Project Quarter 7

Upper South and Appalachia Citizen Air Monitoring Project (USACAMP)

Appalachian Voices

Upper South and Appalachia Citizen Air Monitoring Project (USACAMP)

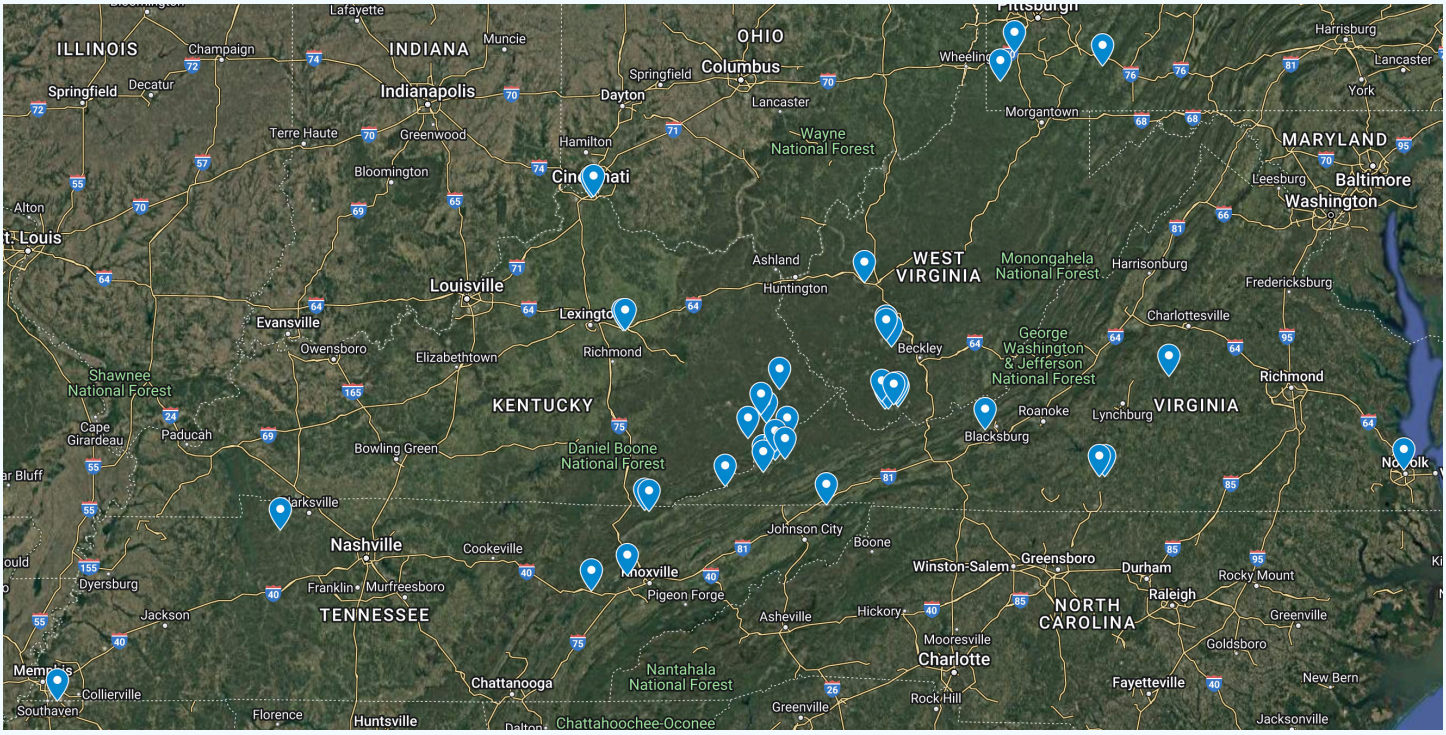
October 2025

In pursuit of a better understanding of air quality within our region, we are pleased to present the quarterly report for the Upper South and Appalachia Citizen Air Monitoring Project (USACAMP). Funded by an Environmental Protection Agency Enhanced Air Quality Monitoring for Communities grant, USACAMP focuses on the collection and analysis of air quality data through the use of PurpleAir monitors and other electronic monitoring devices.

This initiative engages communities across portions of Kentucky, Pennsylvania, Tennessee, Virginia, and West Virginia, deploying low-cost monitoring devices to facilitate the collection and dissemination of air quality data. The project aims to empower local residents, encourage dialogue around public health and policy, and promote clean air and healthy communities through data transparency and community science.

The primary focus of the project is particulate matter (PM), particularly PM2.5 (fine particles) and PM10 (coarse particles), due to their well-documented health impacts, especially for vulnerable populations such as children, the elderly, and individuals with pre-existing conditions. Data collected in 2024 was analyzed against existing and revised National Ambient Air Quality Standards (NAAQS), with additional attention paid to pollutant spikes, long-term averages, and potential exceedances.

Community Partner Locations



About PurpleAir and Data Adjustments

PurpleAir monitors use laser-based sensors to estimate the size and concentration of airborne particulate matter. These affordable, Internet-connected devices make air quality data more accessible, especially in underserved areas.

However, raw PurpleAir calculations data are known to overstate PM2.5 concentrations. As a result, USACAMP has adopted a correction formula developed by Barkjohn et al. (2021), applying it uniformly to all PM2.5 data for improved alignment with Federal Reference Monitors (FRMs).

Corrected PM2.5 = 0.38 × PA + 2.94

In this equation, PA refers to the PM2.5 concentration reported directly by the PurpleAir® sensor.

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Regulatory Overview

This report references the following EPA National Ambient Air Quality Standards for particulate matter:

- **24-hour PM10: 150 $\mu g/m^3$**
- **24-hour PM2.5: 35 $\mu g/m^3$ (based on the 98th percentile average**
- **Annual PM2.5: 9 $\mu g/m^3$ (updated in 2024 from 12 $\mu g/m^3$)**

Due to the multi-year nature of NAAQS compliance calculations, direct exceedance determination is not always possible. Instead, this report provides metrics and visuals that mimic NAAQS methodologies to give insight into likely patterns of exposure.

EPA Administrator Lee Zeldin has said that the agency will reconsider the standards for PM 2.5 as part of a broad deregulatory agenda. At this time, the applicable standards are as they appear above, but in the coming months, EPA is likely to commence rule-making procedures to change the annual and/or 24-hour standards for this pollutant, making these standards less stringent.

Low-cost air quality sensors, such as those produced by PurpleAir, have expanded access to fine particulate matter (PM2.5) monitoring, particularly in underserved or rural areas. However, the raw measurements produced by these sensors often require adjustment to ensure comparability with reference-grade monitors used by regulatory agencies, such as the EPA's Federal Reference Method (FRM) and Federal Equivalent Method (FEM) instruments.

The first model tested applies a linear transformation developed by Barkjohn et al. (2021), which adjusts for the typical overestimation of PM2.5 by PurpleAir sensors. This approach is expressed by the formula:

CPM2.5-transformed =
0.38 × Raw PM2.5 + 2.94

Our 2024 annual report noted that this model performs well in the region and is competitive with other popular PurpleAir transformation models.

Regional Spotlight: Air Quality in Appalachia Affected by Canadian Wildfires

Canada to Appalachia

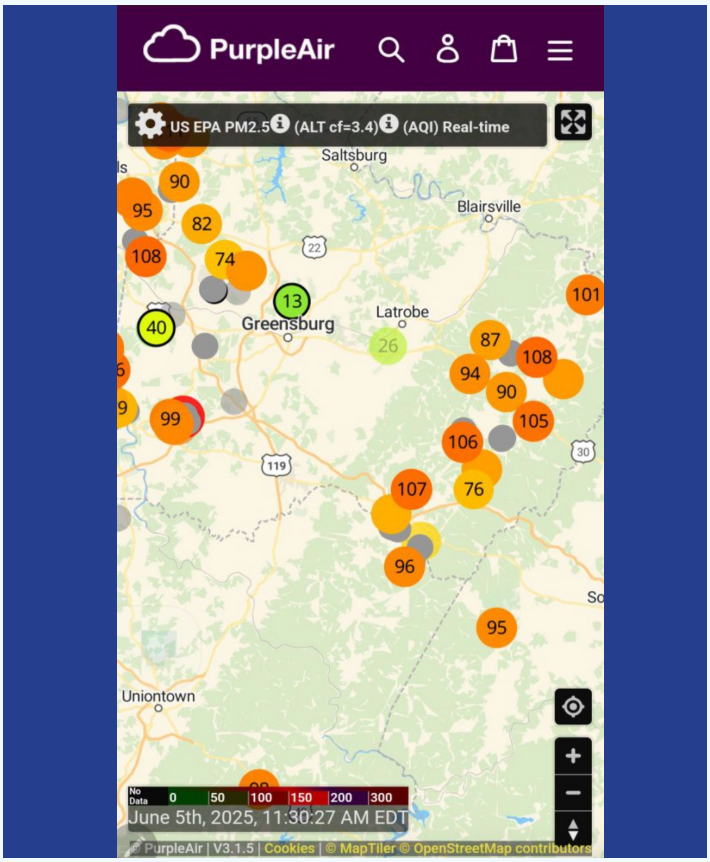
This quarter, instead of doing a community spotlight we are zooming out to focus on an event that occurred across the entire region. Much of the data across all of our monitors showed elevated particulate matter levels in the early weeks of June. Spikes can be seen in most of the graphs around this timeframe.

During the first few weeks of June, wildfires burning across Central and Western Canada released massive plumes of smoke which were carried thousands of miles across North America by strong upper-level winds. The wildfire conditions in Canada also affected the United States, with smoke drifting southward and prompting the National Weather Service to issue air quality alerts across the Upper Midwest, including in Minnesota, Wisconsin, and Michigan.

According to satellite data from the National Oceanic and Atmospheric Administration the smoke had reached the East Coast, including Appalachia, by the first week of June, creating moderate air quality conditions in our region. Moderate air quality conditions are generally okay for most of the population but can cause problems for people unusually sensitive to air pollution.

The smoke was primarily coming from hundreds of fires burning in Canada's boreal forests — particularly in British Columbia, Alberta, and Saskatchewan. Approximately 2.3 million acres have burned across Saskatchewan and Manitoba, while an additional 1.2 million acres have been scorched in Northern Alberta, leading to widespread evacuation orders. Global climate change is among the factors leading to more frequent and worsening wildfires.

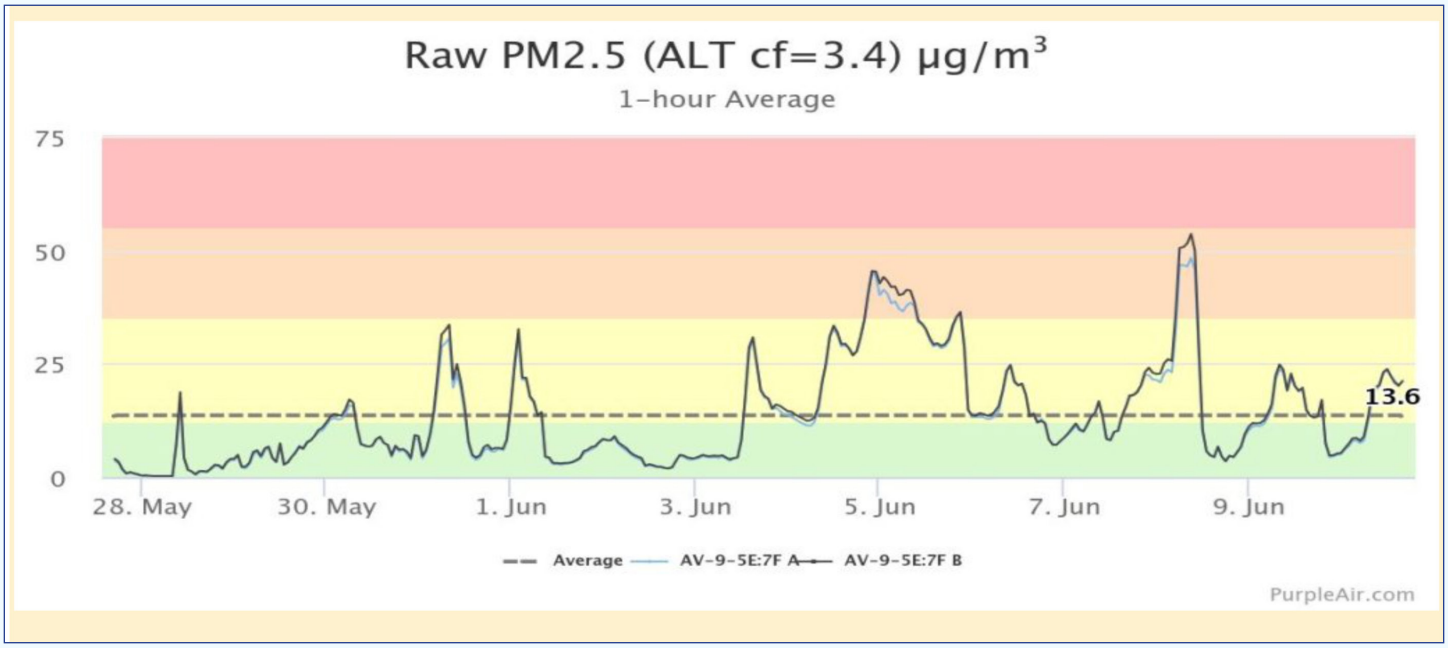
Fine particulate matter, known as PM2.5, is one of the primary pollutants in wildfire smoke, and it poses health risks. These microscopic particles are small enough to bypass the body's natural defenses and lodge deep in the lungs and reach the bloodstream, contributing to respiratory and cardiovascular issues. This can be especially concerning in Central Appalachian communities, where



PurpleAir monitoring results in Pennsylvania during the Canadian wildfires, showing elevated PM 2.5 levels.

preexisting conditions like asthma and black lung disease are more common. Even short-term exposure to PM2.5 can irritate the lungs, trigger breathing problems, and exacerbate chronic illnesses.

Recent air sensor data from a network of PurpleAir monitors in communities across Virginia, West Virginia, Kentucky, and Eastern Tennessee showed increased PM2.5 concentrations during smoke incursions in the first week of June. Localized monitoring revealed elevated values at times when wildfire plumes drifted overhead, further corroborating that the smoke made its way into Central Appalachia.



Graph of PurpleAir sensor AV-9, one of the monitors of the USACAMP project in Pennsylvania, showing elevated PM 2.5 levels.

There are several steps residents can take to limit exposure during wildfire smoke events:

First, stay informed by tracking real-time conditions. The AirNow Fire and Smoke Map incorporates data from the PurpleAir network. Second, limit outdoor activity — especially strenuous exercise — when air quality conditions worsen. Individuals with asthma, COPD, heart disease, or black lung disease are particularly vulnerable and should take extra care during periods of smoky air. Other potential steps for mitigating the health impacts of wildfire smoke can be found in this wildfire smoke fact sheet or on the AirNow website.

As of this report's publication, air quality in Appalachia has largely returned to normal. However, data collected during the recent Canadian wildfires showed that even distant wildfires can affect remote regions of Central Appalachia. Access to local air quality information remains an important tool for protecting public health. With more intense fire seasons expected in the years ahead, communities here will need to stay alert, informed, and ready to protect themselves. Tools like PurpleAir monitors empower residents to track real-time air quality and contribute to citizen science efforts that help fill critical data gaps — especially in rural areas — ensuring that more people have access to the information they need to stay safe.

