



2022 Annual Summary Report

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.

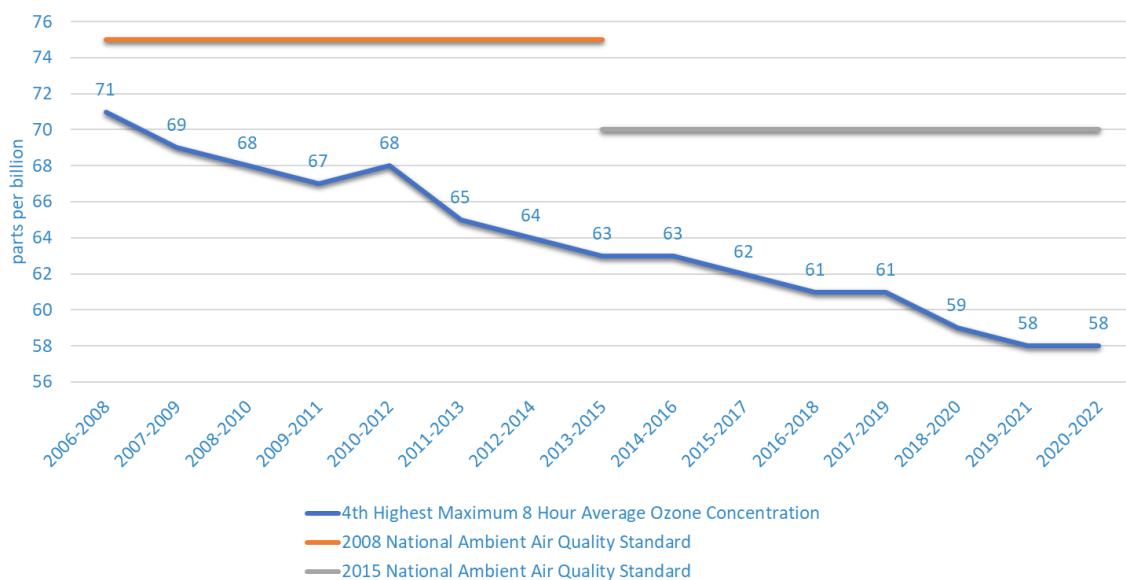
AB Air Quality is governed by a five-member board. Three members are appointed by the Buncombe County Commissioners, and two members are appointed by the Asheville City Council. The Agency is also served by an advisory committee made up of community members from a wide range of backgrounds.

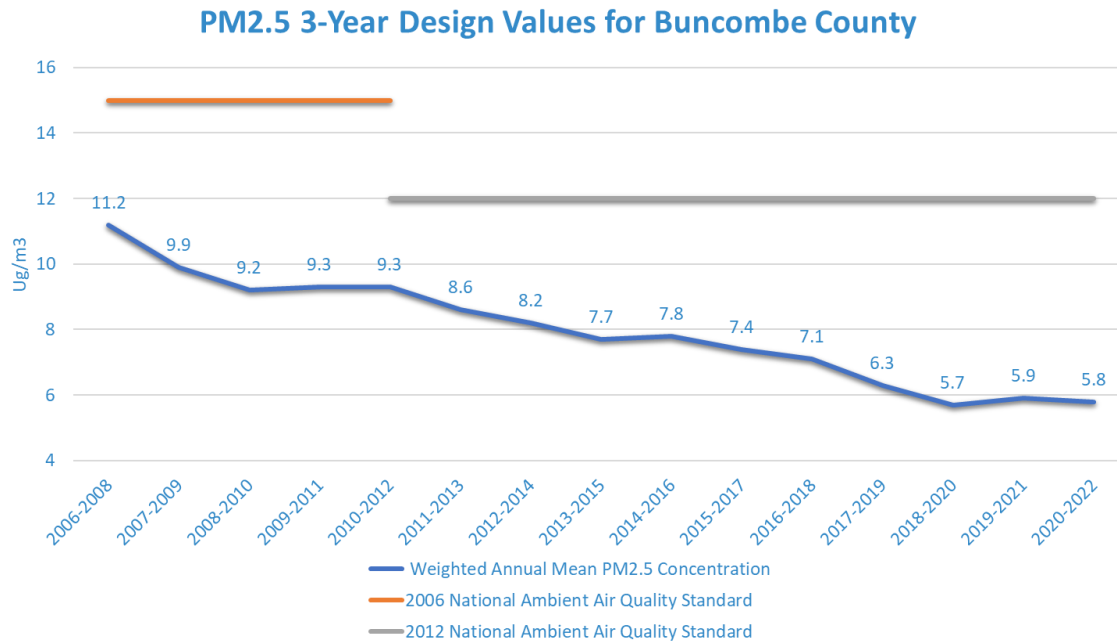
Current Air Quality Monitoring Data – Ozone and Fine Particles

Our area is currently attaining the national ambient air quality standards (NAAQS) that are set by EPA to protect public health and the environment. Our most recent design value used to determine compliance with the national health-based standard for ground level ozone (average of the 4th highest 8-hour ozone concentration measured over 3 consecutive years) at our Bent Creek monitor here in Buncombe County is 58 parts per billion (ppb). EPA revised the national standard in 2015 from 75 ppb to 70 ppb to better protect public health. Below are trend data for the annual standard design value.

