Local Air Quality Update 2019

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Western North Carolina Regional Air Quality Agency

Overview

The Western North Carolina Regional Air Quality Agency (WNCRAQA) is one of three state certified local air pollution control programs in NC that is responsible for monitoring and regulating air quality.

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What does the WNC Regional Air Quality Agency do?

- Responsible for implementing federal, state, and local air quality regulations
  - Permitting of industrial and area sources
  - Compliance and Enforcement
  - Asbestos Removal and Open Burning
- Monitor Air Quality for compliance with National Ambient Air Quality Standards (NAAQS)
- Education and Outreach
  - Pollution Prevention Projects and Outreach
  - Indoor Air Quality – radon awareness, IAQ webpage
  - Website – www.wncairquality.org, social media

Air Pollution in WNC

- Temperature Inversions
  - Trap air pollution near surface, rather than dispersing it
- "Bowl" Effect associated with topography
- Any locally-generated pollution exacerbates the problem

History

- City of Asheville Smoke Abatement Program – 1947-1967
- Multi-County Agency
  - 1967-1970 Buncombe, Haywood, Henderson, Transylvania
  - 1970-2000 Buncombe and Haywood
  - 2000-Buncombe County and City of Asheville

WNCRAQA - Overview

- Inter-local Agreement (Pursuant to NCGS 143-215.112 Local Air Pollution Control Programs)
- Governed by an Independent 5 Member Board
  - 3 members are appointed by Buncombe County Commission
  - 2 members are appointed by Asheville City Council
- Advisory Council
  - Several members of the community from diverse backgrounds
  - Citizens may apply and are appointed by the board

Air Pollution in WNC

- Volatile organic compounds (VOC) and Nitrogen Oxides(NOx) react with heat and sunlight to make ozone
  - Ozone formation depends mostly on NOx
  - NOx is emitted by cars, trucks, Duke Energy Progress Skyland Plant
- Most Particulate Matter ($PM_{2.5}$) forms as a result of chemical reactions involving sulfur dioxide and nitrogen oxides that are emitted from power plants, industries and automobiles. Also results from open burning, road dust, land clearing, etc.
  - Very small particles, less than 2.5 microns
  - Causes haze (reduced visibility)
- Health effects-heart and respiratory illness
- Weather and geography are important factors