VOC and Gas Pollutant Monitoring

In addition to measuring particulate matter, USACAMP's two SENSIT RAMP monitors — located in Bristol, Virginia, (unit 1145) and Bristol, Tennessee (unit 1144) — captured minute-by-minute concentrations of **sulfur dioxide (SO_2), volatile organic compounds (VOCs), ammonia (NH_3), hydrogen sulfide (H_2S), and carbon monoxide (CO).**

These sensors use electrochemical cells and a photo-ionization detector to identify and quantify low-concentration gases. Data was evaluated using public health and occupational exposure standards from multiple agencies, including the EPA's National Ambient Air Quality Standards (NAAQS), Occupational Safety and Health Administration (OSHA) standards, and Mine Safety and Health Administration (MSHA) standards.

Measurements from both sites show that most pollutants remained within generally acceptable levels throughout the quarter. We continue to have some problems with our VOC sensors; both units have been replaced, but unit 1144 needs to be replaced for a second time. A new sensor has been ordered.

All other pollutants — NH_3, H_2S, and CO — remained well below their respective regulatory thresholds at both monitoring locations. VOC readings were assessed against OSHA's benzene exposure limit, which serves as a conservative benchmark for potential health concern.

A description of the measured gases and table of relevant standards is included below.

- **Volatile organic compounds (VOCs)** are a category of organic chemicals characterized by high vapor pressures at room temperature; these compounds easily transition into gaseous states under normal atmospheric conditions. Exposure to high levels of some VOCs can irritate the eyes and throat, cause nausea and trouble breathing, and is associated with damage to the central nervous system and other organs, according to the American Lung Association. Being a category of gases, they can not be directly compared to any one standard. For the purpose of this project, the performance of the SENSIT RAMP VOC sensor is specifically compared to OSHA's exposure limits for benzene.
- **Carbon Monoxide (CO)** is a colorless, odorless gas produced by burning fossil fuels. It is harmful because it can prevent the blood from carrying oxygen to cells, tissues, and organs.
- **Ammonia (NH3)** is a colorless gas with a pungent odor, commonly used in industrial and cleaning products. It is a common toxicant that originates from wastes, fertilizers, and natural processes.
- **Sulfur Dioxide (SO2)** is a gas produced by industrial processes, especially the burning of fossil fuels containing sulfur. It can cause respiratory problems and contribute to the formation of acid rain.
- **Hydrogen Sulfide (H2S)** is a colorless gas known for its characteristic foul odor of rotten eggs. It is toxic and can cause respiratory distress and other health issues at high concentrations.

Chemical Concentration Limits

Ammonia	NH_3	OSHA sets a permissible exposure limit (PEL) of 50 parts per million (ppm) as an 8-hour time-weighted average (TWA).
Volatile organic compounds	VOCs (benzene)	OSHA sets a PEL for benzene of 1 ppm as an 8-hour TWA.
Sulfur dioxide	SO_2	The EPA NAAQS for SO2 specifies that the highest observed 1-hour SO2 concentration should not exceed 75 parts per billion (ppb) more than once per year.*
Carbon monoxide	CO	The EPA NAAQS limits CO to 9 ppm over an 8-hour period and 35 ppm over a 1-hour period.
Hydrogen sulfide	H_2S	MSHA imposes a ceiling of 20 ppm to prevent chronic effects, and a short-term exposure limit (STEL) of 50 ppm for up to 10 minutes to allow for brief peak exposures without severe health risks.

VOC and Other Pollutant Data

All SENSIT RAMP data was compared against the relevant standards. No exceedances were indicated for any of the parameters measured. The table and graphs below show the highest concentrations detected by each of the SENSIT RAMP devices, utilizing calculations as described in the regulations. Sulfur dioxide is shown with the second-highest max value for the quarter, as the regulations require the highest values to be excluded from calculations.

SENSIT RAMP Data

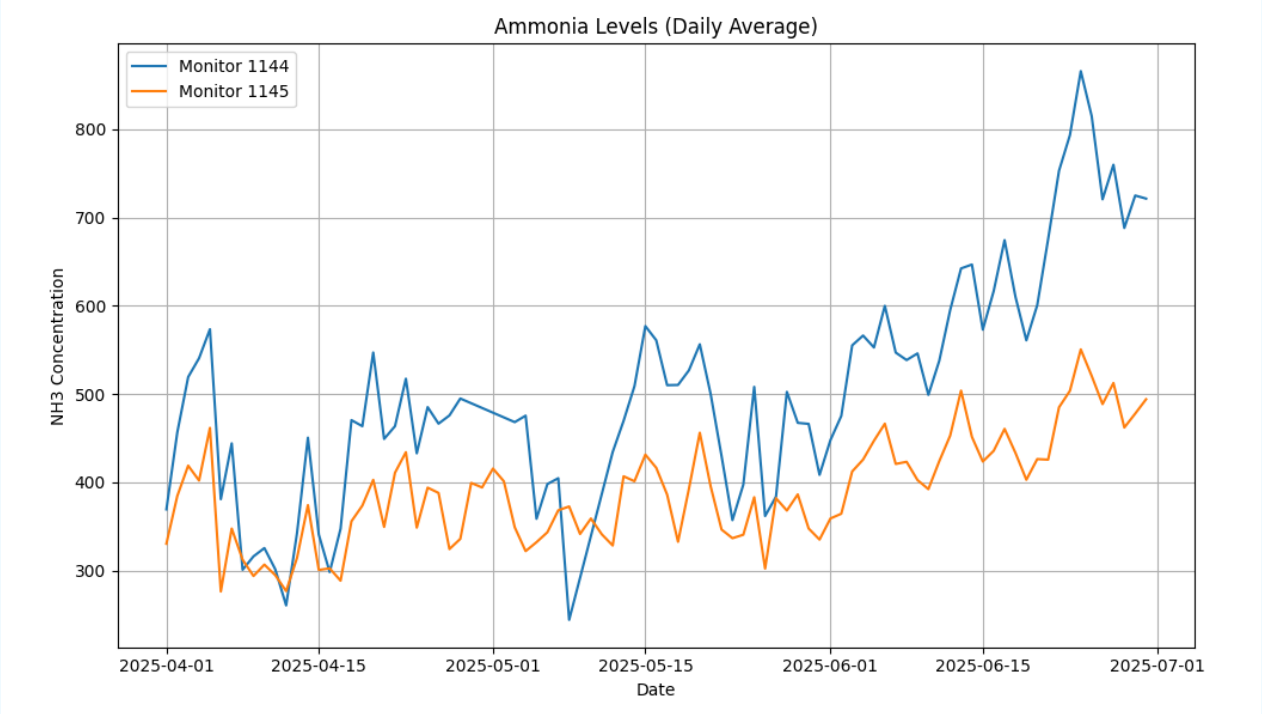
Parameter	Metric Type	Standard	1144	1145
Ammonia (NH3)	Max 8-Hour Weighted Avg	50 ppm (8-hr TWA OSHA)	0.89	0.75
Carbon Monoxide (CO)	Max 1-Hour Avg	35 ppm (1-hr NAAQS)	0.98	0.48
Carbon Monoxide (CO)	Max 8-Hour Avg	9 ppm (8-hr NAAQS)	4.78	0.59
Hydrogen Sulfide (H2S)	Max Concentration	50 ppm (10-min MSHA)	0.28	0.39
Sulfur Dioxide (SO2)*	Max Daily Avg	0.14 ppm (24-hr WHO)	80.45	154.06
Sulfur Dioxide (SO2)	Max Hourly Avg	0.075 ppm (1-hr NAAQS)	0.058	0.055
Volatile Organic Compounds (VOC)	Max 15-Min Avg	5 ppm (15-min STEL OSHA)	N/A	N/A
Volatile Organic Compounds (VOC)	Max 8-Hour Avg	1 ppm (8-hr TWA OSHA)	0.00	0.10

All results reported in parts per million (ppm)

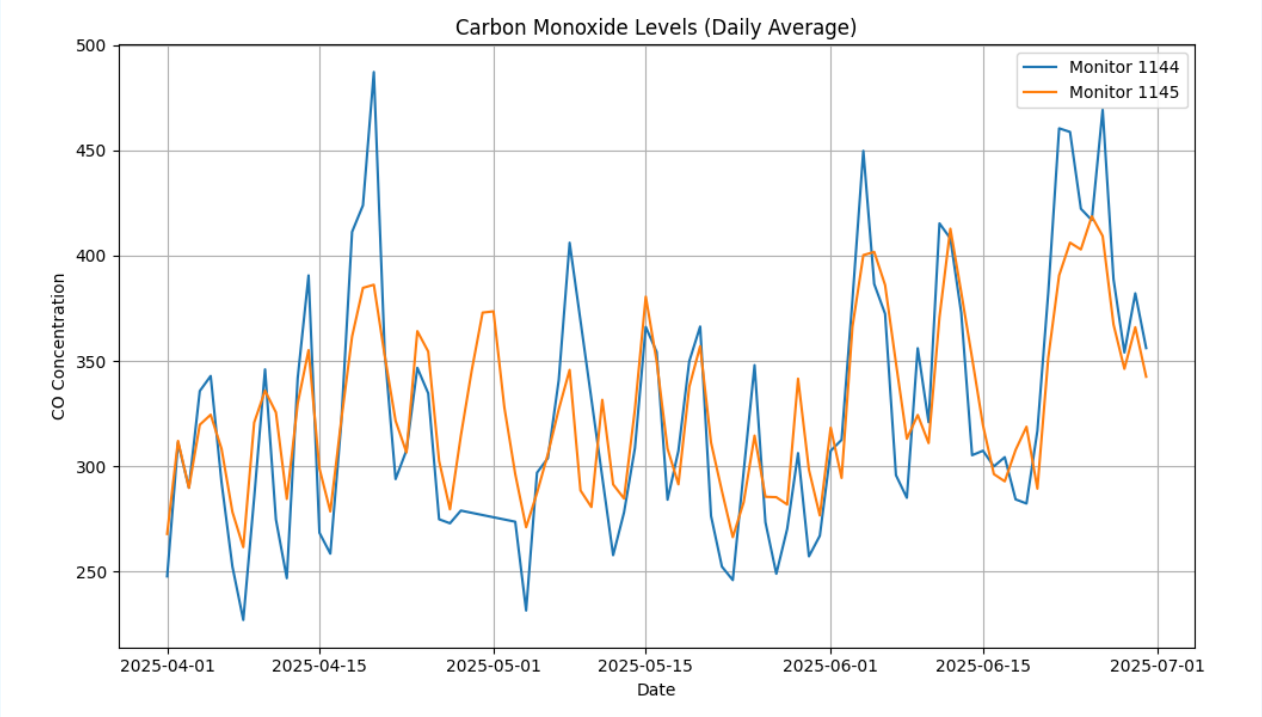
*National primary ambient air quality standards require three years' worth of data for calculations used to determine an exceedance. That said, we do expect exceedances of SO2 will be likely, given the data we have thus far. But this data will also be averaged with data for other years, so it is possible that the average value could remain in compliance.

Graphs of data from the SENSIT RAMPs are shown on the following pages.

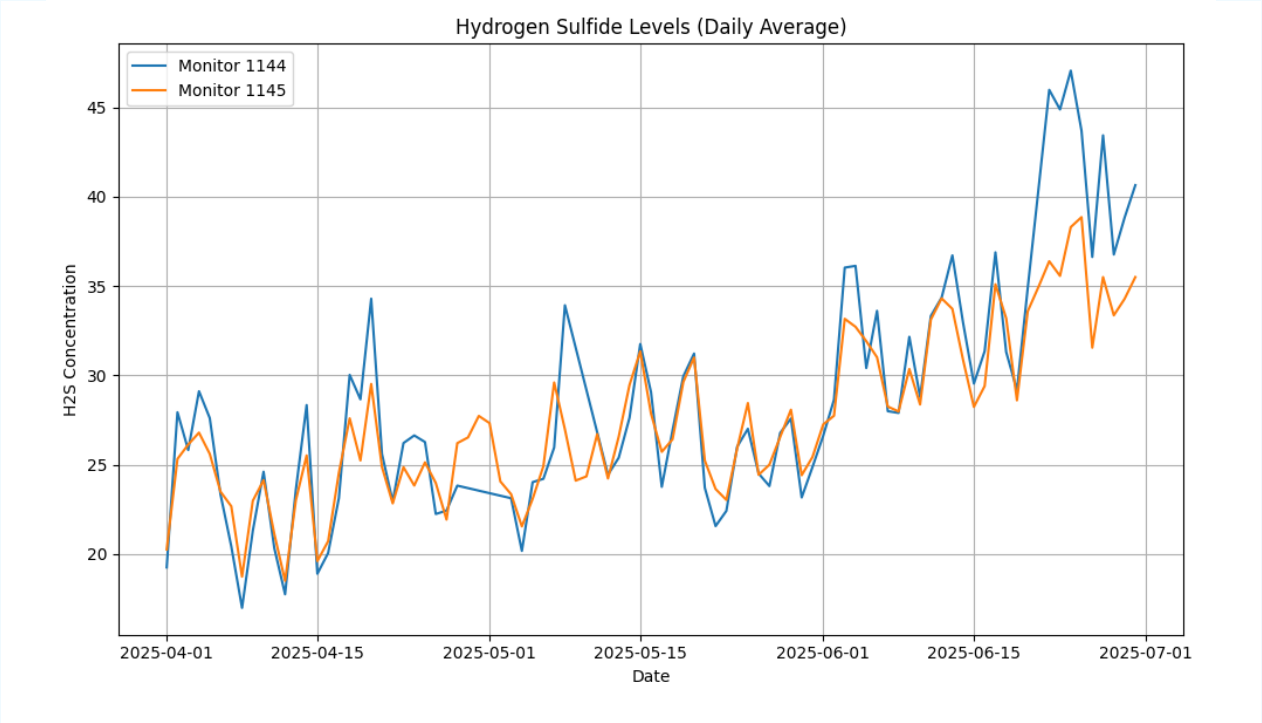
Ammonia: Bristol Virginia and Tennessee



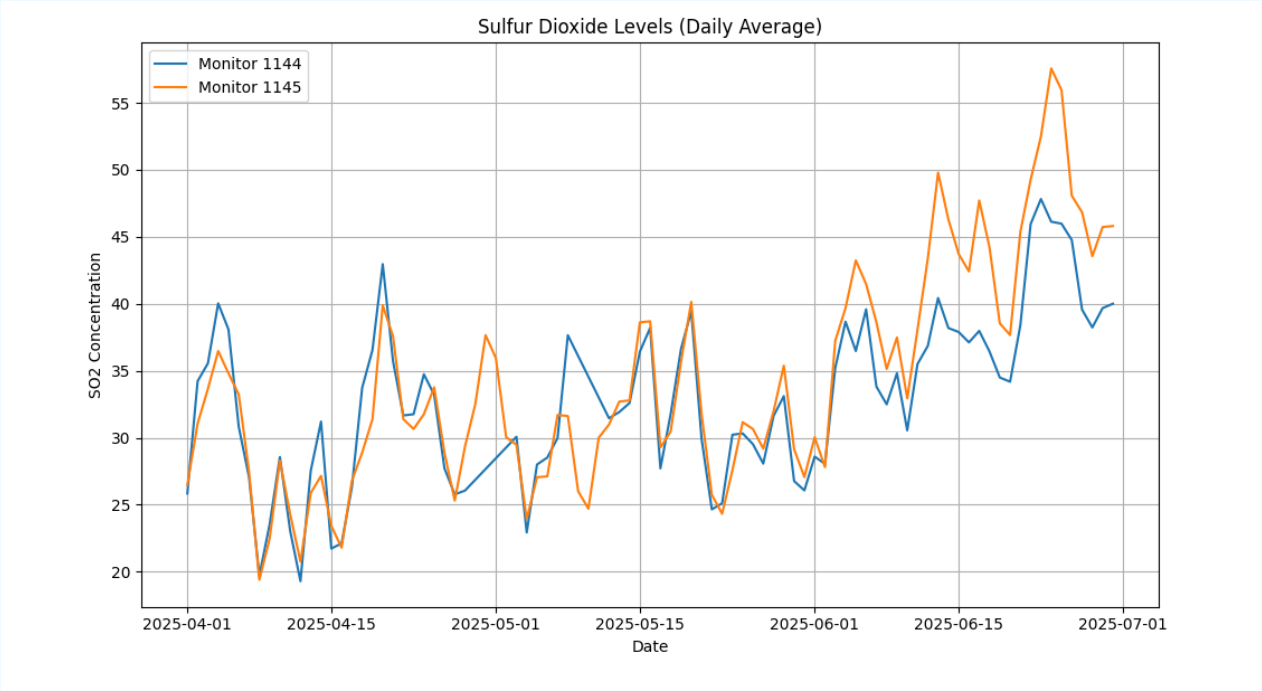
Carbon Monoxide: Bristol Virginia and Tennessee



