Asheville-Buncombe
Air Quality Agency

2023 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 is 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)	CY2023
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)	61 ppb
Particulate matter (PM2.5) measured at county monitoring site	The 98th percentile 24-hour average	35 micrograms per cubic meter ($\mu g/m^3$)	21.8 $\mu g/m^3$
Particulate matter (PM2.5) measured at county monitoring site	Weighted annual mean	12 micrograms per cubic meter ($\mu g/m^3$)	6.3 $\mu g/m^3$

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 2023
261	104	0	0	365

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 2023	44
Number of Clean Air Excellence Awards Given Out in 2023	2
Recipients of Clean Air Excellence Awards: Buncombe County Government - Strategy and Innovation; WNC VA Health Care System	

Environmental Management Commission Report Parameters for Calendar Year 2023

Report Item	CY 2023
Number of Staff in Each Program Area (In Person- Years)	
Permitting	1.8
Inspections	2.1
Enforcement	0.35
Monitoring	1.25
Administrative	.50
Number of Facilities, By Category	
Title V	7
Synthetic Minor	10
Small	55
Stage I Vapor Recovery	150
Dry Cleaners	7
Number of Operating Permits Issued, By Category	
Title V	0
Synthetic Minor	3
Small	16
Number of Construction or Modification Permits Issued, By Category	
Title V	1
Synthetic Minor	1
Small	0
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?	2
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	10
Small	23
Stage I Vapor Recovery	150
Dry Cleaners	0
Number of Full Compliance Evaluations	
Title V	7
Synthetic Minor	10
Small	23
Stage I	150
Dry Cleaners	0
Asbestos Permitting Program	
NESHAP Permits	94
Local Permits	284
City of Asheville Permit Reviews	98
Buncombe County Permit Reviews	137
Number of Staff Available to Perform Compliance Evaluations	
Industrial	3
Asbestos	1
Indoor Air Quality (IAQ)	2
Open Burning, Dust, Odor	6
Number of Violations Found During Inspections	2
Number of Complaints Received	
Industry	7
Asbestos	6
Dust, Odor, IAQ	4
Open Burning	63
Stage I Vapor Recovery	1
Number of Complaints Investigated	
Industry	4
Asbestos	6
Dust, Odor, IAQ	4
Open Burning	63
Stage I Vapor Recovery	1
Number of NOVs, by Type	
Industry – Emissions	1
Industry - Procedural	11

Asbestos/Demolition	3
Dry Cleaners	0
112(r) Program	0
Open Burning	13
Stage I Vapor Recovery	9
Number of Enforcement Cases Processed	27
Number of SOCs Issued	0
Number of Penalties Assessed	13
Total Amount of Penalties Assessed	$7,988
Total Amount of Penalties Collected	$17,375
Number of FRVs and HPVs Reported to EPA	11
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 2023

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.

- The Agency partnered with the NC Radon Program to promote Radon Awareness Month in January of 2023. The NC Radon program had a limited amount of test kits to give away. A press release was issued and posted to the website and social media to promote testing and where to obtain free kits and reduced price kits (when free kits were no longer available).

- In November of 2021, the Agency joined the US EPA's Advance Program for ground level ozone and fine particulate matter. The program is a voluntary, collaborative initiative that promotes local actions in attainment areas to reduce ozone and/or fine particle pollution to help areas maintain the National Ambient Air Quality Standards. In 2022, the agency submitted initiatives for the 'Path Forward.' These include working with partners to find funding for the installation of electric vehicle charging infrastructure, replacing diesel school buses with electric school buses, and promoting Energy Star programs with local

breweries. During 2022, agency staff worked with partners to assist the school transportation department with planning for and obtaining grants for electric buses. We also worked with UNCA to support a McCullough Foundation grant to fund a student to set up an Energy Star program to pursue energy efficiency opportunities at breweries. This came to fruition in 2023 when we worked with a student who partnered with four local micro-breweries on how to save energy and be energy efficient.

- The Asheville-Buncombe Air Quality Agency is committed to encouraging reductions in air pollution by encouraging reductions in vehicle miles traveled and cleaner transportation alternatives. We are a member of the local Clean Vehicles Coalition (CVC) that is administered by the Land of Sky Regional Council of Governments. In 2012, the local CVC was designated by the US Department of Energy as an official Clean Cities program for the five-county area surrounding Asheville including Buncombe, Henderson, Haywood, Madison and Transylvania counties. In October of 2012, the Agency signed a Memorandum of Understanding expressing support for the goals of the CVC and Clean Cities Program.

