Asheville-Buncombe
Air Quality Agency

2024 Annual Summary Report

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Overview and Mission of the Agency

Clean air was an important factor when Asheville became established as a vacation and health care center for the treatment of tuberculosis in the late 1800s and early 1900s, and continues to be so today in this thriving tourist economy. At the same time, the topography, meteorology and associated temperature inversions, and growing population have led to challenges with air pollution.

Asheville has been a leader in clean air with the adoption of some of the first smoke and air pollution ordinances in the nation. The City adopted their first smoke ordinance in 1916 and hired their first smoke inspector the same year. In 1946, while acknowledging the importance of the tourism industry and the air pollution problem characterized by thick black smoke blanketing the area, the City adopted their first air pollution control ordinance, and a smoke abatement agency was established in 1947. The local air quality agency is an extension of that program. From 1967 to 1970, the agency served four counties, and from 1970 to 2000, the Agency served two counties (Buncombe and Haywood) and the City of Asheville. In 2000, the Western North Carolina Regional Air Quality Agency (WNCRAQA) was re-formed through an interlocal agreement between Buncombe County and the City of Asheville. The purpose of this agreement was to establish, administer, and enforce a local air quality program for the City of Asheville and Buncombe County in accordance with the provisions of North Carolina General Statutes Section 143-215.112. In 2021, the Agency was renamed the Asheville-Buncombe Air Quality Agency to better reflect the area it serves. Other updates were made to the Interlocal Agreement at the request of the Air Quality Board by Buncombe County and the City of Asheville to address agency office space and indirect charges that the agency pays to Buncombe County.

The mission of the Agency is to protect and monitor the area's air quality to safeguard the public health and the environment. The Agency is responsible for implementing and enforcing the provisions of the federal Clean Air Act and all additional state and local air quality regulations in Buncombe County. The agency operates an air pollution monitoring network that is used to determine whether our area is in compliance with the national ambient air quality standards (NAAQS). The program ensures that industrial facilities, gas stations, dry cleaners, grading contractors, and asbestos removal activities comply with all applicable air quality regulations that are put in place to protect the public health and welfare. The agency enforces the open burning regulations and responds to air quality related complaints and emergencies. The agency offers compliance assistance, education and outreach services, and is available to do presentations on air quality at the request of schools, civic groups, and other community organizations. The agency also maintains an indoor air quality webpage for resident inquiries and have partnered with other agencies to distribute free radon test kits.

AB Air Quality is governed by a five-member board. Three members are appointed by the Buncombe County Commissioners, and two members are appointed by the Asheville City Council. The Agency is also served by an advisory committee made up of community members from a wide range of backgrounds.