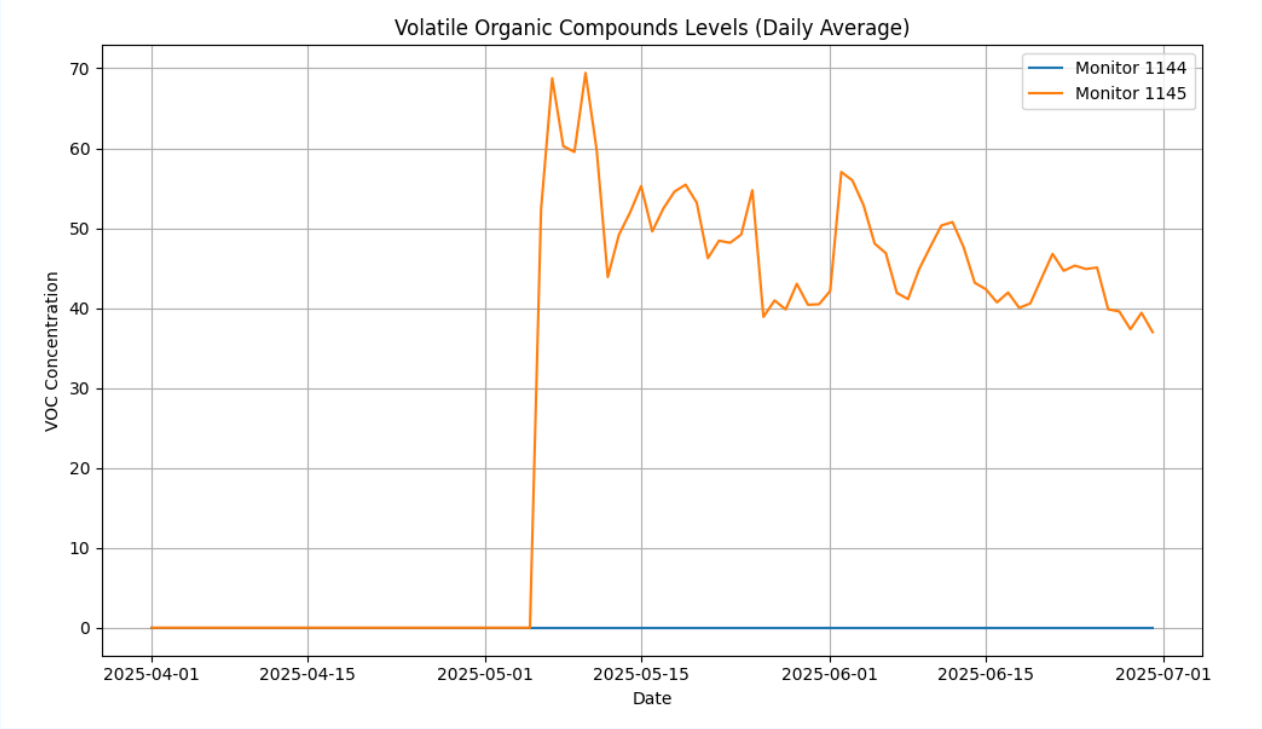
Hydrogen Sulfide: Bristol Virginia and Tennessee



Sulfur Dioxide: Bristol Virginia and Tennessee



Volatile Organic Compounds: Bristol Virginia and Tennessee



Note: Monitor 1144 is in the process of being replaced, 1145 was replaced during this reporting period.

SENSIT RAMP monitors.

Future Outlook and Next Steps

The Project Quarter 7 USACAMP dataset provides another quarter of valuable air quality data from rural and underserved communities across Central Appalachia and the Upper South. With growing sensor coverage, expanded analysis methods, and strong community partnerships, we look forward to improving our technical evaluations and continuing this work throughout the year to serve the community.

Questions and data requests can be directed to Willie Dodson at willie@appvoices.org or Matt Hepler at matt.hepler@appvoices.org.

Photo: Michael Swensen for EarthJustice

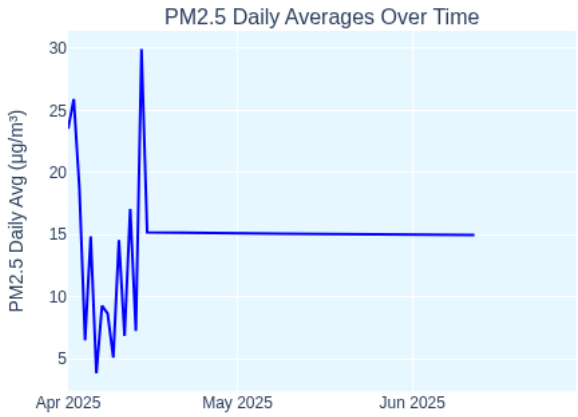
Appendix A

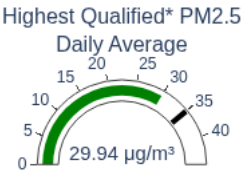
Quarterly PM2.5 and PM10 Trends

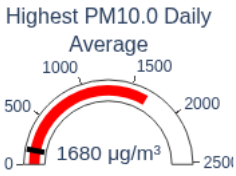
KENTUCKY

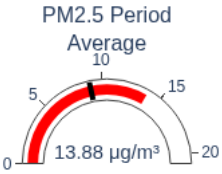
2025-03-01 to 2025-06-30 Report for Sensor 198479: AV-51, Harlan_County, KY

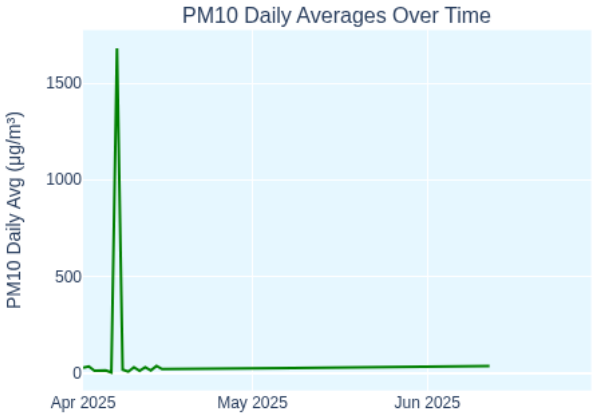
Note: This report has been flagged as possibly returning insufficient data.





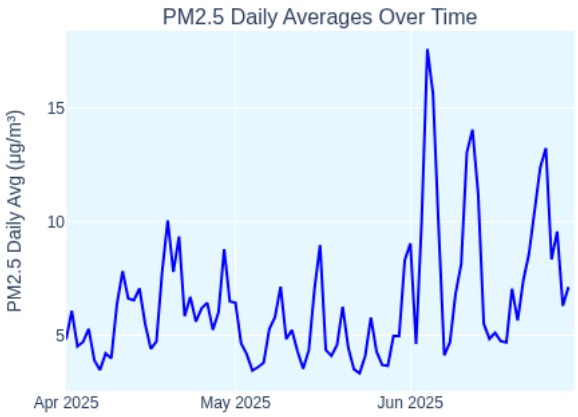


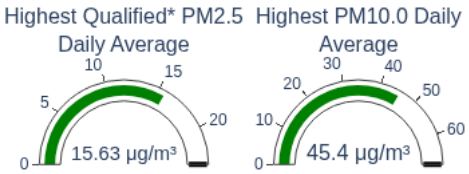


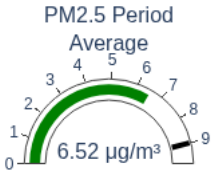


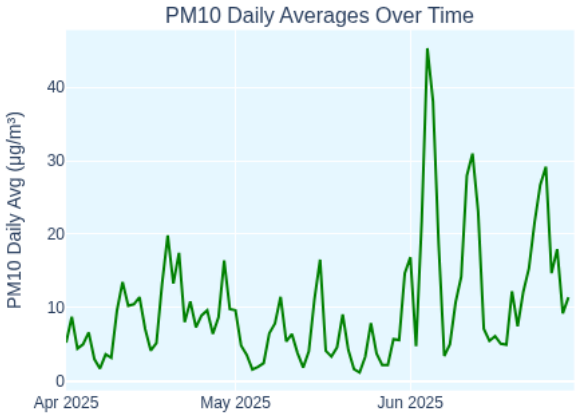
Days PM2.5 Exceeded	Days PM10.0 Exceeded
	2025-04-07

2025-03-01 to 2025-06-30 Report for Sensor 184563: AV-26, Floyd_County, KY









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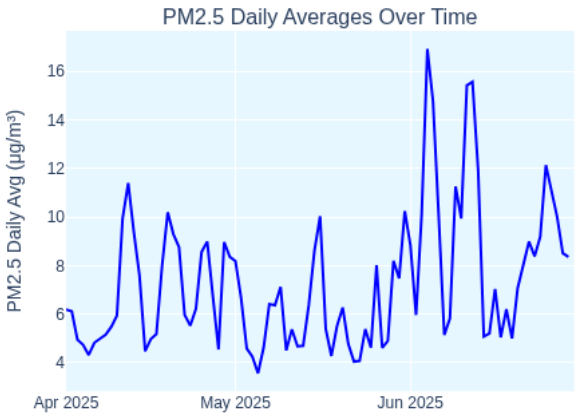

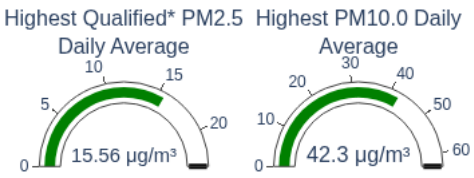

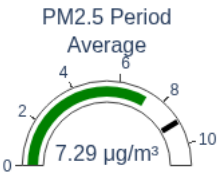

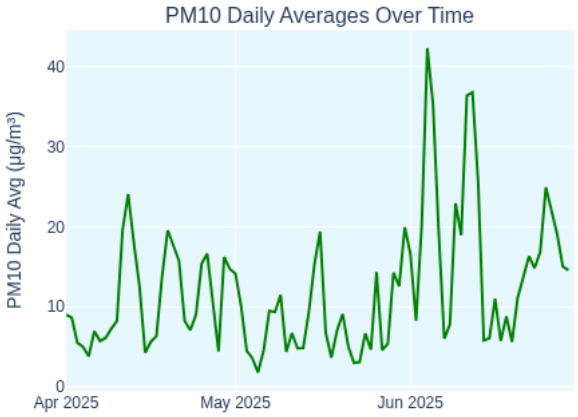

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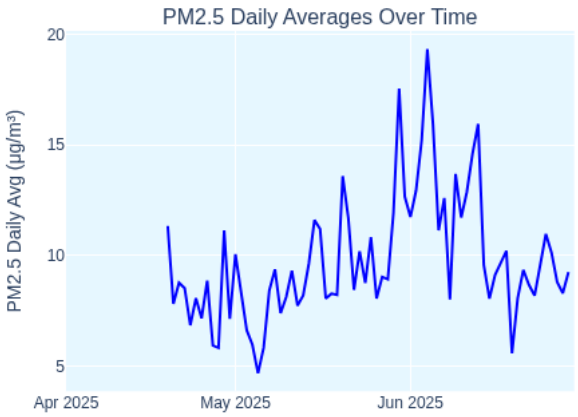

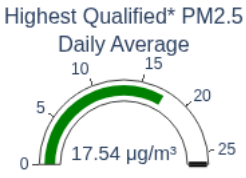

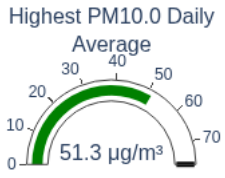

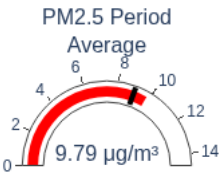

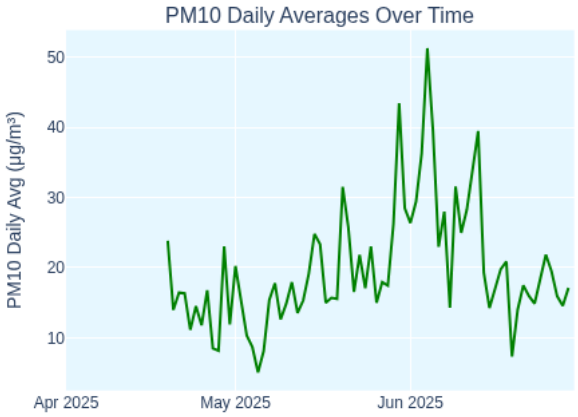

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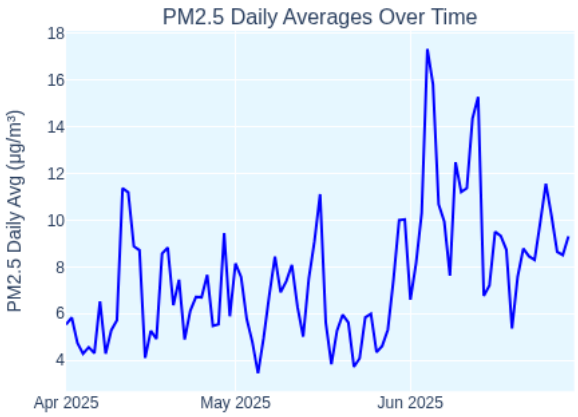

