



# 2013 Annual Summary Report

## **Overview and Mission of the Agency**

In the 1940s, the City of Asheville established a “Smoke Abatement Program” to address the blanket of black smoke that engulfed the city during particularly stagnant weather conditions. The local air quality agency is an extension of that program. Originally, the agency served four counties, and from 1970 to 2000, the Agency served two counties (Buncombe and Haywood). 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.

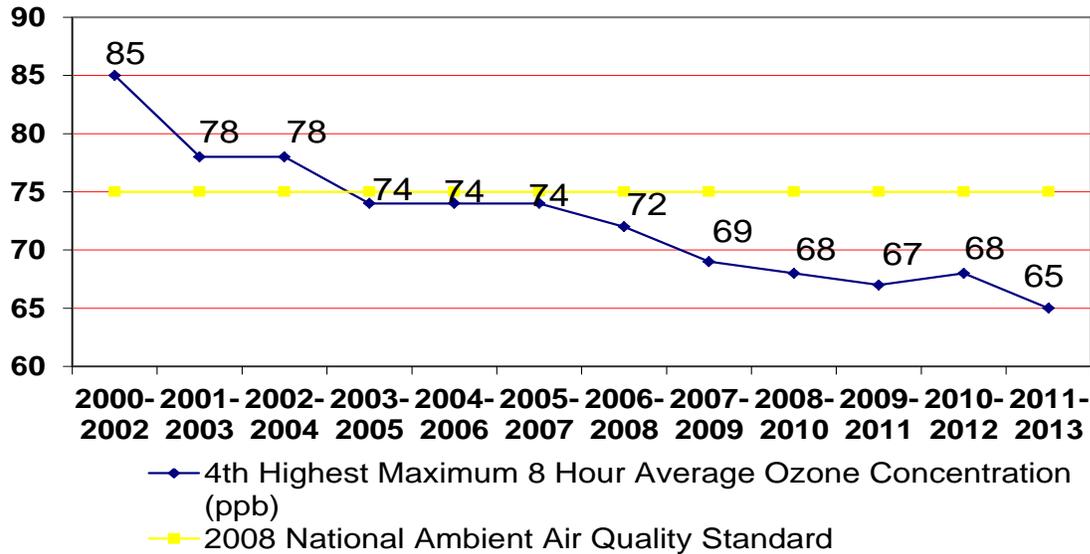
The mission of the Agency is to monitor and regulate the air quality of the City of Asheville and Buncombe County to safeguard public health and the environment, while preserving the quality of life and economic vitality of the area. The Agency is responsible for implementing and enforcing the provisions of the federal Clean Air Act and all additional state and local air quality regulations in Buncombe County. We operate an air pollution monitoring network that is used to determine whether our area is in compliance with the national ambient air quality standards (NAAQS). Our 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. We enforce the open burning regulations and respond to air quality related complaints and emergencies, 24 hours a day, 7 days a week. We offer compliance assistance, education and outreach services, and we are available to do presentations on air quality at the request of schools, civic groups, and other community organizations. We also maintain an indoor air quality hotline for citizen inquiries and have partnered with other agencies to distribute free radon test kits.