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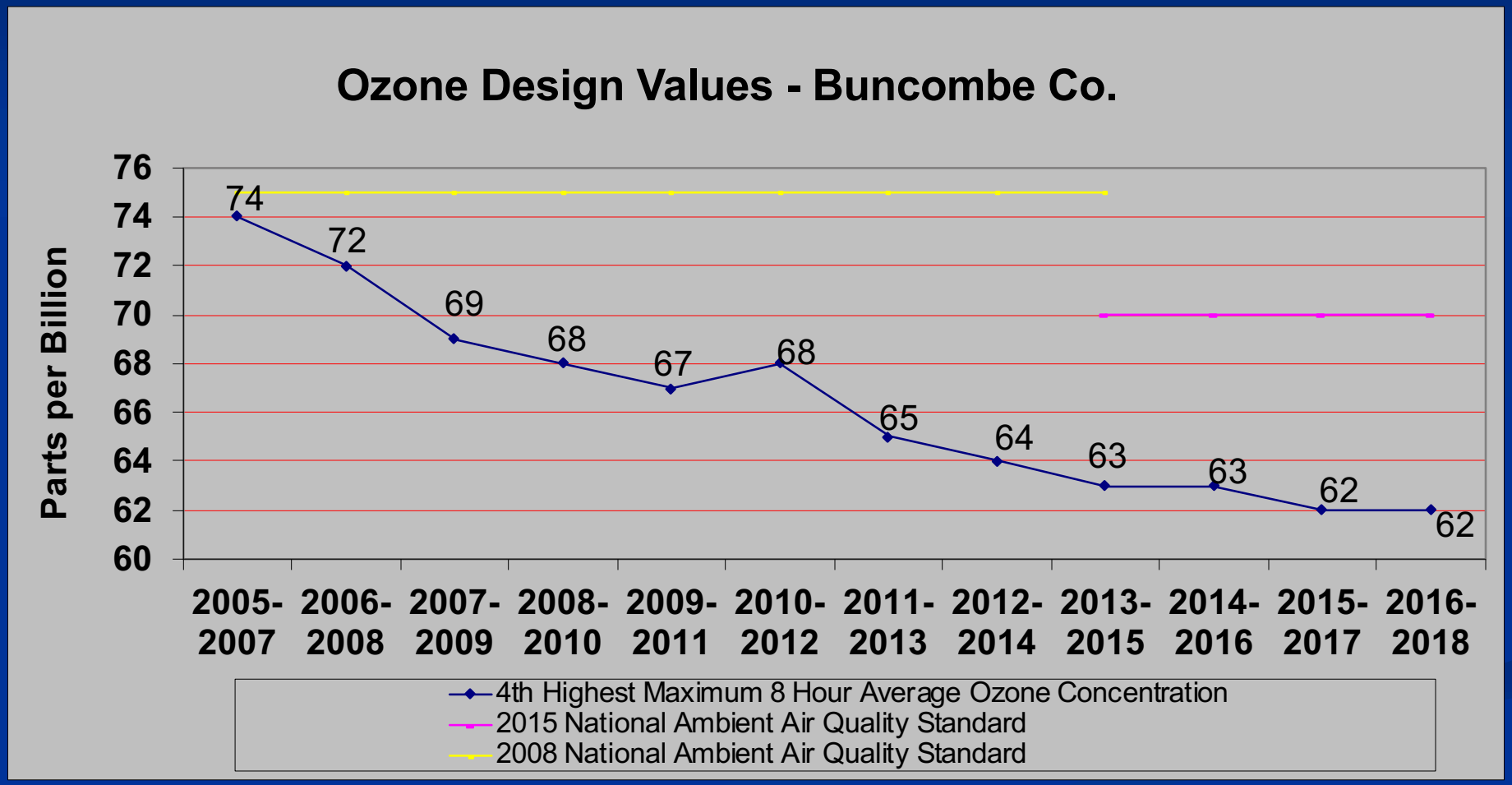
Ozone Design Values in Buncombe County



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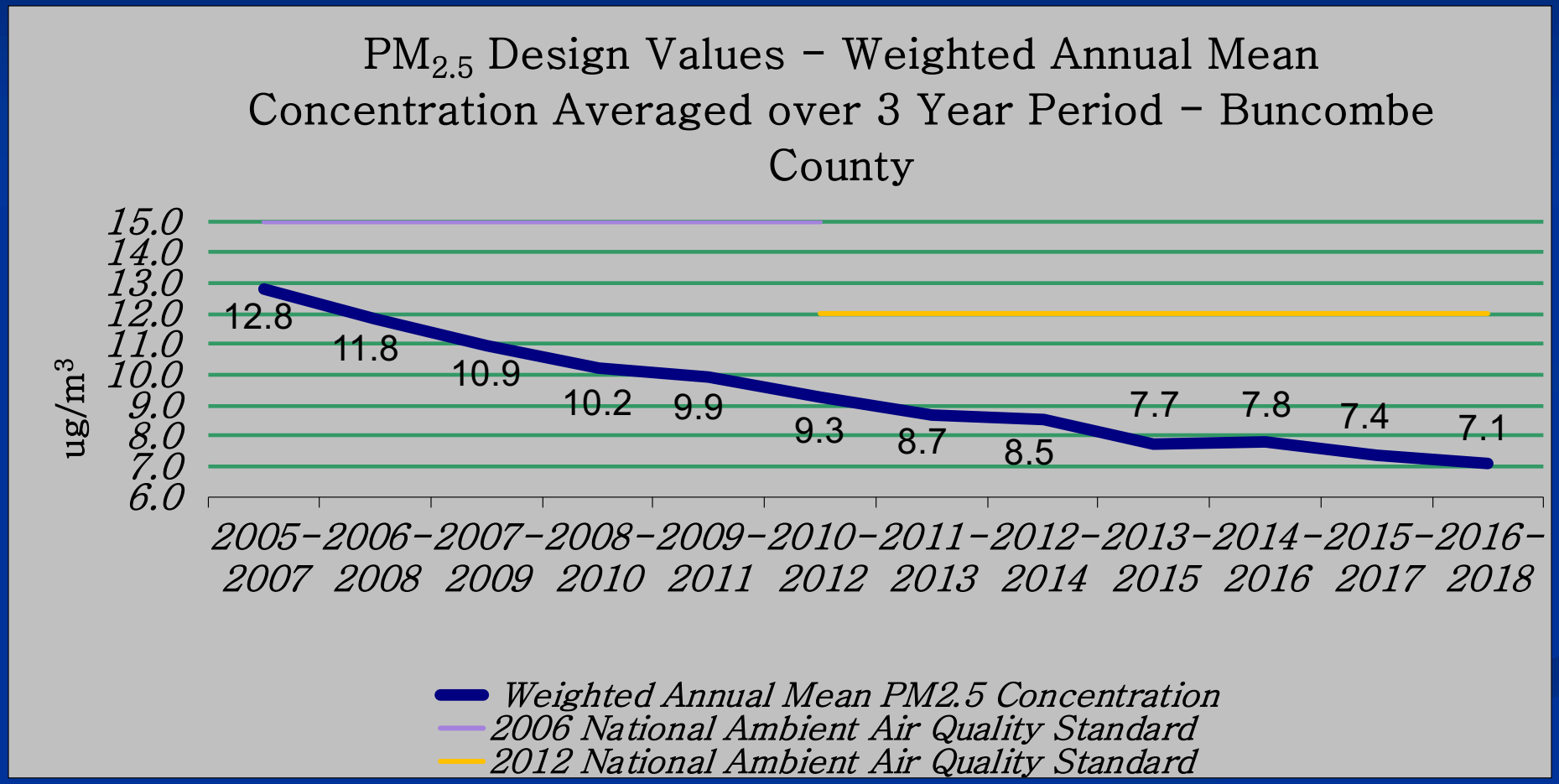
Fine Particulate Matter Levels in Buncombe Co.