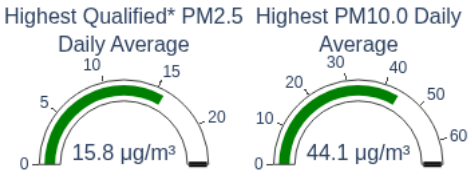

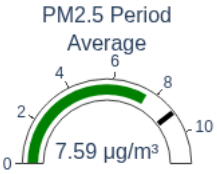

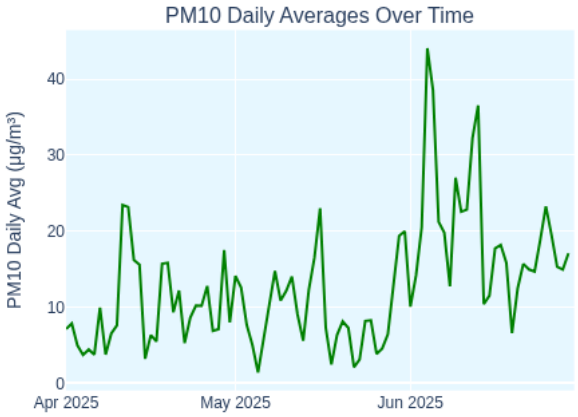

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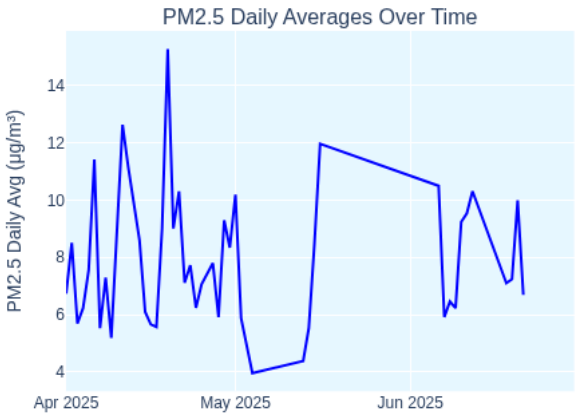

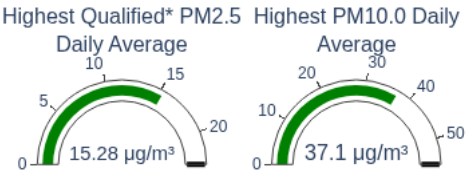

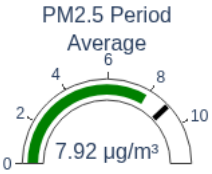

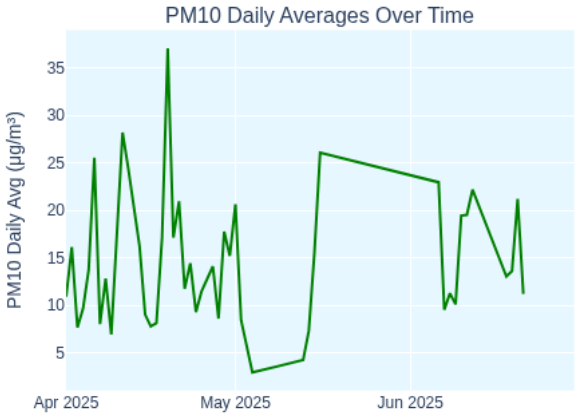

2025-03-01 to 2025-06-30 Report for Sensor 184537: AV-27, Letcher_County, KY

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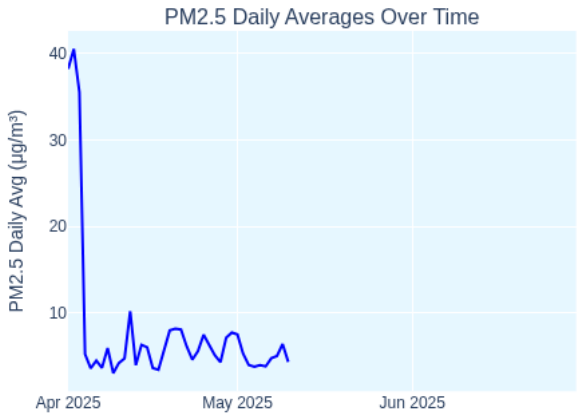
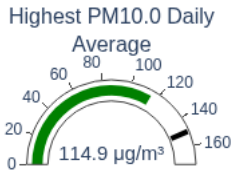
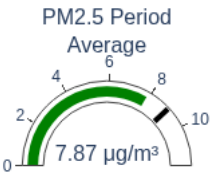
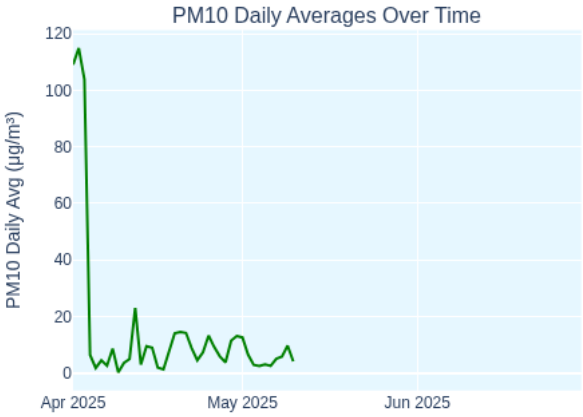




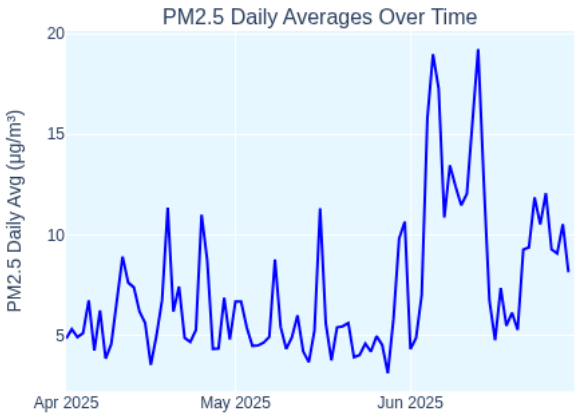


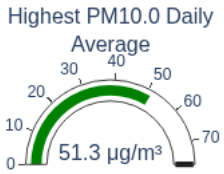


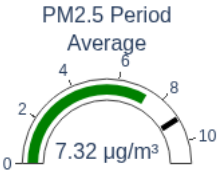
Days PM2.5 Exceeded	Days PM10.0 Exceeded
2025-04-01	
2025-04-02	
2025-04-03	

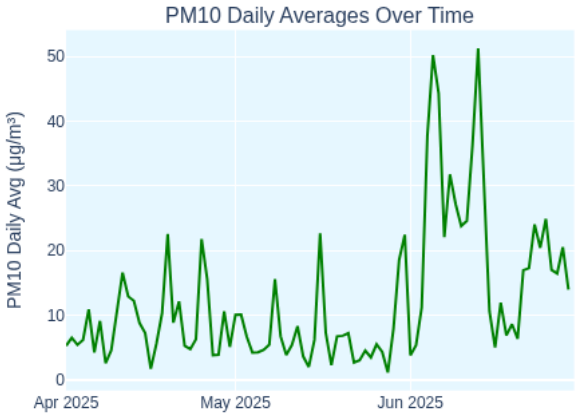
PENNSYLVANIA

2025-03-01 to 2025-06-30 Report for Sensor 183751: AV-12, Greene_County, PA

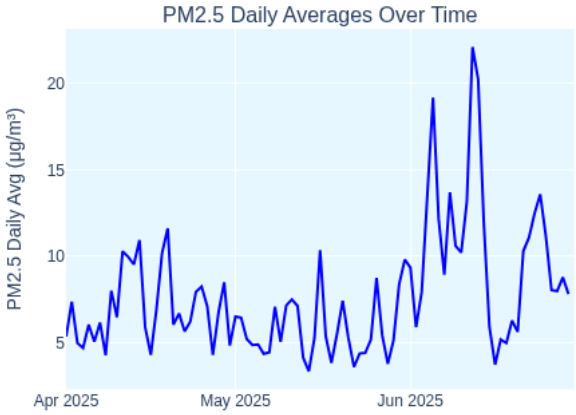


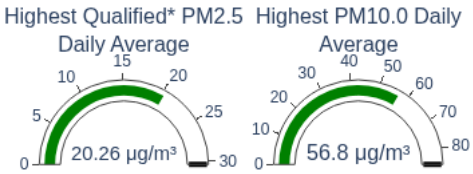


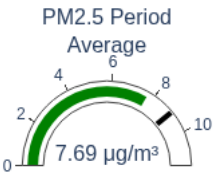


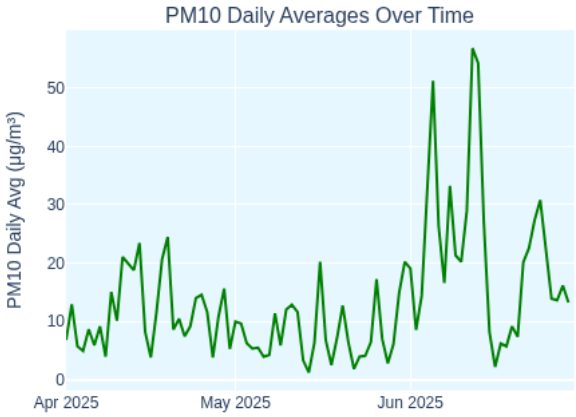


2025-03-01 to 2025-06-30 Report for Sensor 183735: AV-09, Westmoreland_County, F

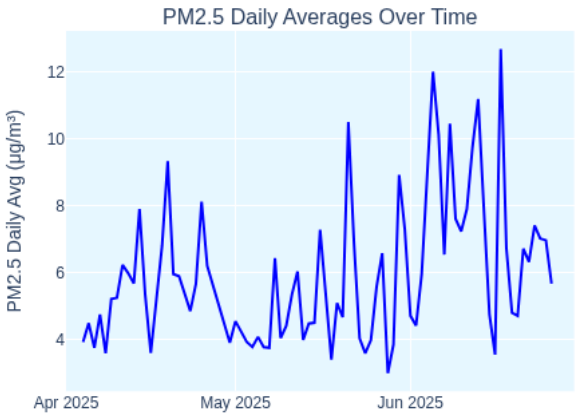


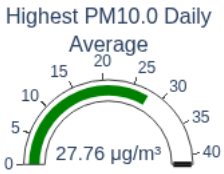


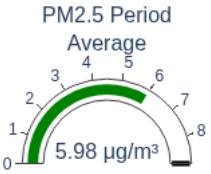


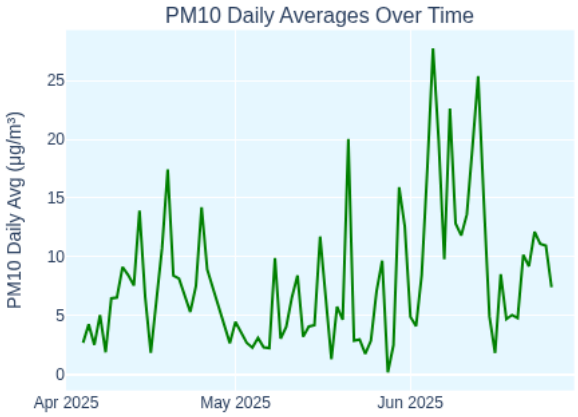


2025-03-01 to 2025-06-30 Report for Sensor 183811: AV-10, Westmoreland_County, F



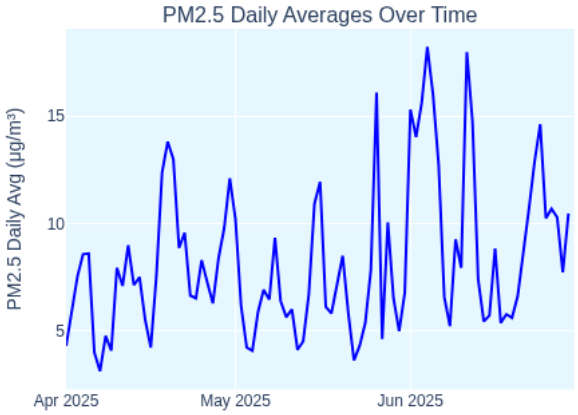


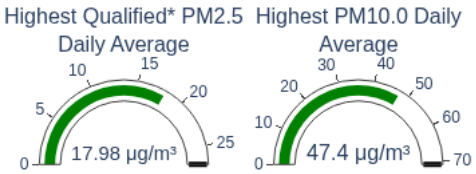


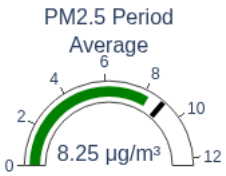


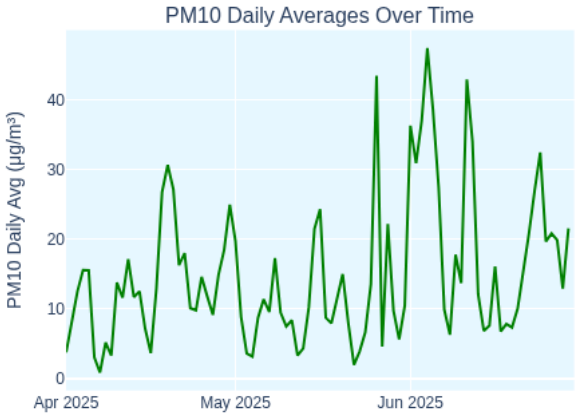
TENNESSEE

2025-03-01 to 2025-06-30 Report for Sensor 196109: AV-49, Anderson_County, TN

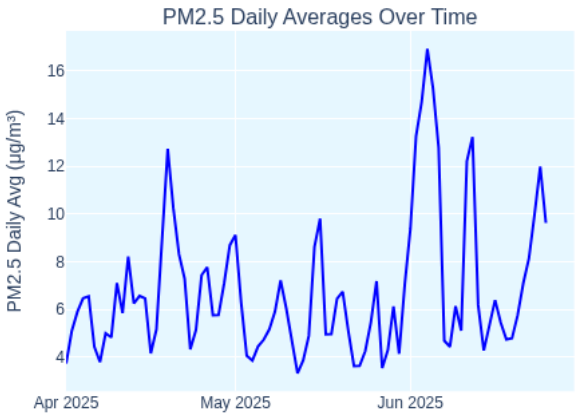


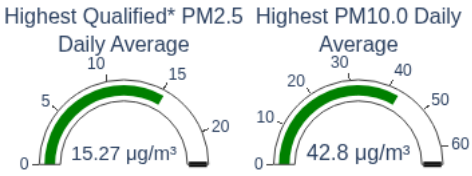


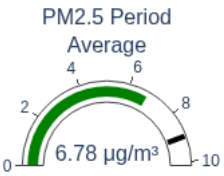


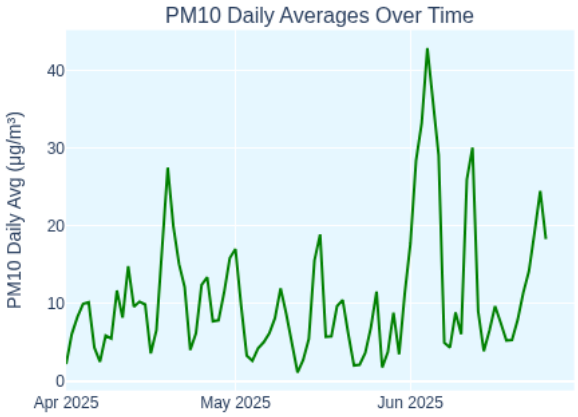


2025-03-01 to 2025-06-30 Report for Sensor 198977: AV-45, Cocke County, TN

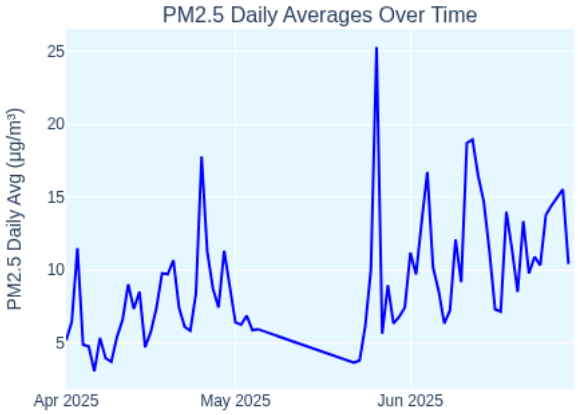


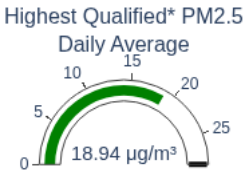


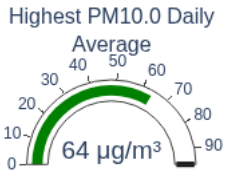


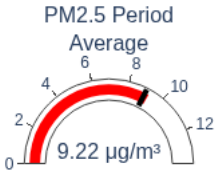


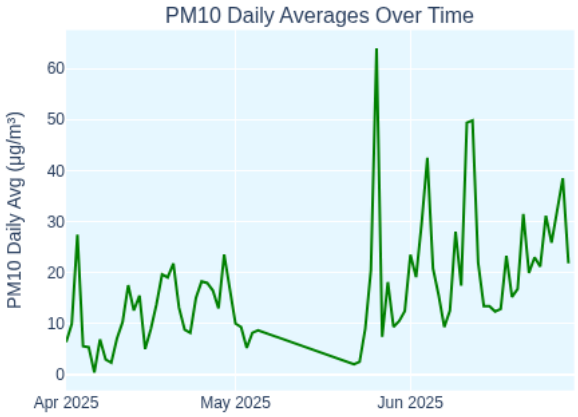
2025-03-01 to 2025-06-30 Report for Sensor 184531: AV-29, Montgomery_County, TN