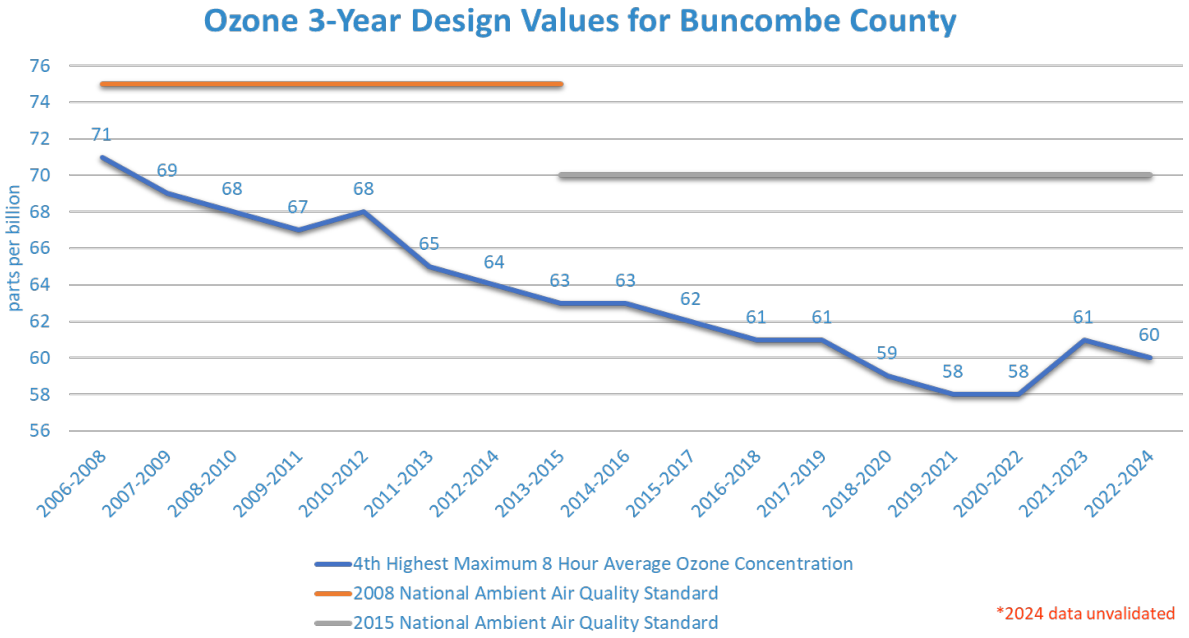
Air Quality Monitoring Data

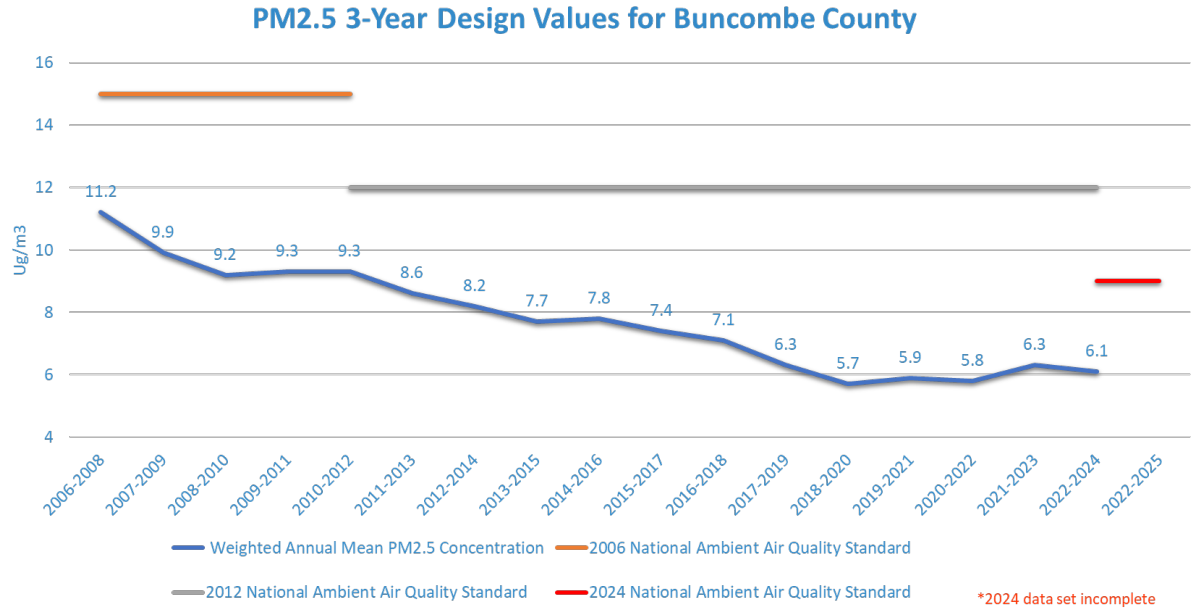
Ozone & Fine Particulate Matter ($PM_{2.5}$)

A large part of our program offerings include air quality monitoring. Our area is currently attaining the National Ambient Air Quality Standards (NAAQS) that are set by EPA to protect public health and the environment. The below table shows our values compared to the standards for Ozone and Fine Particle Matter ($PM_{2.5}$).