The agency also operates a monitoring site for particulate matter (PM_{2.5}). There are two NAAQS for PM_{2.5}; the 98th percentile 24-hour average standard is 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), and the weighted annual mean standard is 12 $\mu\text{g}/\text{m}^3$. The 98th percentile 24-hour average at the Buncombe County monitoring site is 15.0 $\mu\text{g}/\text{m}^3$, and the weighted annual mean is 5.8 $\mu\text{g}/\text{m}^3$. Both of these figures are 3 year average design values for 2020, 2021, and 2022. Below are trend data for the annual standard design value.

Ozone 3-Year Design Values for Buncombe County





In addition to the Ozone and PM monitors, a monitor measuring sulfur dioxide (SO₂) was established in the Royal Pines area of Skyland in 2017 to measure the emissions from the Duke Energy Progress power plant. This monitor was operated through the North Carolina Department of Environmental Quality's Division of Air Quality. This was in response to the EPA revising the National Ambient Air Quality Standard for SO₂. They established a 1-hour primary standard of 75 parts per billion (ppb) based on the 3-year average of the 99th percentile of the yearly distribution of 1-hour daily maximum concentrations. The 99th percentile of the 1-hour daily maximum concentration for 2017-2019 was 11.5 ppb. In 2020, EPA designated the area as attaining the National Ambient Air Quality Standard. The monitor was not required to operate in 2021 and has been permanently shut down.

Air Quality has Improved due to Emissions Reductions from Vehicles and Power Plants

The most significant emissions reduction project affecting the City of Asheville and Buncombe County during the last few years has been the installation and operation of the flue gas desulphurization (FGD) units, or scrubbers, and selective catalytic reduction (SCR) systems in accordance with the NC Clean Smokestacks Act of 2002, including those installed at the Progress Energy plant in Skyland. The NC Clean Smokestacks Act required NC power plants to reduce total emissions of sulfur dioxide and nitrogen oxides by approximately 70%. Sulfur dioxide (SO₂) and nitrogen oxides (NO_x) contribute to fine particle pollution, acid deposition, and the regional haze that obscures our mountain vistas in the summer time. Nitrogen oxides also contribute to ozone formation. The EPA has required emissions reductions at power plants in other states that is also having a positive impact on our air quality here in WNC. EPA has also required cleaner gasoline, diesel fuel, and lower emission rates for cars and trucks in recent years. Duke Energy Progress has implemented the Western Carolinas Modernization Project. This includes the installation of two new natural gas/fuel oil fired combined cycle units which became operational in 2019. They retired the two older coal fired boilers in 2020. These

changes have significantly improved the air quality in the region. While all of these actions have resulted in improved air quality, the most recent scientific studies continue to show health effects at lower levels of pollution and as a result, the standards that we are required to meet continue to be adjusted downward, meaning more work is needed to continue to improve our air quality in order to protect public health and the environment.



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.

Data for 2022	Number of Days the AQI was:			
	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy
Number of Days with an AQI	346	19	0	0
365	346	19	0	0

Source of ozone, fine particle and 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 represent the best and most recent information available to EPA from state and local agencies.

2022 Education and 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 voluntary initiatives and education and outreach activities that were accomplished in 2022.

- The Agency partnered with the NC Radon Program to promote Radon Awareness Month in January of 2022. 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 and 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.

- 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 is currently serving on a committee that approves grant funding for the NC DAQ's diesel emissions reduction grant program.
 - In 2022, staff collaborated with the County Sustainability Office and the CVC on funding to replace Level 2 electric vehicle charging infrastructure at the Land of Sky Regional Council.
 - Also in 2022, 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.
 - Interview with WLOS March 1, 2022: Ozone Season Kick Off. Interview requested by Clean Air Campaign. <https://wlos.com/news/local/ozone-season-asheville-buncombe-air-quality-agency-march-1-north-carolina-united-states-environmental-protection-agency>
 - Presentation with Code Enforcement Workgroup to Buncombe County Commissioners Briefing. Open Burning and Air Quality. March 15, 2022.