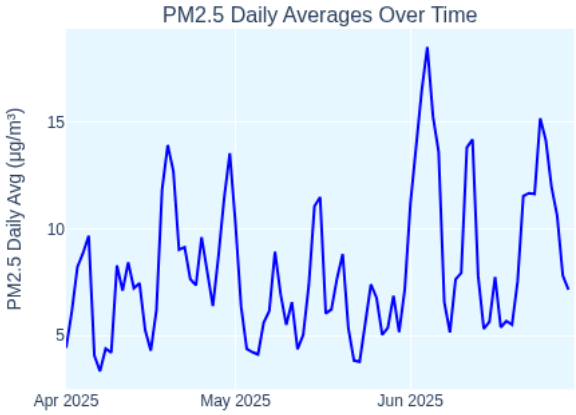


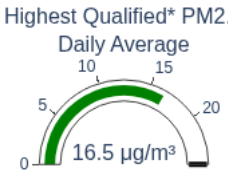


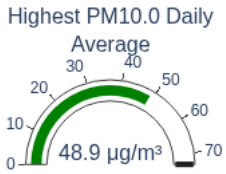


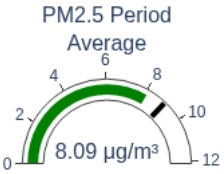


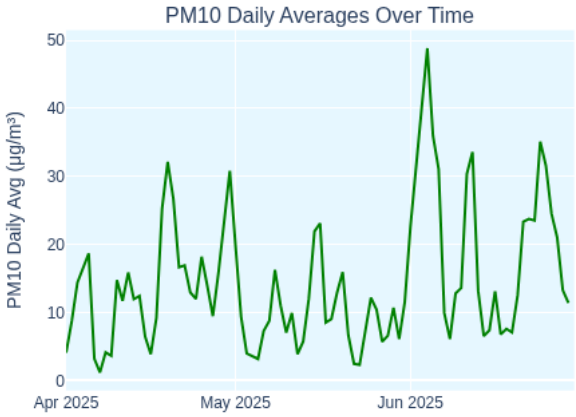
2025-03-01 to 2025-06-30 Report for Sensor 184349: AV-30, Roane_County, TN



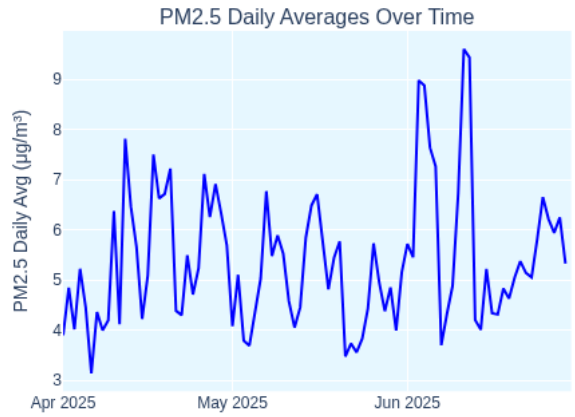


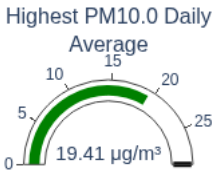


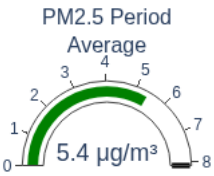


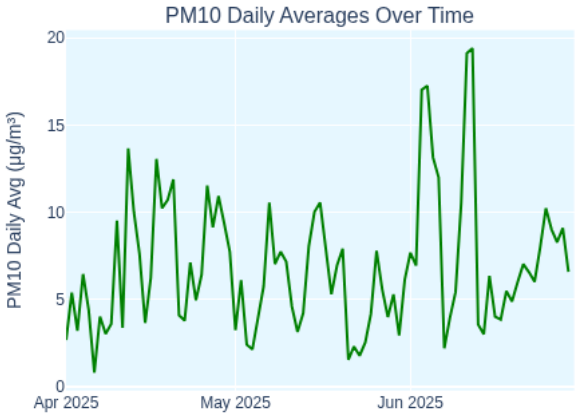


2025-03-01 to 2025-06-30 Report for Sensor 212013: AV-63, Shelby_County, TN

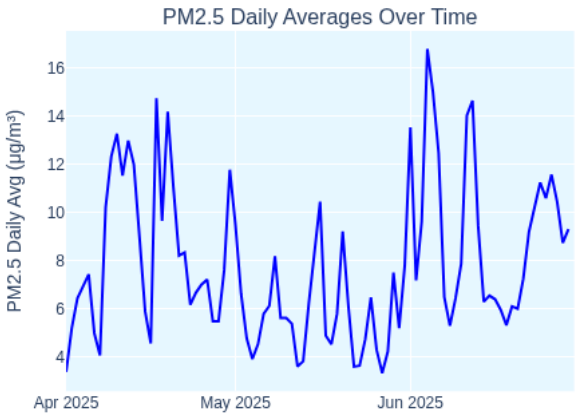


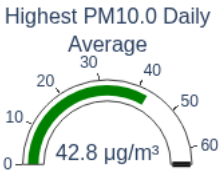


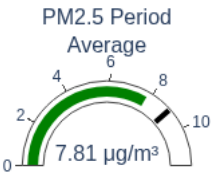


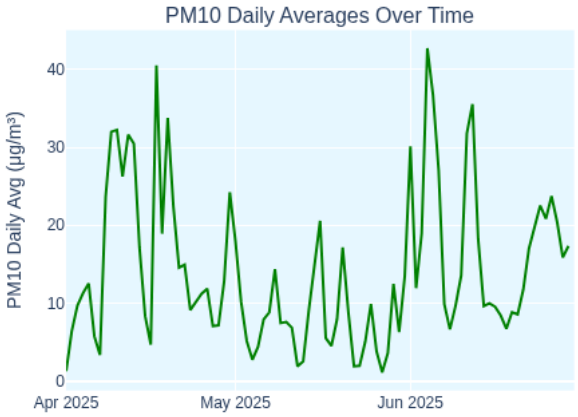


2025-03-01 to 2025-06-30 Report for Sensor 199001: AV-59, Sullivan_County, TN

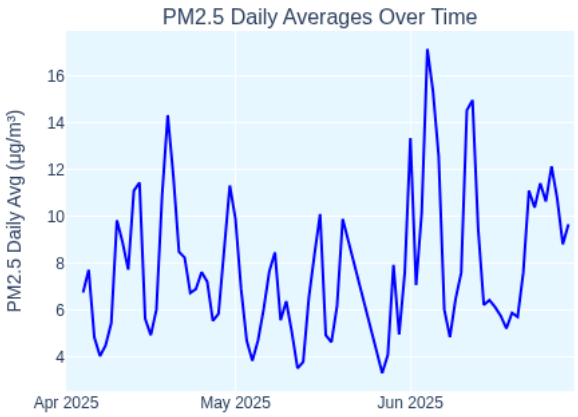


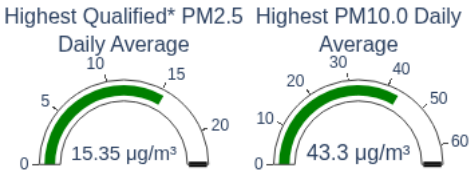


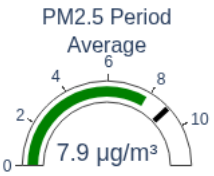


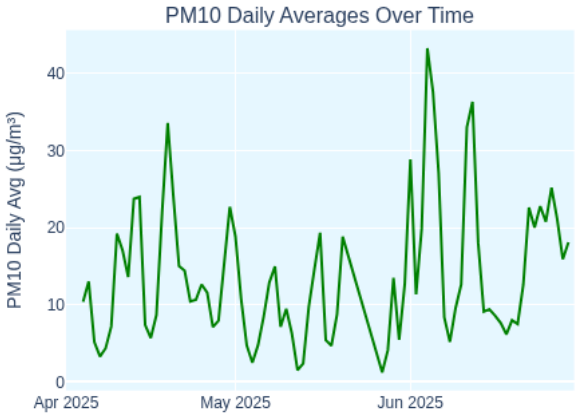


2025-03-01 to 2025-06-30 Report for Sensor 198979: AV-60, Sullivan_County, TN





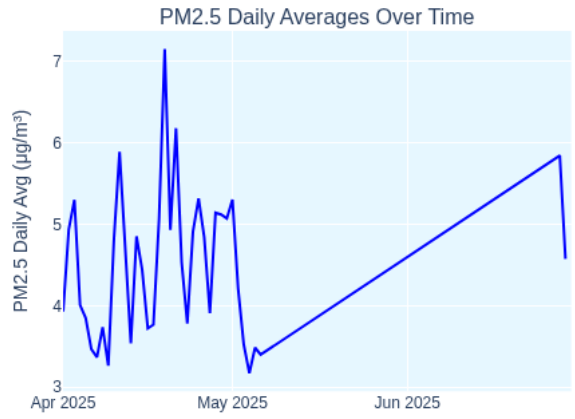


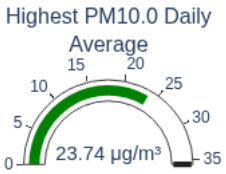


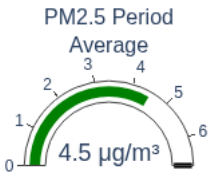
VIRGINIA

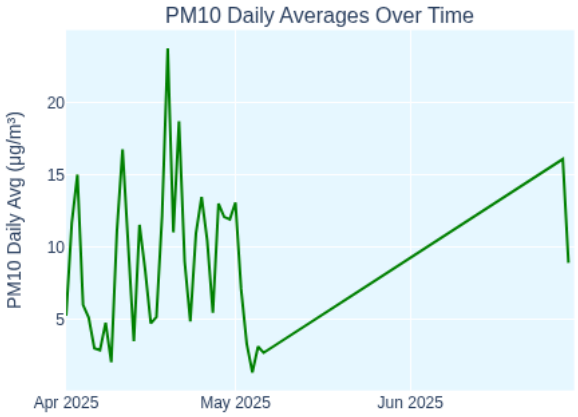
2025-03-01 to 2025-06-30 Report for Sensor 198969: AV-55, Buchanan_County, VA

Note: This report has been flagged as possibly returning insufficient data.

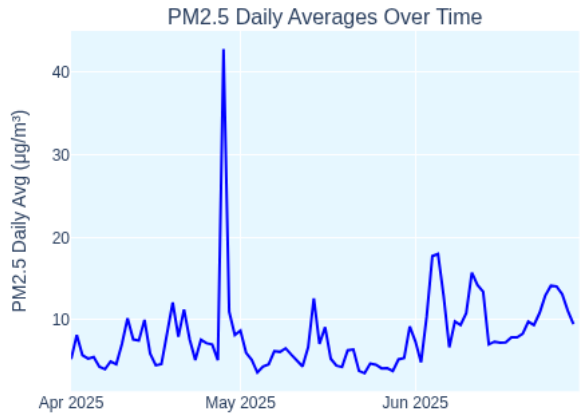


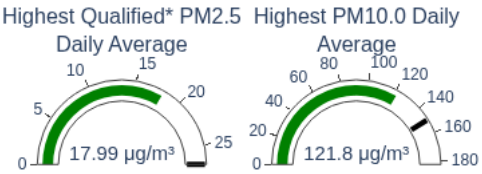


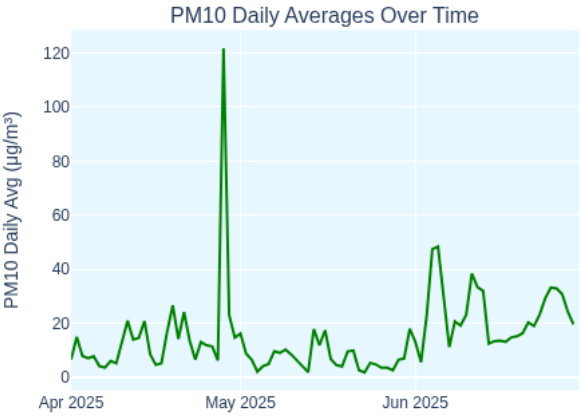


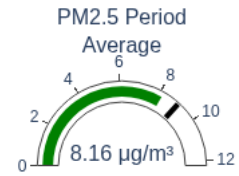


2025-03-01 to 2025-06-30 Report for Sensor 198281: AV-57, Buchanan_County, VA



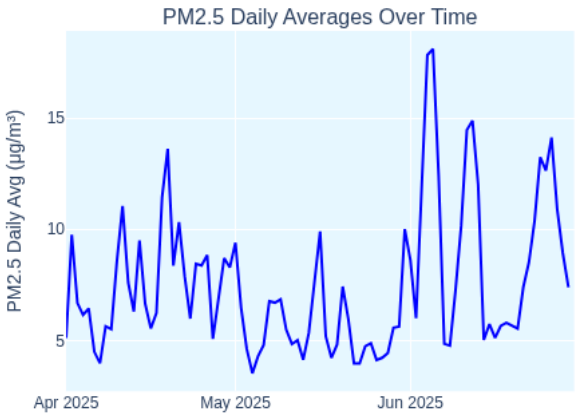


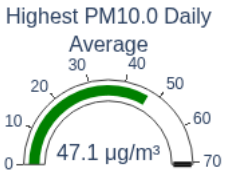


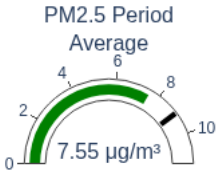


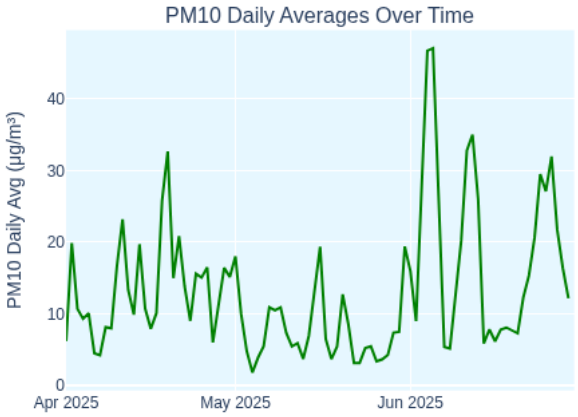
Days PM2.5 Exceeded	Days PM10.0 Exceeded
2025-04-28	