The WNCRAQA 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**

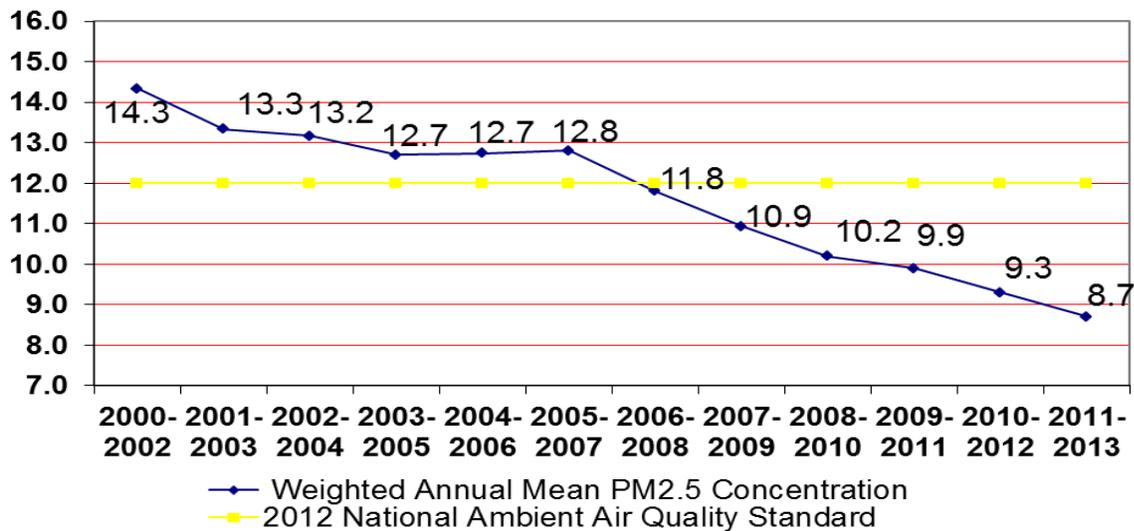
Our area is currently attaining the national ambient air quality standards (NAAQS) that are set by EPA to protect public health and the environment. Our most recent design value used to determine compliance with the national health-based standard for ozone (average of the 4<sup>th</sup> highest 8-hour ozone concentration measured over 3 consecutive years) at our Bent Creek monitor here in Buncombe County is 65 parts per billion (ppb). While we are in compliance with the current standard of 75 ppb, EPA proposed to lower the national standard to somewhere between 60 and 70 ppb to better protect public health. In September of 2011, EPA withdrew the proposal to lower the standard and indicated that a review was ongoing and the standard would be reconsidered in 2013. This action has been delayed into 2014.

### Ozone Design Values - Buncombe Co.



Our agency also operates a monitoring site for particulate matter (PM<sub>2.5</sub>). There are two NAAQS for PM<sub>2.5</sub>; the 98th percentile 24-hour average standard is 35 micrograms per cubic meter (µg/m<sup>3</sup>), and the weighted annual mean standard is 15 µg/m<sup>3</sup>. The 2013 data is not yet final and as such, the most recent 3 year design value available for comparison with the standards is for the period from 2010-2012. The 98th percentile 24-hour average at the Buncombe County monitoring site is 18 µg/m<sup>3</sup>, and the annual arithmetic mean is 9.3 µg/m<sup>3</sup>. Below are trend data for the annual standard design value.

### PM2.5 Design Values - Buncombe Co.



On December 14, 2012, EPA revised the National Ambient Air Quality Standard for fine particles. The new standards went into effect in 2013. The 24-hour average standard was not revised; it will continue to be 35 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The weighted annual mean standard was tightened (adjusted down) from  $15 \mu\text{g}/\text{m}^3$  to  $12 \mu\text{g}/\text{m}^3$ .

### **Air Quality is Improving due to Emissions Reductions from Vehicles and Power Plants**

The most exciting and 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 requires NC power plants to reduce total emissions of sulfur dioxide and nitrogen oxides by approximately 70%. Sulfur dioxide ( $\text{SO}_2$ ) and nitrogen oxides ( $\text{NO}_x$ ) 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 is requiring emissions reductions at power plants in other states that will have 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. 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 you how clean or polluted your air is, and what associated health effects might be a concern for you. Here in Buncombe County, the air quality index is based on the two pollutants that we monitor: ozone and fine particles.

<b>Data for 2013</b>	<b>Number of Days the AQI was:</b>			
<b>Number of Days with an AQI*</b>	<b>Good</b>	<b>Moderate</b>	<b>Unhealthy for Sensitive Groups</b>	<b>Unhealthy</b>
365	319	46	0	0

\*Air quality statistics for 2013 are not final until May 1, 2014.

## **2013 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 2013.

- WNCRAQA completed a grant funded project with monies obtained from the NC Department of Environment and Natural Resources to retrofit 5 Reems Creek Fire Engines with air pollution control devices that will decrease emissions of particulate matter, carbon monoxide, and hydrocarbons by approximately 20, 41, and 66% per year, respectively. This project built on the successful completion of a previous project in 2010, where WNCRAQA partnered with NC DENR, the Buncombe County Fire Marshal's Office, seven local Fire Departments (City of Asheville, Broad River, Black Mountain, Enka-Candler, Skyland, Swannanoa, and West Buncombe), and the of Land of Sky Regional Council's Clean Vehicles Coalition to retrofit 20 pre-2007 fire engines with DOCs. The WNCRAQA's Citizens Advisory Committee was instrumental in putting this project together.