Report Item	Item Measurement/Explanation	Current National Standard (NAAQS)	CY2024
Design value at Bent Creek monitoring site	Average of the 4th highest 8-hour ozone concentration measured over 3 consecutive years; used to determine compliance with the national health-based standard for ground level ozone	70 parts per billion (ppb)	60 ppb
Particulate matter (PM2.5) measured at county monitoring site	The 98th percentile 24-hour average	35 micrograms per cubic meter ($\mu g/m^3$)	15.1 $\mu g/m^3$
Particulate matter (PM2.5) measured at county monitoring site	Weighted annual mean	9 micrograms per cubic meter ($\mu g/m^3$)*	6.0 $\mu g/m^3$

*The weighted annual mean standard decreased from 12 $\mu g/m^3$ to 9 $\mu g/m^3$ in February 2024.





Source of Ozone and Fine Particle data: U.S. EPA AirData https://www.epa.gov/outdoor-air-quality-data. AirData reports are produced from a direct query of the AQS Data Mart. The data represents the best and most recent information available to the EPA from state and local agencies.

Air Quality Index

The AQI is an index for reporting daily air quality. It tells how clean or polluted the air is, and what associated health effects might be of concern. Here in Buncombe County, the air quality index is based on the two pollutants that we monitor: ground level ozone and fine particles.



Number of Days the AQI was:				
Good (Green)	Moderate (Yellow)	Unhealthy for Sensitive Groups (Orange)	Unhealthy (Red)	Total Number of Days with an AQI in CY2024
243	120	0	0	363

Source of AQI data: U.S. EPA AirData https://www.epa.gov/outdoor-air-quality-data. AirData reports are produced from a direct query of the AQS Data Mart. The data represents the best and most recent information available to the EPA from state and local agencies.

Clean Air Compliance Awards

Clean Air Compliance awards recognize local facilities for their compliance with air quality regulations and standards. The primary qualification for a facility to receive a Clean Air Compliance Award is that it has operated in compliance with all regulations and permit requirements for the calendar year. All sources receiving Notices of Violation or Deficiency from the Agency during the year are excluded from consideration. In addition, the Agency uses several criteria to exclude other facilities from the awards list, including those facilities that have been the subject of verified citizen complaints (e.g., odor, visible emissions, or dust complaints) and those facilities that have been notified regarding deficiencies (e.g. inadequate recordkeeping and reporting, and other permit deviations during the calendar year).

Number of Clean Air Compliance Awards Given Out in 2024	46
Number of Clean Air Excellence Awards Given Out in 2024	1
Recipients of Clean Air Excellence Awards: Green Built Alliance for its Appalachian Offsets Program	

Environmental Management Commission Report Parameters for Calendar Year 2024

Report Item	CY 2024
Number of Staff in Each Program Area (In Person- Years)	
Permitting	2.05
Inspections	2.35
Enforcement	0.35
Monitoring	1.75
Administrative	0.5
Number of Facilities, By Category	
Title V	8
Synthetic Minor	9
Small	55
Stage I Vapor Recovery	151
Dry Cleaners	7
Number of Operating Permits Issued, By Category	
Title V	0
Synthetic Minor	0
Small	3
Number of Construction or Modification Permits Issued, By Category	
Title V	1
Synthetic Minor	3
Small	3
Average Time to Process Each Permit, By Category	
Initial Title V	7 months
Synthetic Minor	1.5 month
Small	1.5 month
Construction	2 months
Have emissions inventories been reported to EPA?	Yes
How many stack tests were observed?	5
How many stack test protocols and reports were received, reviewed, and approved?	6
List Number of CEMs, By Type	
CO	3
CO_2	0
NO_x	2
O_2	3
Opacity	2
SO_2	0
Mercury	0

PM	0
Number of Inspections Performed at Each Source Category	
Title V	7
Synthetic Minor	9
Small	22
Stage I Vapor Recovery	0
Dry Cleaners	0
Number of Full Compliance Evaluations	
Title V	7
Synthetic Minor	9
Small	22
Stage I	0
Dry Cleaners	0
Asbestos Permitting Program	
NESHAP Permits	139
Local Permits	240
City of Asheville Permit Reviews	346
Buncombe County Permit Reviews	144
Number of Staff Available to Perform Compliance Evaluations	
Industrial	5
Asbestos	2
Indoor Air Quality (IAQ)	2
Open Burning, Dust, Odor	7
Number of Violations Found During Inspections	1
Number of Complaints Received	
Industry	5
Asbestos	2
Dust, Odor, IAQ	8
Open Burning	69
Stage I Vapor Recovery	0
Number of Complaints Investigated	
Industry	5
Asbestos	2
Dust, Odor, IAQ	8
Open Burning	69
Stage I Vapor Recovery	0
Number of NOVs, by Type	
Industry – Emissions	1
Industry - Procedural	4
Asbestos	0
Dry Cleaners	0
112(r) Program	0
Open Burning	5