2025-03-01 to 2025-06-30 Report for Sensor 211973: AV-64, Buchanan_County, VA

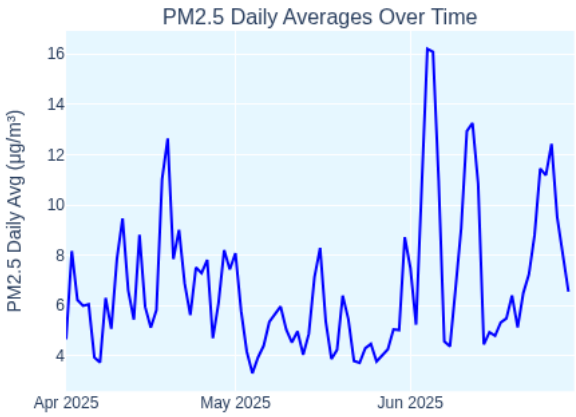


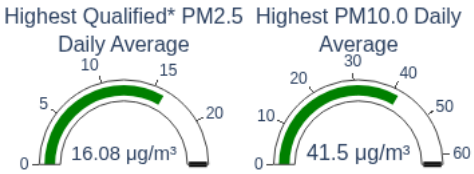


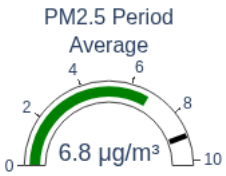


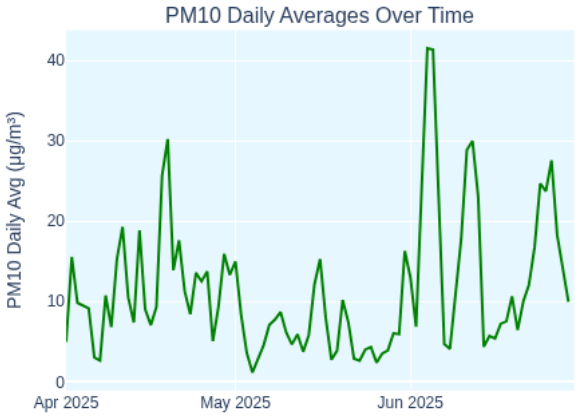


2025-03-01 to 2025-06-30 Report for Sensor 211937: AV-65, Buchanan_County, VA

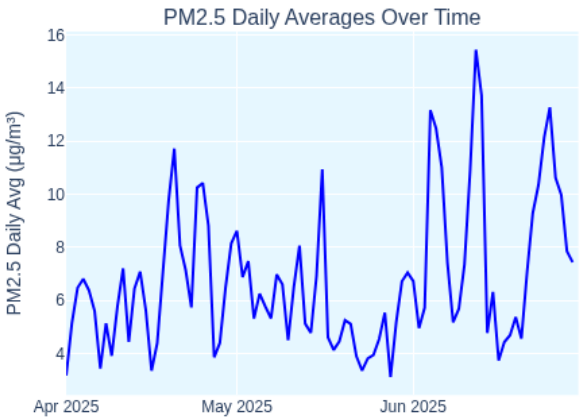


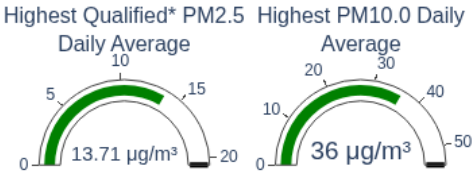


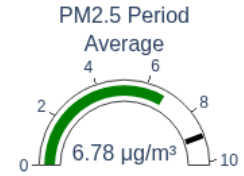


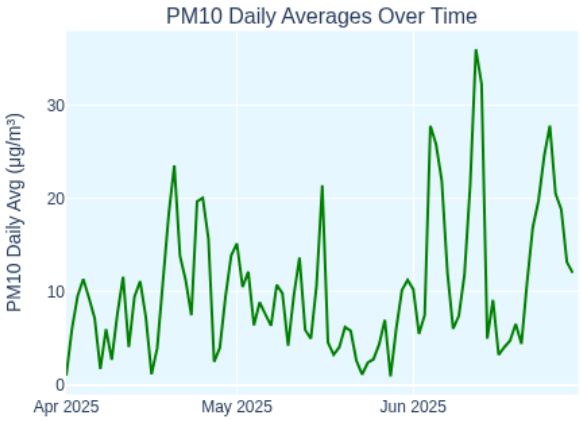


2025-03-01 to 2025-06-30 Report for Sensor 183737: AV-34, Buckingham_County, VA



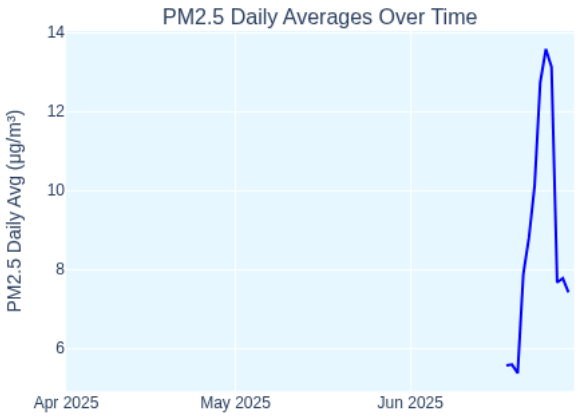


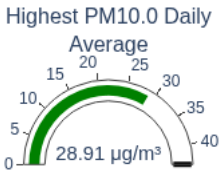


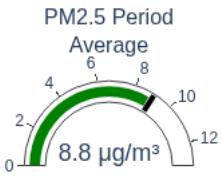


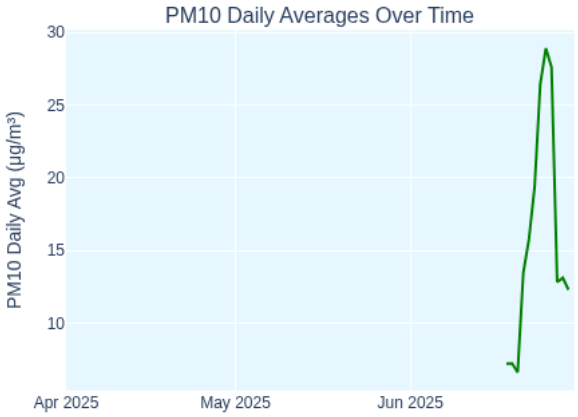
2025-03-01 to 2025-06-30 Report for Sensor 183743: AV-04, Montgomery_County, VA

Note: This report has been flagged as possibly returning insufficient data.

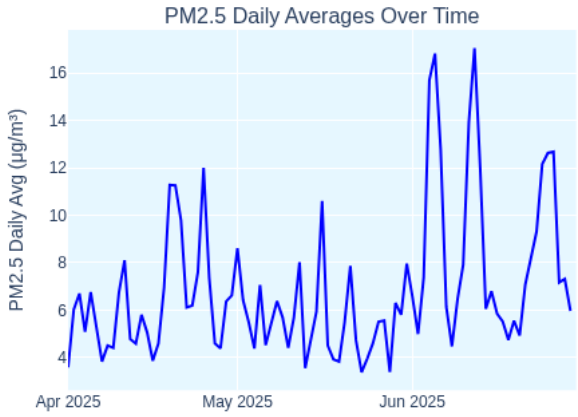


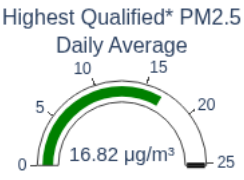


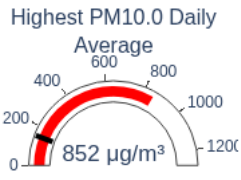


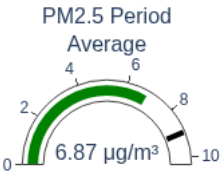


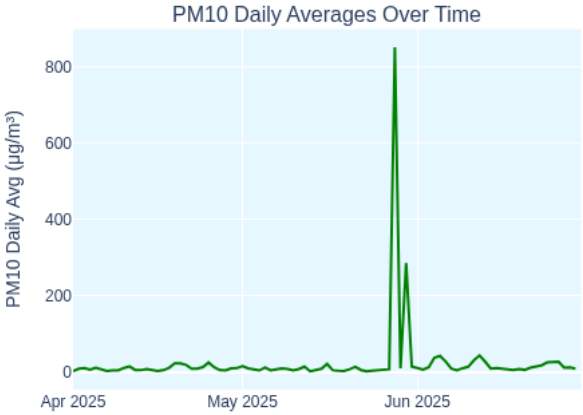
2025-03-01 to 2025-06-30 Report for Sensor 183813: AV-05, Montgomery_County, VA





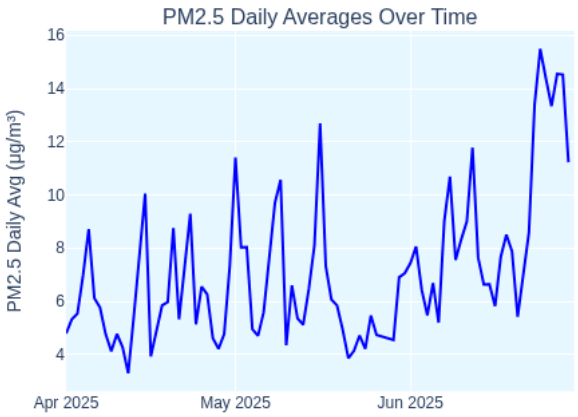


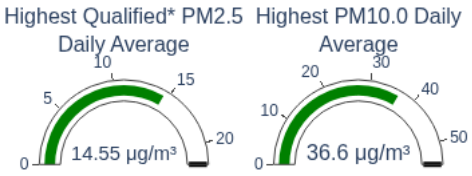


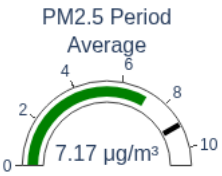


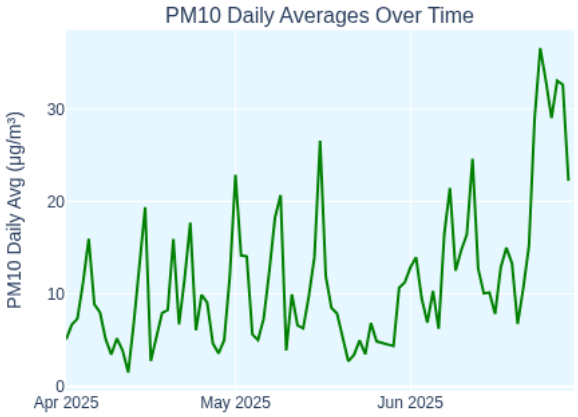
Days PM2.5 Exceeded	Days PM10.0 Exceeded
	2025-05-28
	2025-05-30

2025-03-01 to 2025-06-30 Report for Sensor 196167: AV-47, Norfolk, VA

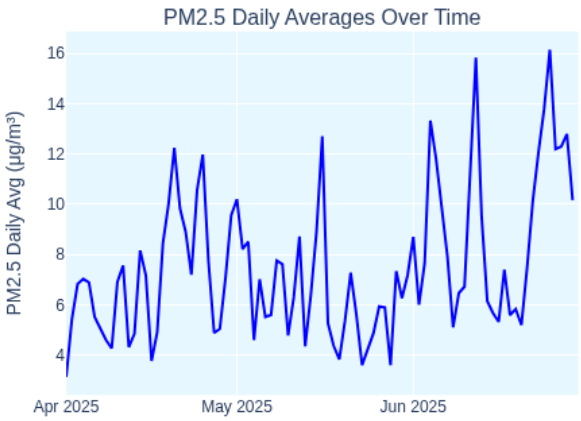


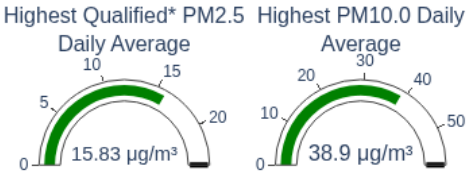


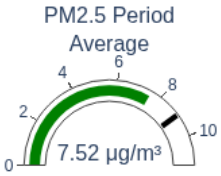


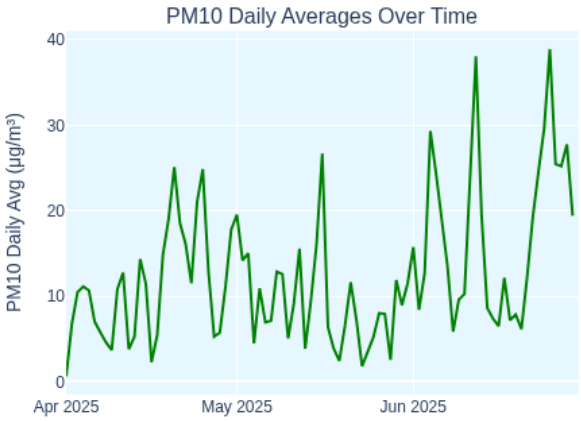


2025-03-01 to 2025-06-30 Report for Sensor 184519: AV-35, Pittsylvania_County, VA

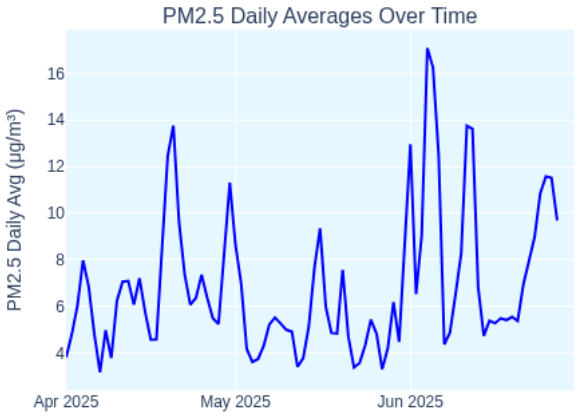


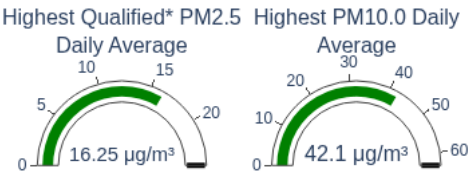


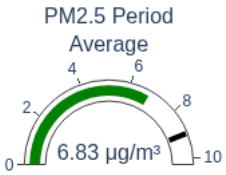


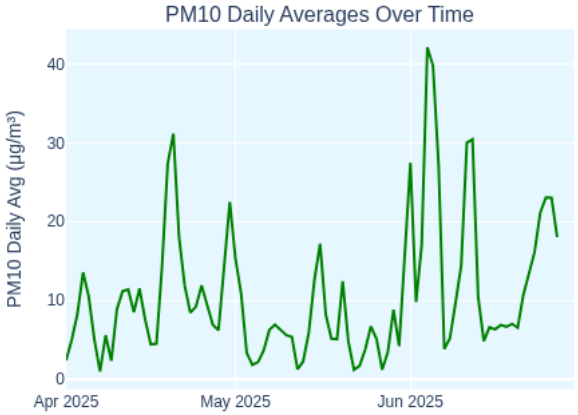


2025-03-01 to 2025-06-30 Report for Sensor 183749: AV-16, Wise_County, VA



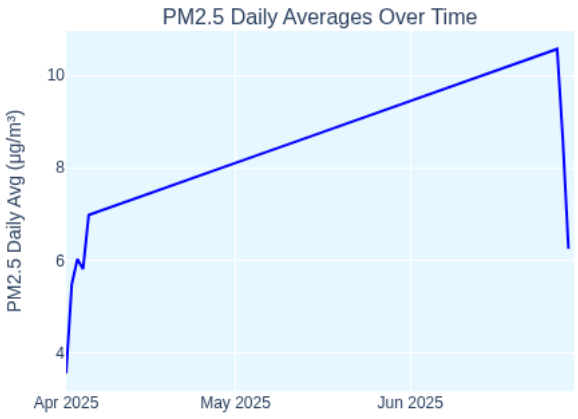


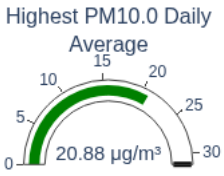


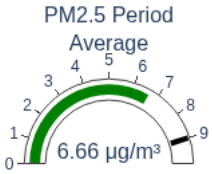


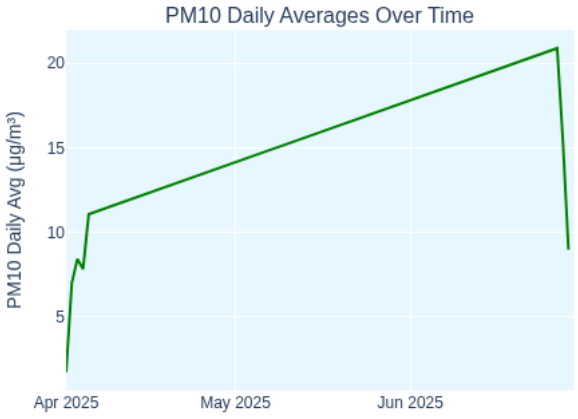
2025-03-01 to 2025-06-30 Report for Sensor 184559: AV-25, Wise_County, VA

Note: This report has been flagged as possibly returning insufficient data.

