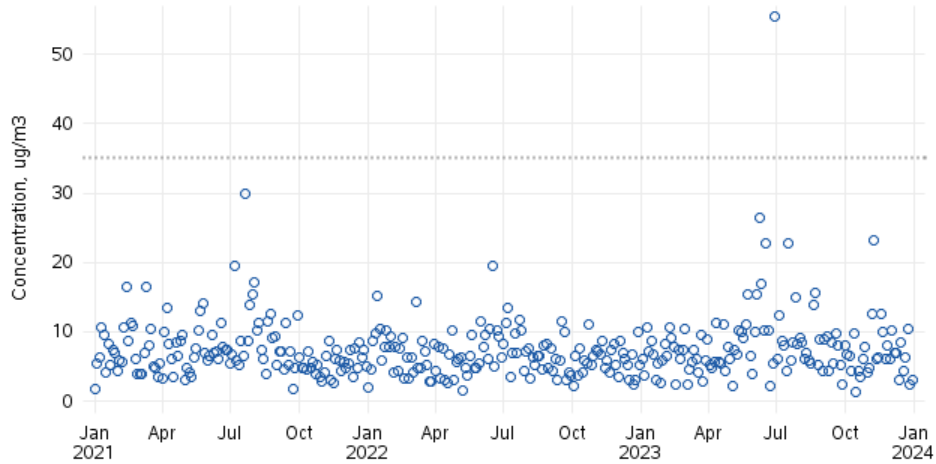
CBSA: Charleston, WV

County: Kanawha

State: West Virginia

AQS Site ID: 540390020, poc 1

Local Site Name: Dixie St.



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

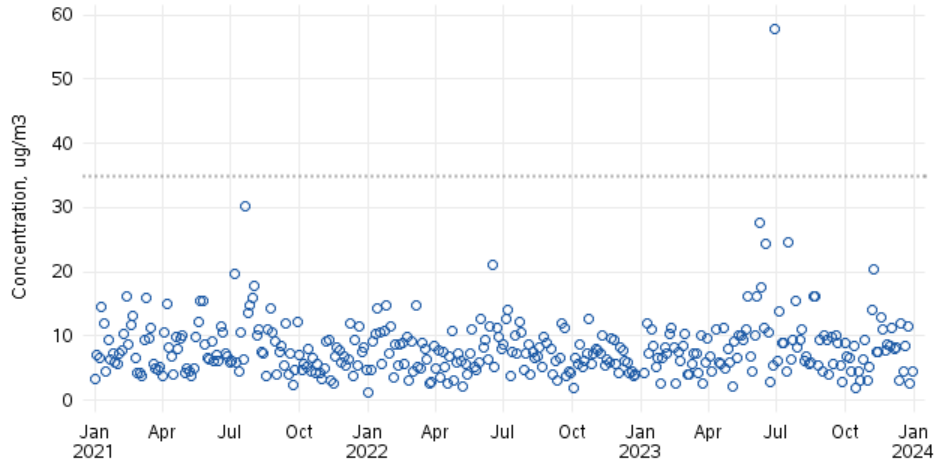
CBSA: Charleston, WV

County: Kanawha

State: West Virginia

AQS Site ID: 540391005, poc 1

Local Site Name:



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 17, 2025

Daily Mean PM2.5 Concentrations from 01/01/21 to 12/31/23

Parameter: PM2.5 - Local Conditions (Applicable standard is 35 ug/m3)

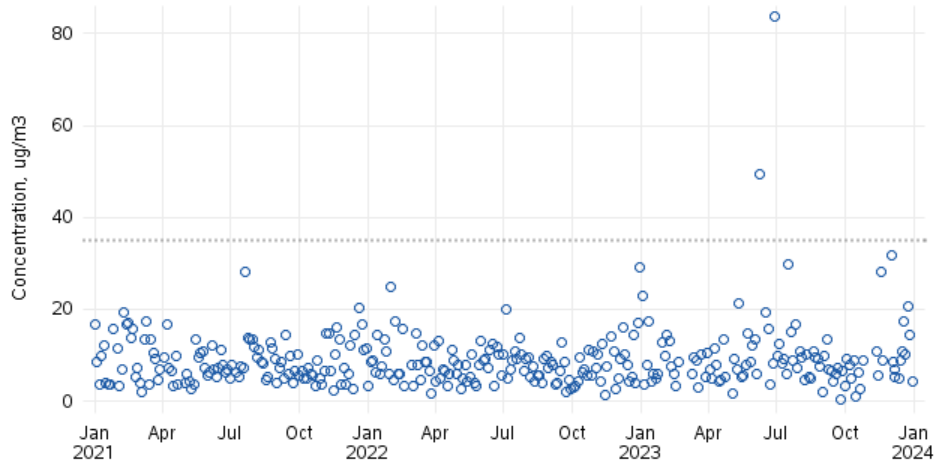
CBSA: Hagerstown-Martinsburg, MD-WV

County: Berkeley

State: West Virginia

AQS Site ID: 540030003, poc 1

Local Site Name: MARTINSBURG BALL FIELD



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: January 15, 2025