Stage I Vapor Recovery	0
Number of Enforcement Cases Processed	10
Number of SOCs Issued	0
Number of Penalties Assessed	1
Total Amount of Penalties Assessed	$6,644
Total Amount of Penalties Collected	$10,379
Number of FRVs and HPVs Reported to EPA	3
Was compliance status of the facilities updated in ICIS on a regular basis? How often?	Yes, Bi-Monthly

The Agency submits 100% of all collected penalties to the local school system.

Additional Highlights for Calendar Year 2024

Hurricane Helene-Related Activities

In late September of 2024, Hurricane Helene devasted Western North Carolina. Buncombe County's normal operations were halted for about a month so that county employees could instead work at water distribution sites, care shelters, emergency response, and anything else that was needed.

Once normal operations resumed, the Asheville-Buncombe Air Quality Agency immediately reached out to permitted facilities that were damaged, started damage assessments in Buncombe County and City of Asheville, started quickly processing demolition permits, and prepared for the uptick in debris burning. There were about 100 demolition permits that came through that were Helene related from the end of September to December 31, 2024, and the number continues to rise through 2025. About 3,800 damage assessments were completed by Buncombe County. Seventeen permitted Stage I facilities were damaged.

To prepare for the increase in smoke in the area, the Agency borrowed two EBAMs (mobile PM2.5 monitors) from DEQ (North Carolina's Division of Air Quality) and eight Purple Air sensors from the EPA as part of a loan program granted to DEQ (Environmental Protection Agency). These non-regulatory monitors and sensors were strategically placed in areas of the county that were damaged and did not have sufficient PM coverage (See figure below). It was estimated that 10 million cubic yards of debris needed to be collected and disposed of in Buncombe County. One solution to this was for companies to bring in Air Curtain Incinerators (ACIs). The agency granted permission to operate for four ACIs, and one of our Title V facilities brought in one as well (see figure below). The damage from Hurricane Helene was immense, and Buncombe County will be working on recovery-related efforts for years to come.

Helene AQ response

Locations of ABAQA temporary monitors

2 views

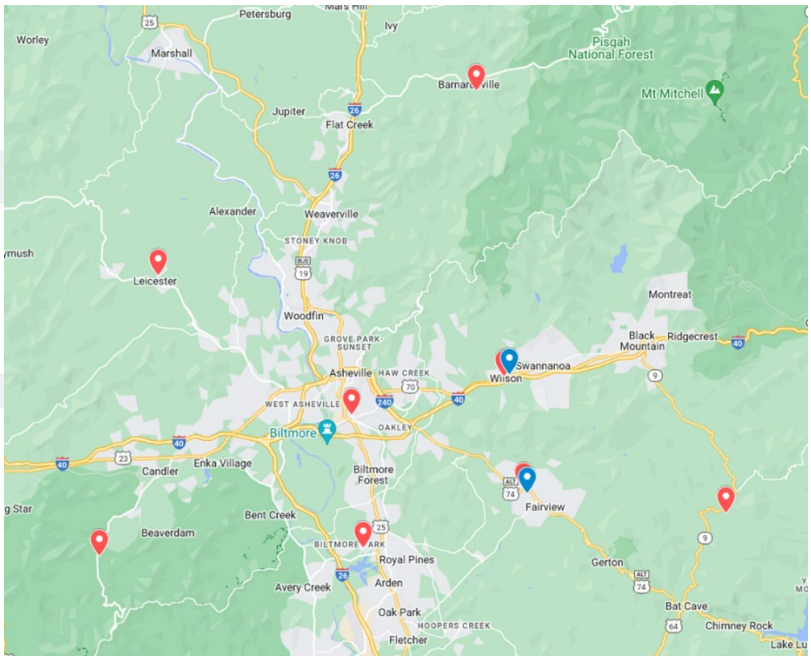
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Individual styles