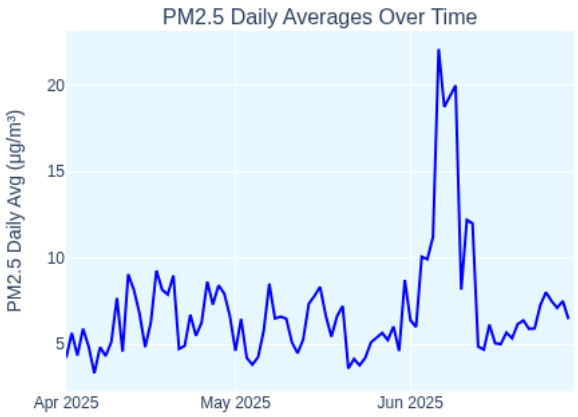


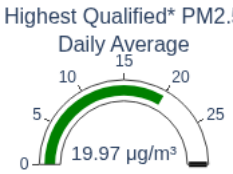


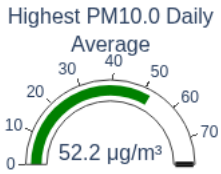


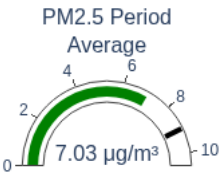


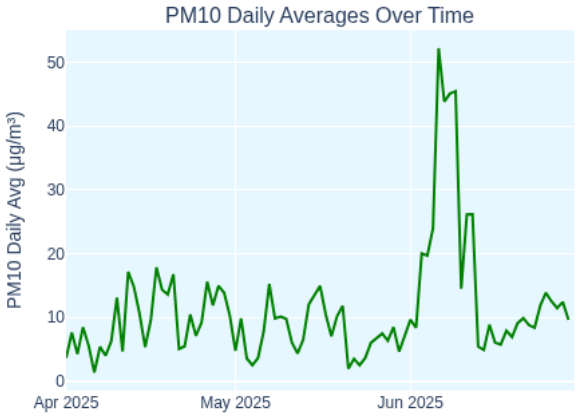
2025-03-01 to 2025-06-30 Report for Sensor 198253: AV-53, Wise_County, VA







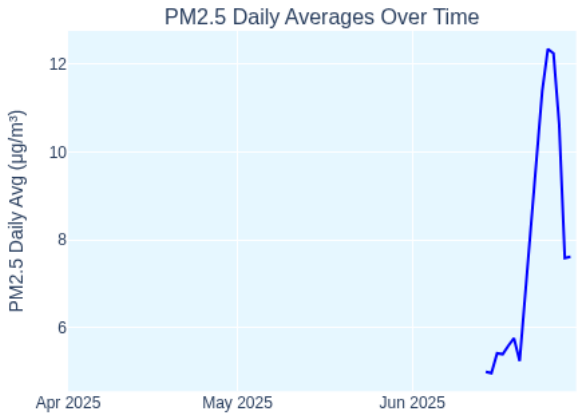


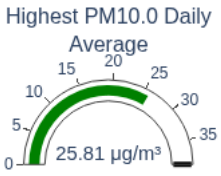


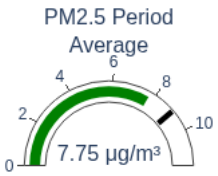
WEST VIRGINIA

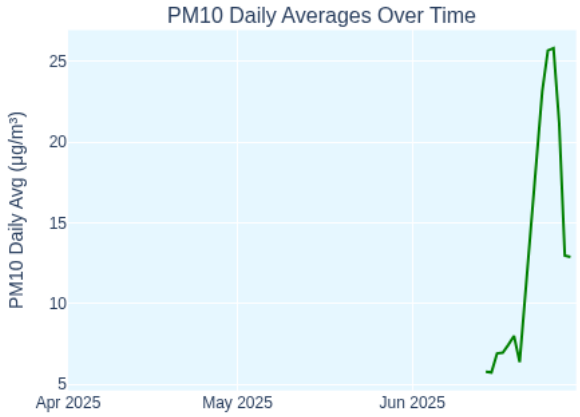
2025-03-01 to 2025-06-30 Report for Sensor 199007: AV-52, Boone_County, WV

Note: This report has been flagged as possibly returning insufficient data.

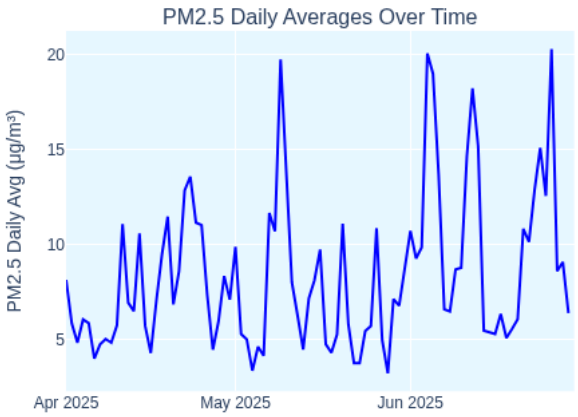


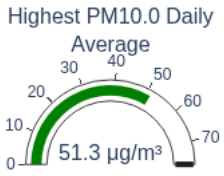


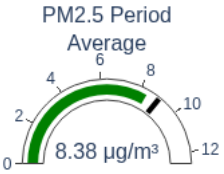


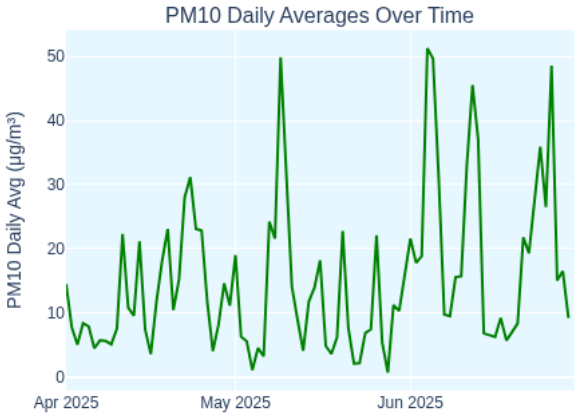


2025-03-01 to 2025-06-30 Report for Sensor 184513: AV-24, Kanawha_County, WV

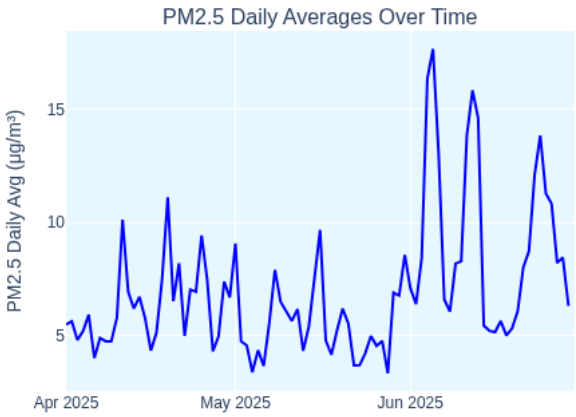


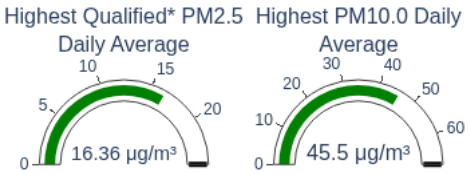


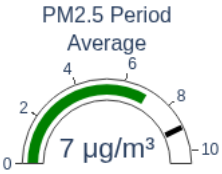


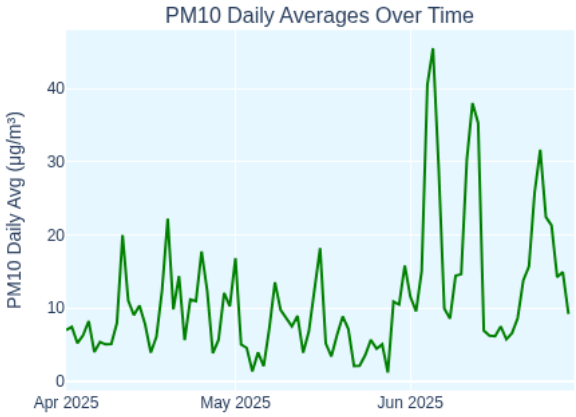


2025-03-01 to 2025-06-30 Report for Sensor 184561: AV-32, Kanawha_County, WV

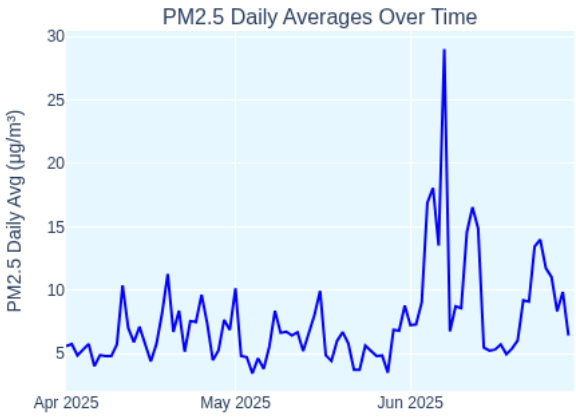


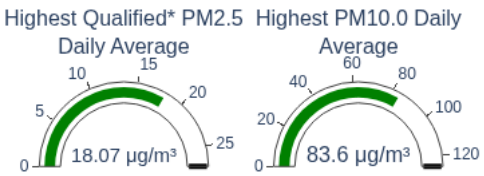


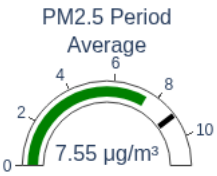


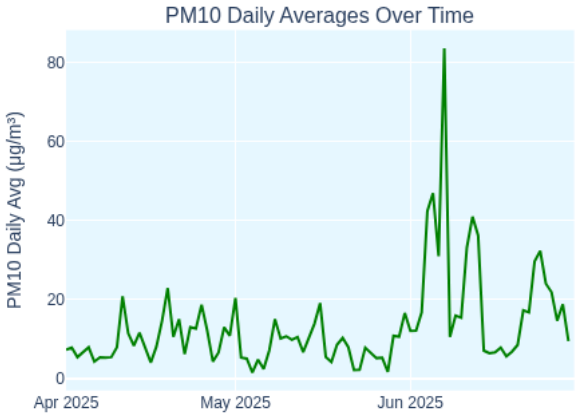


2025-03-01 to 2025-06-30 Report for Sensor 184515: AV-36, Kanawha_County, WV

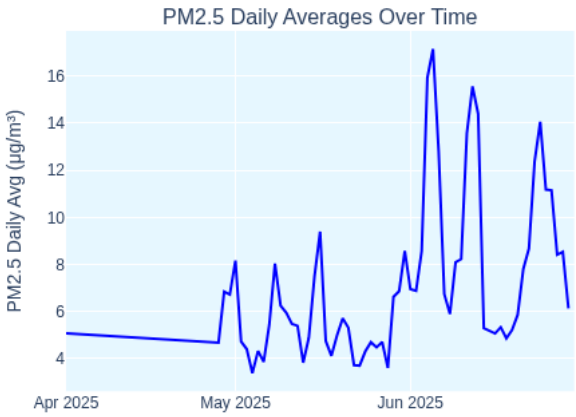


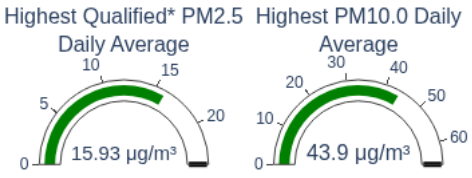


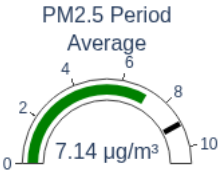


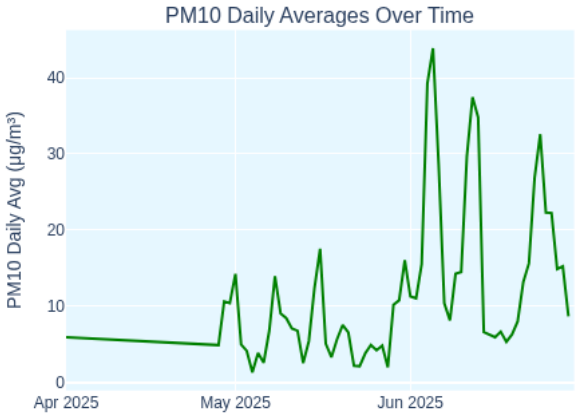


2025-03-01 to 2025-06-30 Report for Sensor 183793: AV-38, Kanawha_County, WV

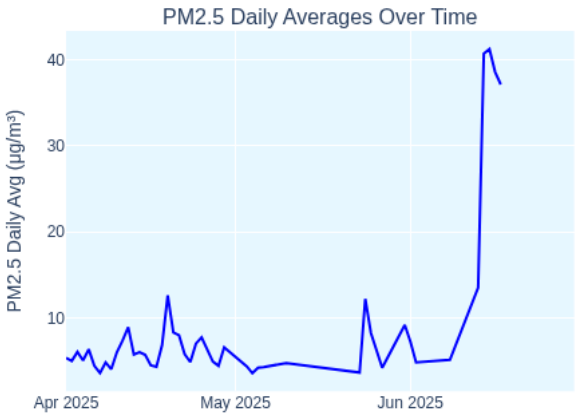


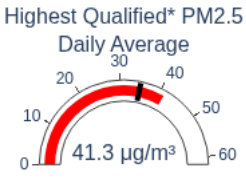


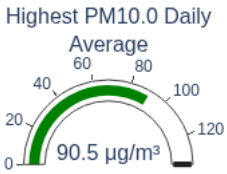


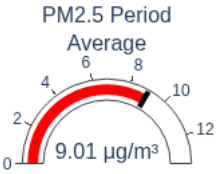


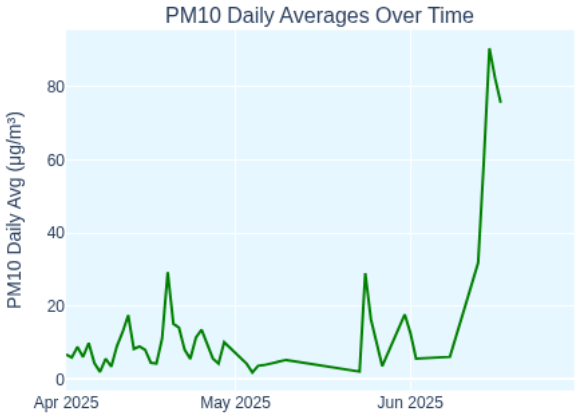
2025-03-01 to 2025-06-30 Report for Sensor 183779: AV-21, McDowell_County, WV