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Air Quality Index for Buncombe County

		Number of Days the AQI was:			
Year	Number of Days with an AQI	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy
2018	365	318	47	0	0
2017	365	325	40	0	0
2016	366*	300	58	4*	4*
2015	363	329	34	0	0
2014	365	311	54	0	0

Air Quality Index

- Know the Code, check the NC DAQ's Forecasting Page: https://xapps.ncdenr.org/aq/ForecastCenter

- Asheville Valleys and Ridge Tops are now the Mountain Valleys and Ridge Tops

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Know the Code

Air Quality Index Levels of Health Concern	Meaning
Good	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	Health alert: everyone may experience more serious health effects.
Hazardous	Health warnings of emergency conditions. The entire population is more likely to be affected.

Wildfires in WNC 2016

- Air Quality and Outdoor Activity Guidance
  - Activity Guide for Schools: https://airnow.gov/index.cfm?action=flag_program.activityguid
  - Activity Guide for Particle Pollution: https://airnow.gov/index.cfm?action=pubs.aqguidepart

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Wildfires in WNC 2016-Outdoor Activity Guidance

Air Quality Guide for Particle Pollution

Harmful particle pollution is one of our nation's most common air pollutants. Use the chart below to help reduce your exposure and protect your health. For your local air quality forecast, visit www.airnow.gov

Air Quality Index	Who Needs to be Concerned?	What Should I Do?
Good (0-50)	It's a great day to be active outside.	
Moderate (51-100)	Some people who may be unusually sensitive to particle pollution.	**Unusually sensitive people:** *Consider reducing* prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier. **Everyone else:** It's a good day to be active outside.
Unhealthy for Sensitive Groups (101-150)	Sensitive groups include **people with heart or lung disease, older adults, children and teenagers.**	**Sensitive groups:** *Reduce* prolonged or heavy exertion. It's OK to be active outside, but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. **People with asthma** should follow their asthma action plans and keep quick relief medicine handy. **If you have heart disease:** Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your heath care provider.
Unhealthy (151-200)	**Everyone**	**Sensitive groups:** *Avoid* prolonged or heavy exertion. Consider moving activities indoors or rescheduling. **Everyone else:** *Reduce* prolonged or heavy exertion. Take more breaks during outdoor activities.
Very Unhealthy (201-300)	**Everyone**	**Sensitive groups:** *Avoid all* physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. **Everyone else:** *Avoid* prolonged or heavy exertion. Consider moving activities indoors or rescheduling to a time when air quality is better.
Hazardous (301-500)	**Everyone**	**Everyone:** *Avoid all* physical activity outdoors. **Sensitive groups**: Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.