- Leicester Library (PA)
- Barnardsville FD (PA)
- Upper Hominy Fire (PA)
- Biltmore Village (PA)
- Art Space (PA)
- ARO (EBAM)
- Skyland Library (PA)
- Fairview Library (PA)
- Fairview Elementary (EBAM)
- Broad River FD (PA)



Buncombe County ACI locations

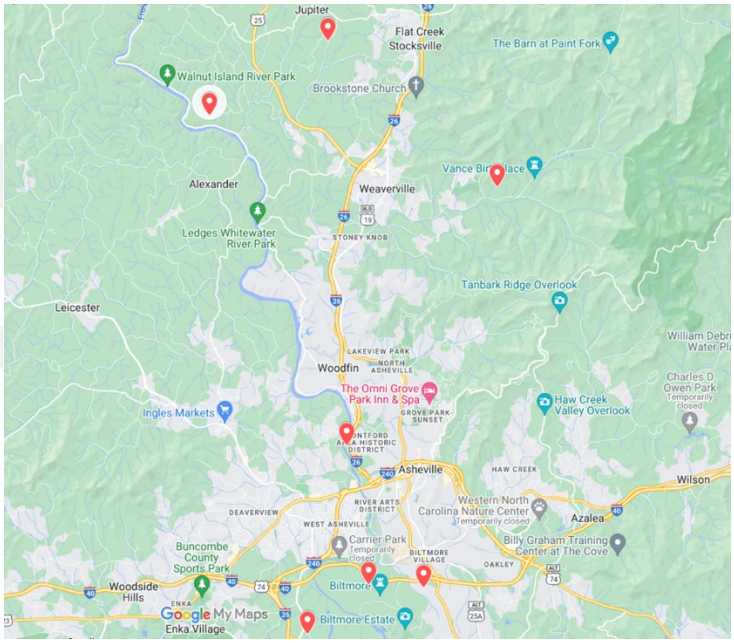
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ACI Locations

Individual styles

- North End Stump and Brush
- Riverside Stump Dump
- SDR Town of Weaverville
- Biltmore Estate SawMill
- Biltmore Estate Stump Dump
- Biltmore Estate Brevard Road
- Buncombe County Landfill



Education & Outreach and Voluntary Program Initiatives

In addition to our core duties including the implementation of our monitoring, permitting, and enforcement programs, below is a list of Education & Outreach and Voluntary Initiatives activities that were accomplished.

- **Radon Awareness Month - January 2024**
  A press release (announcement on website and social media) was sent out to promote Radon Awareness Month. NC Radon program had a limited amount of test kits to give away. Promoted testing and where to buy an inexpensive kit.

- **NC DAQ Annual Air Quality Monitoring Workshop**
  Local Air Quality Program Update
  James Raiford
  February 7, 2024

- **Air Quality Monitoring Station and Sensor Shelter Meeting**
  Buncombe County Board of Education-Nesbitt Discovery Academy
  Ashley Featherstone, James Raiford, Kevin Lance, Johanna Cano (CAPE)
  Meeting with BOE and Nesbitt faculty about Educational Display with School
  February 20, 2024

- **Clean Air Excellence Awards**
  Press Release Taking Nominations
  February 28, 2024

- **Buncombe County Environmental and Energy Stewardship Subcommittee Meeting**
  Electric School Bus Update
  Ashley Featherstone
  March 15, 2024

- **Air Quality Action Day Story on Website**
  CAPE
  April 30, 2024

- **Air Quality Awareness Week**
  May 6-10, 2024
  Proclamation from Board of Commissioners
  Proclamation presented to Agency at BOC meeting on May 7, 2024
- **Asheville-Buncombe Sustainable Microbrewery Initiative (2023-2024)**