    - Staff are currently serving on a committee that approves grant funding for the NC DAQ's diesel emissions reduction grant program.
    - In 2023, staff collaborated with the County Sustainability Office, the CVC, Duke Energy, and BCS to strategize about electric buses and to help apply for the Duke Park and Plug program "that provides funding for EV charging infrastructure
    - Also, in 2023, staff participated in the CVC Holiday parade in downtown Asheville that featured numerous clean vehicles and electric assist bikes, including one of Buncombe County's new Electric Ford Lightnings

- The Agency maintains a website with information for our permitted facilities as well as information and links to sites concerning air quality, health, climate, and other areas of interest for the residents of Buncombe County. Please go to www.abairquality.org for more information. Please like us on Facebook https://www.facebook.com/ABAirQuality and follow us on Twitter https://twitter.com/ABAirQuality.

- The Agency participated in various public forums and responded to interview requests.

    - Presentation and Field trip with UNCA students to the Ozone Monitoring Site located at Bent Creek. March 31, 2023.
    - Interview with Mountain Xpress April 27, 2023: Air Quality Continues to Improve, but Vigilance Remains Essential. https://mountainx.com/news/air-quality-continues-to-improve-but-vigilance-remains-essential/

- Interview with WLOS June 2023. Wildfire smoke from Canada impacting air quality. https://wlos.com/news/local/were-experiencing-the-effects-of-climate-change-induced-wildfires-unca-professor-says
- Published story to the Air Quality website and the Buncombe County website about air quality and wildfire smoke. June-July 2023.
- Dynamite Roasting Company was recognized and received a Clean Air Excellence Award and did a story about it for Buncombe County which got picked up by Mountain Xpress and Asheville Newsletter. July 31, 2023.
- Participated in story by Asheville Watchdog August 31, 2023, about what is being done to prevent a wildfire like Hawaii. https://avlwatchdog.org/whats-being-done-to-prevent-a-fire-like-hawaiis-from-happening-here/
- Presentation with Buncombe County Strategic Partnerships Grants Committee about grants related to air quality and community partners. September 7, 2023.
- Toured the Particulate Matter monitoring site and the new community sensor shelter at Board of Education with UNCA students. September 22, 2023.
- Published story on Buncombe County website for Children's Health Month. Titled, "Children's Health: Tips for Maintaining Healthy Indoor Air Quality." October – December 2023. https://www.buncombecounty.org/countycenter/news-detail.aspx?id=21078
- Issued press release with WLOS about air quality and fires. November 6, 2023. https://wlos.com/news/local/air-quality-alert-code-red-orange-western-north-carolina-wildfire-smoke-ongoing-particles#

Accomplishments

Buncombe County's air quality continues to be in attainment with the National Ambient Air Quality Standards for fine particles and ground level ozone. In November of 2021, the Agency joined the US EPA's Advance Program for ground level ozone and fine particulate matter. The program is a voluntary, collaborative initiative that promotes local actions in attainment areas to reduce ozone and fine particle pollution to help areas maintain the National Ambient Air Quality Standards. In 2023, EPA reviewed the national standards for fine particles and proposed to make them more stringent. A final rule was issued in February (2024).

In 2023, our local air quality monitoring site at the Buncombe County Board of Education that is part of the national ambient air quality monitoring network was upgraded and expanded with new equipment that will be required (PM-10 monitor) as our Metropolitan Statistical Area approaches the population threshold of 500,000. The agency worked with the Buncombe County Board of Education to move the monitoring site from a roof top to the ground, improving safety and accessibility of the site. Part of the upgrade also included the installation of an EPA provided community science station for low-cost air quality sensors. This will facilitate more resident engagement and citizen science projects as interest in low-cost air

quality sensors is increasing. Funding for the PM-10 monitor, which also measures PM-2.5, was provided by EPA through the American Rescue Plan Act (ARPA). Funding was also secured to replace one of the agency's ground level ozone monitors as part of this grant.

Partnerships with UNCA. The Agency is supporting a UNCA project to use low-cost air quality sensors to determine potential air quality impacts to disadvantaged communities associated with red lining and urban renewal in Asheville. Phase 1 included collocating UNCA sensors with the Agency's regulatory monitors. Now deployed in the community at several City of Asheville schools, some of the sensor data is publicly available and will inform community of air quality levels, increasing awareness and supplementing the data from the Agency's regulatory monitors. This will be especially useful when smoke from fires impacts our area. Purple Air sensor data can be seen alongside the Agency's permanent monitor data on the EPA Fire and Smoke Map at https://fire.airnow.gov/.