Older diesel engines contribute significantly to air pollution in North Carolina. The average replacement cycle for a diesel fire engine in Buncombe County is approximately 20 years. This project is one of the first of its kind to address diesel emissions from emergency response vehicles in the eight-state -southeastern region. In addition to recognizing the local fire departments for voluntarily participating in the project, the publicity efforts are being utilized to help inform other public and private fleet managers about the benefits and potential funding sources available for similar projects that will help improve air quality in our area. At the request of the US EPA, the WNCRAQA has prepared a case study about the two projects that can be utilized by other organizations. WNCRAQA staff gave a presentation of the case study information to the Southeast Diesel Collaborative at their 8<sup>th</sup> Annual Partners Meeting in Atlanta in September of 2013. Videos for both projects are available on our YouTube page at <http://www.youtube.com/user/wncraqa>.

- As part of our pollution prevention efforts in 2013, the WNCRAQA partnered with Buncombe County Solid Waste, Biltmore Iron and Metal Company, and a corporate sponsor to swap 486 conventional gas cans for lower emitting cans, reducing Volatile Organic Compound (VOC) emissions by approximately 1,992 pounds per year. In combination with last year's project, we will have reduced VOCs by 5,376 pounds per year! The swap was open to all Buncombe County residents. As part of these efforts, we distributed brochures and promoted the PSA that we filmed with BCTV last year to increase awareness of the benefits of new more environmentally friendly gas cans. The video is on our YouTube site at <http://www.youtube.com/user/wncraqa>.
- WNCRAQA started Facebook and Twitter accounts in 2013. Please like us on Facebook <https://www.facebook.com/WesternNCRegionalAirQualityAgency> and follow us on Twitter <https://twitter.com/WNCAirQuality!>
- The Agency continued working on a campaign to encourage the reduction of engine idling by parents waiting to pick up their children at local schools. Signs stating "Turn Off Your Engine – Breathe Better – Save Money" were distributed to the Asheville City Schools in 2010, Buncombe County Schools received and put up signs in 2009. In 2012, additional signs were provided to Buncombe County Schools for the new intermediate schools (Eblen and Koontz) that were not yet constructed when the first signs were distributed and placed. WNCRAQA and DENR Division of Air Quality staff attended a meeting of the Asheville City

Schools Green Team in February of 2013 and presented information on idle reduction campaigns at schools including a tool kit that was created by the Catawba College Center for the Environment (<http://www.campaignforcleanair.org/schools-no-idling-toolkit.html>) and a video on the “Idle Free NC” campaign produced by the Triad Air Awareness Program (<http://www.youtube.com/watch?v=69kOBapDFWc>). Additional signs were provided to the Asheville City Schools Maintenance Department as part of follow up efforts after the meeting.

- The WNCRAQA 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. During 2013, WNCRAQA staff participated in several CVC events showcasing alternative fueled vehicles including a booth at the annual Bele Chere festival and an entry in the annual Holiday Parade in downtown Asheville. On July 26, 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 WNCRAQA signed a Memorandum of Understanding expressing our support for the goals of the CVC and Clean Cities Program.
- We participated in the judging process and helped with the awards ceremony for the NC Division of Air Quality’s Air Quality IQ contest in area middle schools. The Agency had an air quality booth and distributed information at a local health fair. Air Quality presentations were given to groups including an ecology class at Montreat College, the Council of Independent Business Owners, and a monthly educational series for the community provided by the Riceville Fire Department. We also participated in the annual “Ozone Kickoff,” a media event sponsored by the Land of Sky Regional Council’s Clean Air Campaign to raise awareness about ground level ozone pollution.
- Outreach with the regulated community was conducted with area gas stations, auto body shops, certain metal fabrication companies, and a wide variety of other institutions and businesses that are subject to new federal air pollution requirements.
- The Agency partnered with the NC Radon Program to distribute free radon test kits during radon awareness month in January.
- 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 citizen’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. In conjunction with this, the Agency continued its efforts as an EPA ENERGY STAR Low Carbon IT Campaign ally by promoting the use of power management tools on computers to save energy and money, and to reduce emissions of greenhouse gases and other air pollutants.