- Interview with Mountain Xpress. April 2022. Air Quality and the Agency. <https://mountainx.com/living/ashley-featherstone-asheville-buncombe-air-quality-agency/>
 - Presentation and field trip with County Management Team at the Bent Creek Ground Level Ozone Monitoring Site. April 12, 2022.
 - Presentations: Air Quality Agency Update and NC Greenhouse Gas Emissions Inventory. Buncombe County Commissioners' Subcommittee on Environment and Energy June 10, 2022. <https://www.buncombecounty.org/common/boards-commissions/environment-energy-stewardship-subcommittee/calendar-files/2022-06-10/air-quality-update-june-2022.pdf>
 - Presentation about Open Burning and Updates to Agency After Hours Complaint Response Policy. Also spoke about clean vehicle grants. Buncombe County Fire Chiefs Monthly Meeting. September 15, 2022.
 - Good News Presentation-Air Quality Excellence Award. Buncombe County Commissioners Meeting. Presented award to Buncombe County Strategy and Innovation Department for emissions reductions associated with flexible workplace policy. Reduction in vehicle miles traveled. October 4, 2022.
- The Agency continued its popular air quality awards with permitted facilities to recognize those that implement voluntary measures to reduce emissions. In recent years, our resident's advisory committee has assisted this effort by developing more structured guidelines and expanding the awards program to include a broader range of businesses and organizations in the local community.
- Clean Air Compliance Awards: Certificates were sent to 48 permitted facilities for complying with all air quality regulations and their permit requirements for 2021.
 - Clean Air Excellence Awards. CAE Award was presented to Buncombe County Government-Strategy and Innovation and WNC VA Health Care System.

Attached is a table of the parameters that the Asheville-Buncombe Air Quality Agency reports to the NC Environmental Management Commission on a biennial basis.

Asheville-Buncombe Air Quality Agency 2022 Environmental Management Commission Report Parameters

REPORT ITEM	SUB-ITEM	CY 2022
Number of Staff in Each Program Area (In Person- Years)		
	<i>Permitting</i>	1.8
	<i>Inspections</i>	2.1
	<i>Enforcement</i>	0.35
	<i>Monitoring</i>	1.25
	<i>Administrative</i>	.50
Number of Facilities, By Category		
	<i>Title V</i>	7
	<i>Synthetic Minor</i>	10
	<i>Small</i>	51
	<i>Stage I Vapor Recovery</i>	149
	<i>Dry Cleaners</i>	7
Number of Operating Permits Issued, By Category		
	<i>Title V</i>	2
	<i>Synthetic Minor</i>	5
	<i>Small</i>	5
Number of Construction or Modification Permits Issued, By Category		
	<i>Title V</i>	2
	<i>Synthetic Minor</i>	2
	<i>Small</i>	1
Average Time to Process Each Permit, By Category		
	<i>Initial Title V</i>	7 months
	<i>Synthetic Minor</i>	1.5 month
	<i>Small</i>	1.5 month
	<i>Construction</i>	2 months
Have emissions inventories been reported to EPA?		Yes

REPORT ITEM	SUB-ITEM	CY 2022
How many stack tests were observed?		4
How many stack test protocols and reports were received, reviewed, and approved?		11
List Number of CEMs, By Type		
	<i>CO</i>	3
	<i>CO₂</i>	0
	<i>NO_x</i>	2
	<i>O₂</i>	3
	<i>Opacity</i>	2
	<i>SO₂</i>	0
	<i>Mercury</i>	0
	<i>PM</i>	0
Number of Inspections Performed at Each Source Category		
	<i>Title V</i>	7
	<i>Synthetic Minor</i>	10
	<i>Small</i>	21
	<i>Stage I Vapor Recovery</i>	149
	<i>Dry Cleaners</i>	0
Number of Full Compliance Evaluations		
	<i>Title V</i>	7
	<i>Synthetic Minor</i>	10
	<i>Small</i>	16
	<i>Stage I</i>	149
	<i>Dry Cleaners</i>	0
Asbestos Permitting Program		
	<i>NESHAP Permits</i>	72
	<i>Local Permits</i>	297
	<i>City of Asheville Permit Reviews</i>	99
	<i>Buncombe County Permit Reviews</i>	177

REPORT ITEM	SUB-ITEM	CY 2022
Number of Staff Available to Perform Compliance Evaluations		
	<i>Industrial</i>	3
	<i>Asbestos</i>	1
	<i>Indoor Air Quality (IAQ)</i>	2
	<i>Open Burning, Dust, Odor</i>	6
Number of Violations Found During Inspections		0
Number of Complaints Received		
	<i>Industry</i>	4
	<i>Asbestos</i>	1
	<i>Dust, Odor, IAQ</i>	1
	<i>Open Burning</i>	60
	<i>Stage I Vapor Recovery</i>	2
Number of Complaints Investigated		
	<i>Industry</i>	4
	<i>Asbestos</i>	1
	<i>Dust, Odor, IAQ</i>	1
	<i>Open Burning</i>	60
	<i>Stage I Vapor Recovery</i>	2
Number of NOVs, by Type		
	<i>Industry – Emissions</i>	2
	<i>Industry - Procedural</i>	3
	<i>Asbestos</i>	1
	<i>Dry Cleaners</i>	0
	<i>112(r) Program</i>	0
	<i>Open Burning</i>	24
	<i>Stage I Vapor Recovery</i>	4
Number of Enforcement Cases Processed		34
Number of SOCs Issued		0
Number of Penalties Assessed		13
Total Amount of Penalties Assessed		\$19,281
Total Amount of Penalties Collected ⁱ		\$4,906
Number of FRVs and HPVs Reported to EPA		3
Was compliance status of the facilities updated in AFS on a regular basis? How often?		Yes, Bi-Monthly

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