In 2023, the agency worked with local partners on different voluntary pollution prevention initiatives with assistance from US EPA, as part the EPA Advance program. Three programs have been identified for our participation, including: expanding electric vehicle (EV) charging infrastructure, assisting with grant funding to obtain electric school buses for the local fleet, and promoting an Energy Star program with local microbreweries to reduce energy use and emissions at their facilities. The following progress was made in these areas:

- Worked with Buncombe County Sustainability office and Land of Sky Clean Vehicles Coalition to obtain grant from North Carolina to replace EV charging equipment at LOS office on New Leicester Highway (open to the public and back in service);
- Worked with local partners including Buncombe County Schools Transportation Department, Sustainability, Clean Vehicles Coalition and Duke Energy on EPA grant applications to replace 5 diesel buses with 5 electric buses (2 applications, one pending); and
- Partnered with UNCA to support a McCullough Fellow on a project to launch the Asheville-Buncombe Sustainable Microbrewery Initiative. With assistance from Land of Sky's Waste Reduction Partners, energy audits or 'treasure hunts' were conducted at 4 microbreweries and opportunities for savings and emissions reductions were identified and reported to the facilities.

Agency data management systems are being modernized to utilize the Accela Government Software program that is used by the City of Asheville and Buncombe County. This will further facilitate more interdepartmental collaboration and improve customer service and

efficiency. The software has enabled the Agency to accept electronic payments and applications for demolition, renovation, and asbestos removal permits. In 2021 and 2022, a complaint module was established that facilitates information sharing with county departments that enforce codes. Staff are participating in a code enforcement workgroup to address repeat violators.

Agency staff worked with the Buncombe County's Communications and Public Engagement (CAPE) Team and others including Public Health and the Fire Marshal's office to put together a media tool kit in response to smoke impacts from Canadian wildfires last summer. The kit is now in place to use when other smoke events from wildfires impact our area's air quality.

The Board and staff continued to promote voluntary programs to increase energy efficiency and reduce air pollution including greenhouse gas (GHG) emissions with our annual Clean Air Excellence Awards program. Dynamite Roasting Company was recognized in 2023 for their projects and associated air pollution emissions reductions related to renewable energy and utilization of the first electric product delivery vehicle in the area.

Potential Budgetary Impact of Goals and/or Recommendation(s)

There are three main sources of funding for air pollution programs: EPA grants, permit fees and to a lesser extent, a portion of the NC gas tax. EPA grant funding has been level since 2004 with no adjustments for inflation. NC Gas Tax revenues have been flat for several years and are projected to remain that way for the next 7 years. Permit fees for the largest permitted sources are based on emissions which have been decreasing with emissions reductions at the Duke Energy Progress Skyland plant. While this has resulted in significant benefits to air quality, staffing levels have decreased over the years while workload has stayed steady or increased as new rules have been implemented. Fees were increased in 2021, which helped to make up for a portion of the loss of permit fees at the Duke Energy Skyland plant that resulted from the emissions reductions when the plant switched from coal to natural gas. In 2022, there was a significant increase in salary and benefits related expenses related to a comprehensive salary study conducted by Buncombe County, which resulted in a projected budget shortfall for future years. In 2023, the agency received a modest increase in recurring grant funds for the first time since 2004. It was not sufficient to fully fund a vacant position, but has the potential to fund a significant portion of one FTE. One time grant funds from the American Rescue Plan and the Inflation Reduction Act were obtained to replace equipment that is part of the air quality monitoring network. The Agency does have a fund balance to draw from, but is actively working on funding strategies to keep the program and the important services it provides in place.

Upcoming Goals

- Complete improvements to air quality monitoring network: Upgrade equipment with funds from the Inflation Reduction Act. Replace older diesel (once biodiesel) truck used by the air quality monitoring team with new electric Ford Lightning if funding is provided by EPA (application pending).
- Restructure the Agency and fill vacant position as key senior staff retire in 2024.
- Continue to work with UNCA on low-cost air quality sensor project to place sensors in the community in former red lined areas and areas impacted by urban renewal to determine impacts and to generate more data that will be useful for the community during air pollution events including fires. Assist with proper siting of monitors, quality control, and interpretation of data.
- Continue work with partners as part of EPA Advance program. Goal to reduce pollution of PM2.5 and NOx with projects that also reduce GHGs in accordance with business plan and City and County goals. Focus on fleet or mobile source projects and Energy Efficiency programs with community partners including Electric School Bus project and Energy Efficiency project with breweries. Incorporate equity and environmental justice where possible with emissions reductions projects.
- Partner with Environmental Health to distribute radon test kits during Radon awareness month in January of 2025.
- Work with IT and Buncombe County on digital vision project to develop a plan to digitize Agency files and implement a document management system to digitize and manage incoming files in accordance with an approved plan for public records (that meets state and federal requirements). This will help with modernization efforts, increase data availability to the public, conserve staff resources (once implemented) and put necessary processes in place for future online permitting and report submittal.
- Data modernization will continue with the Accela software. We plan to work with IT to add permitted facilities to this program. This will enable electronic payments for permit fees, improving customer service.
- The Board and Agency staff pride themselves in leading a totally self-funded program. The Board will continue to assess the level of revenues and expenses in FY 2024-2025 and future years, striving to make sound decisions in continuing our financial independence, while fulfilling our mission of protecting local air quality.