**Attached is a table of the parameters that the WNCRAQA reports to the NC Environmental Management Commission on a biennial basis.**

# **WNC Regional Air Quality Agency 2013 Environmental Management Commission Report Parameters**

REPORT ITEM	SUB-ITEM	CY 2013
Number of Staff in Each Program Area (In Person-Years)		
	<i>Permitting</i>	1.5
	<i>Inspections</i>	2.75
	<i>Enforcement</i>	1.25
	<i>Monitoring</i>	1.5
	<i>Clerical</i>	0.5
	<i>Administrative</i>	1.5
Number of Facilities, By Category		
	<i>Title V</i>	8
	<i>Synthetic Minor</i>	11
	<i>Small</i>	54
	<i>Stage I Vapor Recovery</i>	155
	<i>Dry Cleaners</i>	7
Number of Operating Permits Issued, By Category		
	<i>Title V</i>	1
	<i>Synthetic Minor</i>	3
	<i>Small</i>	16
Number of Construction or Modification Permits Issued, By Category		
	<i>Title V</i>	4
	<i>Synthetic Minor</i>	3
	<i>Small</i>	8
Average Time to Process Each Permit, By Category		
	<i>Initial Title V</i>	6 months
	<i>Synthetic Minor</i>	1 month
	<i>Small</i>	1 month
	<i>Construction</i>	1.5 month
Have emissions inventories been reported to EPA?		Yes

REPORT ITEM	SUB-ITEM	CY 2012
How many stack tests were observed?		7
How many stack test protocols and reports were received, reviewed, and approved?		10
List Number of CEMs, By Type		
	<i>CO</i>	1
	<i>CO<sub>2</sub></i>	2
	<i>NO<sub>x</sub></i>	2
	<i>O<sub>2</sub></i>	1
	<i>Opacity</i>	2
	<i>SO<sub>2</sub></i>	2
	<i>Mercury</i>	2
	<i>PM</i>	2
Number of Inspections Performed at Each Source Category		
	<i>Title V</i>	7
	<i>Synthetic Minor</i>	10
	<i>Small</i>	25
	<i>Stage I Vapor Recovery</i>	155
	<i>Dry Cleaners</i>	7
Number of Full Compliance Evaluations		
	<i>Title V</i>	7
	<i>Synthetic Minor</i>	10
	<i>Small</i>	25
	<i>Stage I</i>	155
	<i>Dry Cleaners</i>	7
Asbestos Permitting and Inspection Program		
	<i>NESHAP Permits</i>	171
	<i>Local Permits</i>	260
	<i>NESHAP Inspections</i>	240
	<i>Local Inspections</i>	336
	<i>City of Asheville Permit Reviews</i>	759
	<i>Buncombe County Permit Reviews</i>	239

REPORT ITEM	SUB-ITEM	CY 2012
Number of Staff Available to Perform Compliance Evaluations		
	<i>Industrial</i>	5
	<i>Asbestos</i>	4
	<i>Indoor Air Quality (IAQ)</i>	2
	<i>Open Burning, Dust, Odor</i>	7
Number of Violations Found During Inspections		23
Number of Complaints Received		
	<i>Industry</i>	1
	<i>Asbestos</i>	1
	<i>Dust, Odor, IAQ</i>	6
	<i>Open Burning</i>	44
	<i>Stage I Vapor Recovery</i>	0
Number of Complaints Investigated		
	<i>Industry</i>	1
	<i>Asbestos</i>	1
	<i>Dust, Odor, IAQ</i>	6
	<i>Open Burning</i>	44
	<i>Stage I Vapor Recovery</i>	0
Number of NOVs, by Type		
	<i>Industry – Emissions</i>	0
	<i>Industry - Procedural</i>	5
	<i>Asbestos</i>	0
	<i>Dry Cleaners</i>	0
	<i>112(r) Program</i>	0
	<i>Open Burning</i>	13
	<i>Stage I Vapor Recovery</i>	18
Number of Enforcement Cases Processed		36
Number of SOCs Issued		0
Number of Penalties Assessed		17
Total Amount of Penalties Assessed		\$14,350.00
Total Amount of Penalties Collected <sup>i</sup>		\$10,775.00
Number of HPVs Reported to EPA		0
Was compliance status of the facilities updated in AFS on a regular basis? How often?		Yes, Bi-Monthly

<sup>1</sup> The Agency submits 100% of all collected penalties to the local school system.

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