Partnership with EPA Advance Program, UNC Asheville, Land of Sky Waste Reduction Partners and Four Local Breweries: Cellarest Beer Project, Hi-Wire Brewing, River Arts District Brewing and Wicked Weed Brewing
Asheville Beer Week, May 21, 2024
Brewing some Good for the Environment
Participated in round table function to promote Energy Star Treasure Hunts at breweries, media outreach
Presented to National EPA Advance Partners
April 24, 2025

- **Clean Air Excellence Awards**
  Appalachian Offsets Program of Greenbuilt Alliance was recognized. Did story for CAPE for website, also picked up by Asheville.com.
  https://www.asheville.com/news/2024/07/asheville-buncombe-air-quality-agency-presents-2024-air-quality-excellence-awards/
  July 11, 2024

- **Air Quality and Open Burning News Stories Post Hurricane Helene**
  Numerous stories on County Website and Air Quality Website
  First ran October 18, 2024, updated regularly
  Air Quality Concerns Related to Tropical Storm Helene.
  https://www.buncombenc.gov/CivicAlerts.aspx?AID=163
  Open Burning in Response to Tropical Storm Helene
  https://www.buncombenc.gov/CivicAlerts.aspx?AID=203
  Press Conference Statements about burning issued October 17, 2024

- **Asheville Watchdog**
  Buncombe Air Quality Post-Helene Has not been Greatly Affected by Dust, but Smoke Risk Rises, Agency Says
  Ashley Featherstone Interview
  November 1, 2024. Story ran November 13, 2024
  https://avlwatchdog.org/buncombe-air-quality-post-helene-has-not-been-affected-greatly-by-dust-but-smoke-risk-rises-agency-says/

Accomplishments

- Worked with NC DAQ and EPA to install and operate between 8 and 10 Purple Airs and an EBAM for non-regulatory PM monitoring post Helene. Purpose was to monitor and increase public awareness about potential for increased PM pollution from debris burning, clean up and rebuilding, etc.
- Completed a reorganization of the agency that included filling positions of 2 senior staff and hired a new staff member in a position that had been vacant for several years.
- Purchased additional air quality monitoring equipment with one-time funds from EPA grants (ozone and PM monitoring equipment, a nasal ranger, and a Ford F150 Lightning to replace our 18-year-old diesel truck).
- Adopted a nondiscrimination policy and procedures as required of federal grant recipients and posted it to our website.
- Received a proclamation from Buncombe County Government for Air Quality Awareness Week.
- Participated in a recognition ceremony and roundtable and continued to promote the Asheville-Buncombe Sustainable Microbrewery Initiative with local breweries. This included continuing to work with a UNCA McCollough Fellow, and hiring an intern who made more progress with the program until it was discontinued due to Helene impacts.
- Finalized and made available procedures for residents to use our Citizen Science Shelter at the Buncombe County Board of Education.
- Continued partnership with UNCA on air quality sensor project that is looking at quantifying any disparities in pollution levels in the community related to historical red lining practices.
- Worked with Buncombe County on outreach and damage assessments, processed over 100 building demolitions related to Helene during the last 3 months of the year.
-

Upcoming Goals

- Establish and begin operating an additional ground level ozone monitoring site at AB Tech, as required by EPA based on population for our area.
- Continue to maintain data completeness and increase cross training for air quality monitoring equipment that is part of the national network for determining compliance with national standards.
- Work with IT to add permitted facilities to Accela and begin taking electronic payments from permitted facilities.

- Submit file retention policy and file digitization plan to state for approval. This is necessary for moving towards electronic permits for industrial facilities and will increase access to emissions and compliance data for residents.
- Continue Partnerships with UNCA including low-cost air sensors in community at Asheville City Schools.
- Continue to increase community outreach related to Helene-Air Quality Index and temporary monitors, open burning and storm debris burning, indoor air hazards including asbestos, lead, and mold.
    - Continue with Neighborhood and Built Environment Workgroup with the Department of Health and Human Services.
- Complete Community Engagement Policy for permitted facilities.
- Increase outreach and provide EPA Burn Wise materials for fire wood banks that formed in Buncombe County post Helene.
- Put up an educational display at the Community Science Shelter and Air Quality monitoring site
- Work with Strategy and Innovation to review and improve agency processes and improve customer service to regulated community and residents.
- Increase community engagement and language access resources.