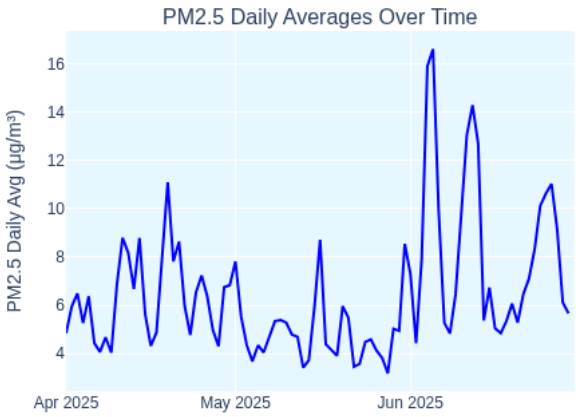


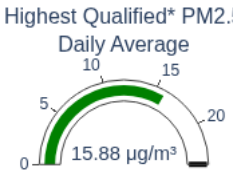


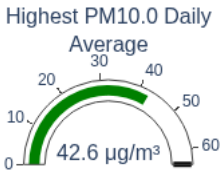


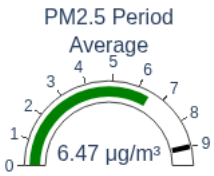
Days PM2.5 Exceeded	Days PM10.0 Exceeded
2025-06-14	
2025-06-15	
2025-06-16	
2025-06-17	

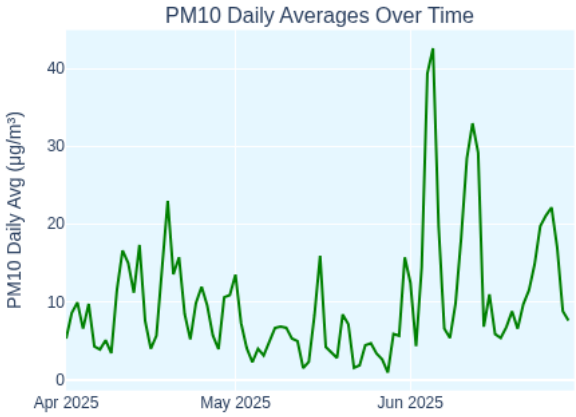
2025-03-01 to 2025-06-30 Report for Sensor 198997: AV-42, McDowell_County, WV



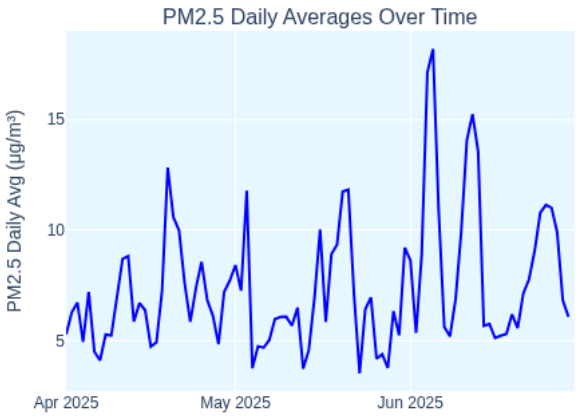


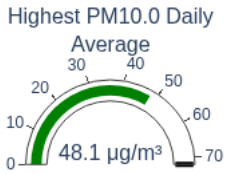


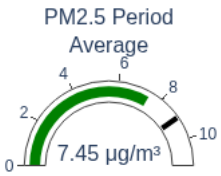


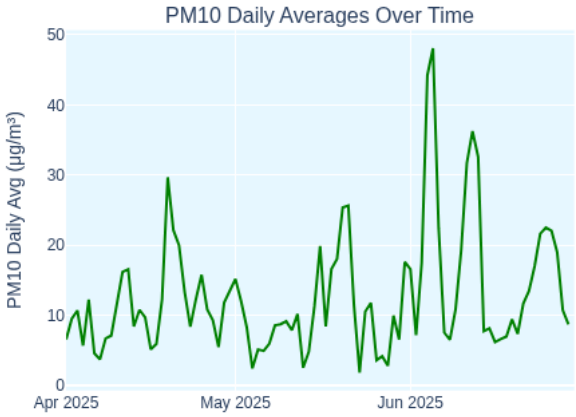


2025-03-01 to 2025-06-30 Report for Sensor 199027: AV-44, McDowell_County, WV



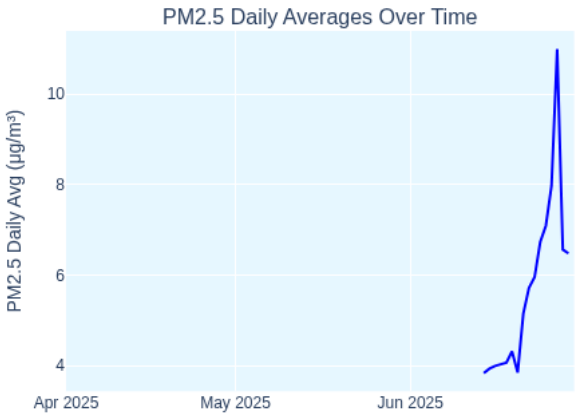


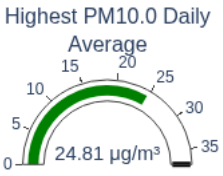


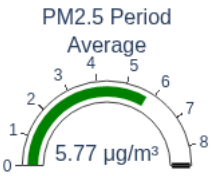


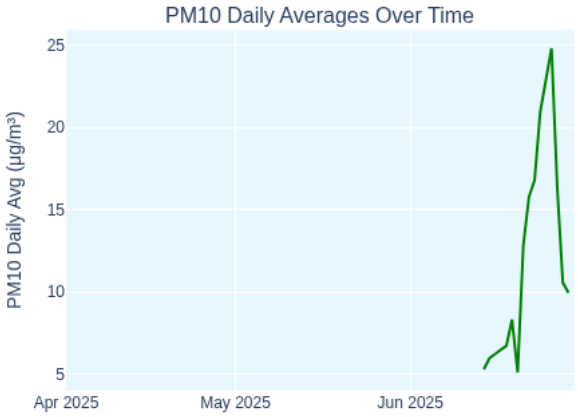
2025-03-01 to 2025-06-30 Report for Sensor 198477: AV-43, Raleigh County, WV

Note: This report has been flagged as possibly returning insufficient data.

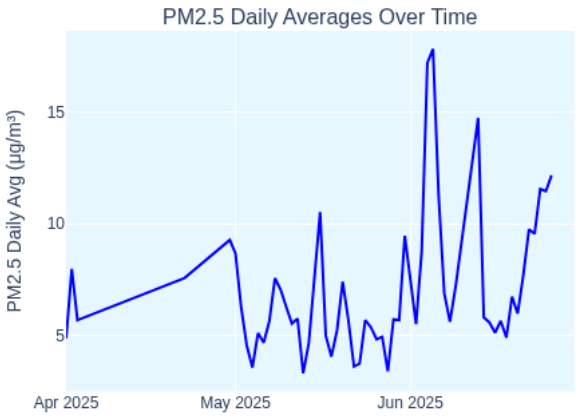


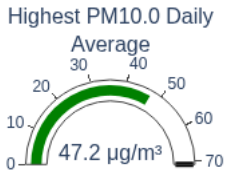


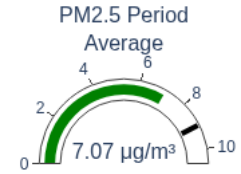


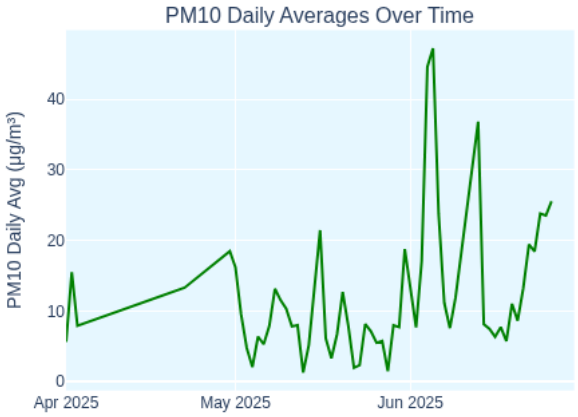


2025-03-01 to 2025-06-30 Report for Sensor 199037: AV-54, Raleigh_County, WV

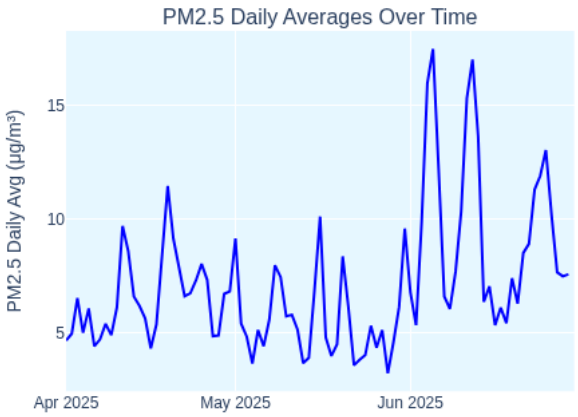


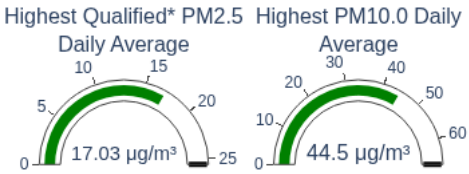


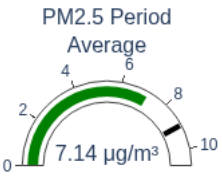


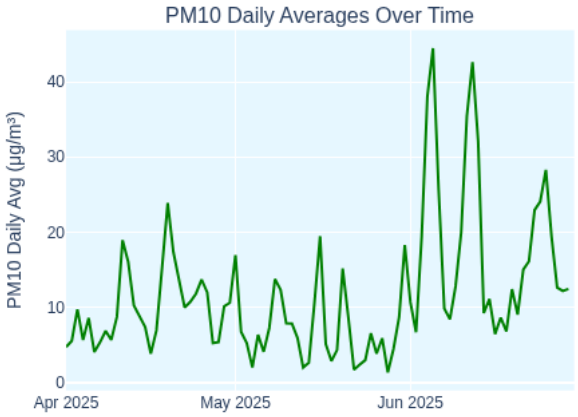


2025-03-01 to 2025-06-30 Report for Sensor 212029: AV-61, Raleigh_County, WV



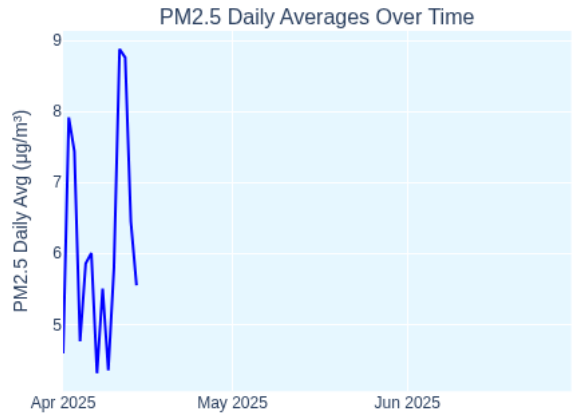


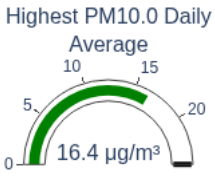


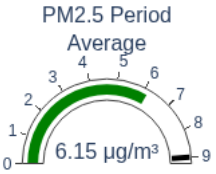


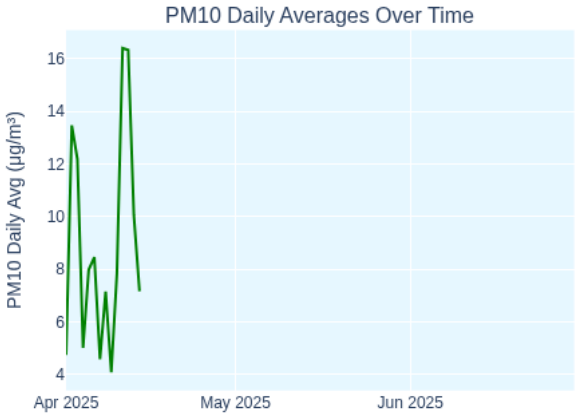
2025-03-01 to 2025-06-30 Report for Sensor 211969: AV-69, Raleigh County, WV

Note: This report has been flagged as possibly returning insufficient data.









The following monitors are either offline or received insufficient data to include in this quarter's report:

AV-01, sensor 183803 — Test monitor. No longer receiving data.

AV-02, sensor 183791 — Lee County, VA. Replaced.

AV-03, sensor 183807 — McDowell County, WV — No data.

AV-06, sensor 183739 — Raleigh County, WV — Insufficient data

AV-07, sensor 183755 — Naoma, Raleigh County, WV — No data. Removed.

AV-08, sensor 183769 — Raleigh County, WV — No data.

AV-11, sensor 183781 — Lackawanna, PA — No data. Removed.

AV-13, sensor 183777 — Permanently removed.

AV-17, sensor 183799 — Wise County, VA — Insufficient data.

AV-18, sensor 183753 — Wise County VA — Removed. Replaced by AV-25.

AV-19, sensor 184351 — Wise County VA — No data.

AV-20, sensor 183741 — McDowell County, WV — No data. Removed.

AV-22, sensor 184511 — Clark County, KY — No data.

AV-23, sensor 184345 — White Oak, Campbell County, TN — No data. Removed.

AV-28

AV-31, sensor 184567 — Pittsylvania County, VA — no data. Replaced.

AV-33, sensor 184553

AV-37, sensor 183783

AV-39, sensor 184523

AV-41, sensor 198821 — McDowell County, WV — no data. Removed.

AV-46

AV-48 — Permanently removed.

AV-50, sensor 196153

AV-56, sensor 199033 — Removed. Replaced by AV-6.

AV-58

AV-62

AV-66, sensor 211961 — Buchanan County, VA. Permanently removed.

AV-67

AV-68, sensor 211957