What's New

- Duke Energy Progress Western Carolinas Modernization Project
  - 2 new natural gas/fuel oil fired combined cycle units should be operational later this year
  - Coal fired units will be retired in 2020
- Voluntary Hangtag Guidelines for Manufacturers of Wood-Burning Devices
  (Wood stoves and heaters that meet new 2015 standards that go into effect in 2020)

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Revised Sulfur Dioxide (SO_2) Standard

SO_2 monitor near the Duke Energy Progress Plant in Skyland

Began Operation in January 2017

2017 Data: 16.6 ppb

2018 Data: 9.8 ppb

NAAQS: 75 ppb

(99th percentile of 1-hour daily maximum concentrations)

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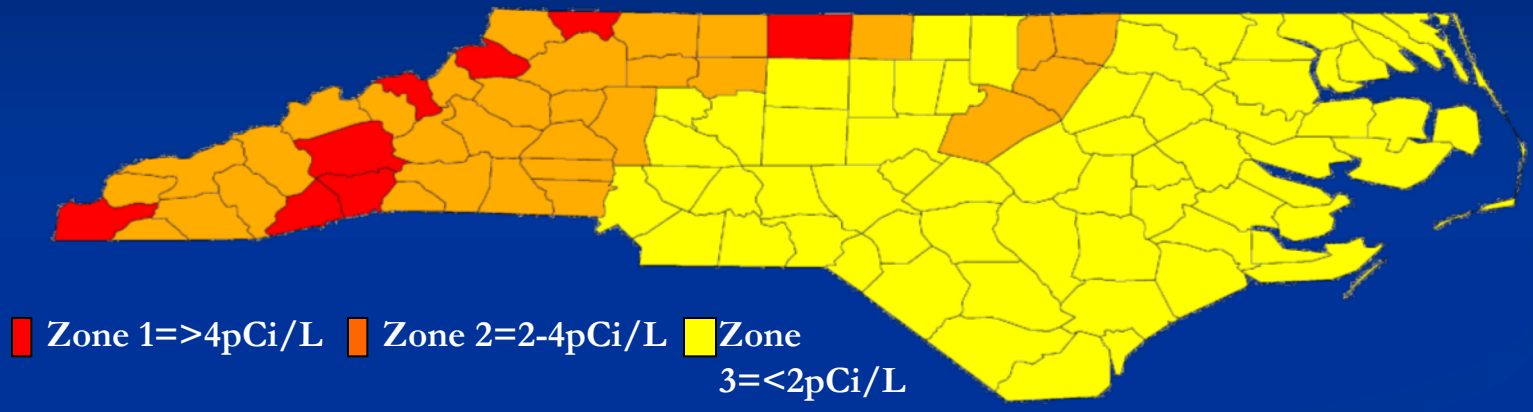
Radon Awareness

Average Radon Levels by County



- Since 2006, WNCRAQA has partnered with the NC Radon Program and Buncombe County Environmental Health to give away over 2,000 radon test kits to citizens of Buncombe County.
- Radon is the second leading cause of lung cancer in the U.S. and Buncombe County has some of the highest radon levels in NC.

What Can You Do?

- **Conserve Electricity**
  - Use power management on your monitor and computer to reduce energy consumption
  - Buy energy efficient light bulbs and turn off the lights when not in use
  - Insulate your home
- **Drive Less, Burn Less Fuel**
  - Carpool
  - Combine trips
  - Don't idle your vehicle – Turn off your engine
- **Buy More Fuel Efficient Vehicles**
- **Participate in NC Green Power**
  - Choose to pay $4/month to support renewable energy projects in NC – sign up on your electric bill
- **Know the Air Quality Forecast**

For More Information…

WNC Regional Air Quality Agency

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