



# Health Factors **Physical Environment**

**MATCH – County Ranking Data** (Mobilizing Action Toward Community Health)

## 2010 Snapshot of Physical Environment Factors that Impact Health Outcomes

MATCH - Buncombe County	Buncombe Value	NC Value	Target Value	
<b>Physical Environment</b> <b>NC Rank 13th Healthiest</b>				
Air pollution-particulate matter days [25]	0	1	0	=
Air pollution-ozone days [26]	6	4	0	=
Access to healthy foods [27]	58%	45%	69%	↑
Liquor store density [28]	0.5	0.6	0.2	↓

Source URL: <http://www.countyhealthrankings.org/north-carolina/buncombe>

**About the Target Value**  
 The arrows help us know whether we should be higher or lower than the targeted value in order to improve health. For example, when looking at Adult Smoking, the Buncombe Value is higher than the Target Value. We need to decrease ↓ the percentage of adults who smoke in order to meet or exceed the Target Value.

**About the Buncombe Value**  
 The Buncombe Value is calculated using multiple years of data to stabilize the data and offer a good “snapshot” of a particular health behavior. Health behaviors that are highlighted in **Red** are above ↑ the Target Value.

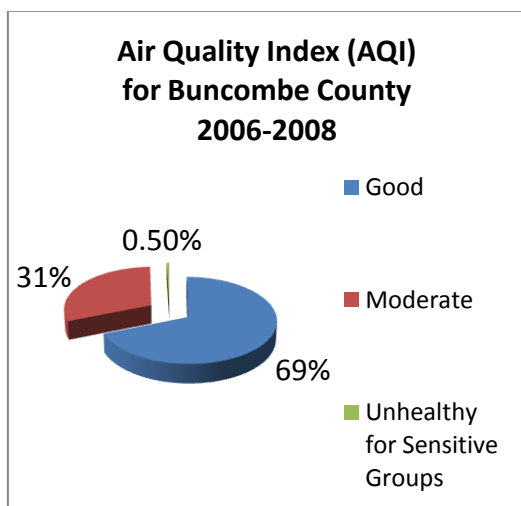
**In this Section...**

*Find data from resources about physical environment factors that impact health outcomes.*

- **Air Quality**
- **Water Quality**
- **Food Safety**
  - Website for current Restaurant Inspection Ratings
- **Environment (built environment)**
  - Access to Healthy Food – web-based Map
  - Access to Physical Activity – web-based Map

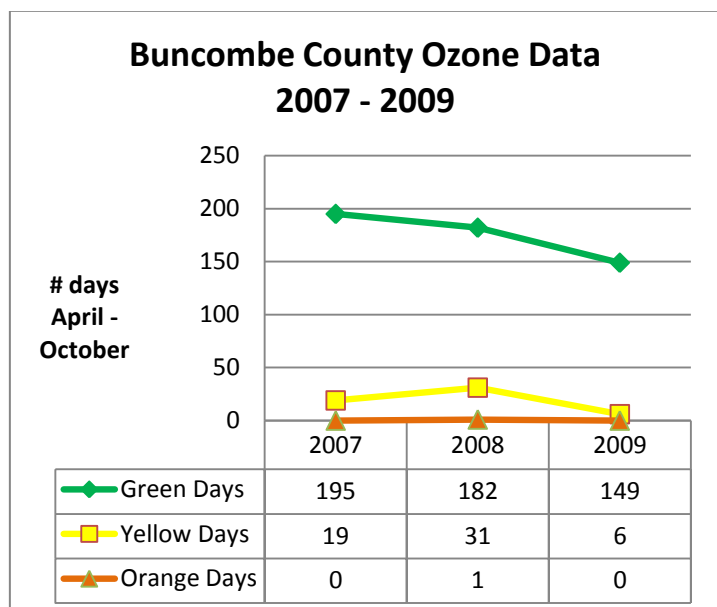


<b>Category</b> Physical Environment	<b>Air Quality</b>
<b>Indicators</b>	Air Quality Index, Ozone days
<b>Why is this important?</b>	<p>The negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.</p> <p>Exposure to excess levels of ozone or fine particulate matter are correlated with an increase in hospital emergency room visits and hospitalizations among asthmatics and others with compromised respiratory function. Increases in these pollutants are associated with greater risk of death due to cardiopulmonary and cardiovascular conditions and ischemic heart disease. All-cause mortality also is associated with greater concentrations of ozone and fine particulate matter. [MATCH County Ranking]</p>



Source: [www.wncairquality.org](http://www.wncairquality.org)

NOTE: There were 0 number of Unhealthy Days reported during this period of time.



Source: [www.wncairquality.org](http://www.wncairquality.org)

Air Quality Index rating was “good” slightly more than 2 out of 3 days. When compared to nearby cities, Asheville’s number of “good” days compares more favorably (Atlanta - 36%, Chattanooga – 52%, Charlotte – 45%). Ozone causes health problems, especially for people with asthma and respiratory problems and also for children and workers who are active outside during the months of April through October when ozone levels may be elevated. In 2009 the number of days with elevated ozone was less than in the previous two years, possibly linked to fewer hot and humid days. The number of elevated ozone days has increased significantly since the 1990’s due to increased pollution.



<b>Category</b> Physical Environment	<h2 style="color: #0056b3;">Water Quality</h2>
<b>Indicators</b>	Number of inspections
<b>Why is this important?</b>	<p>Adequate environmental quality in terms of good air and water quality are prerequisites for good health. Poor air or water quality can be particularly detrimental to the very young, the old, and those with chronic health conditions. [MATCH County Ranking]</p> <p>Giardia and cryptosporidium are pathogens that have been found occasionally in public-water supplies and have caused illness in a large number of people in a few locations. Pathogens can enter our water from leaking septic tanks, wastewater-treatment discharge, and animal wastes. [USGS Water-Quality Information]</p> <p>Chemicals such as pharmaceutical drugs, dry-cleaning solvents, and gasoline that are used in urban and industrial activities, have been found in streams and ground water. After decades of use, pesticides are now widespread in streams and ground water, though they rarely exceed the existing standards and guidelines established to protect human health. Some pesticides have not been used for 20 to 30 years, but they are still detected in fish and streambed sediment at levels that pose a potential risk to human health, aquatic life, and fish-eating wildlife. [USGS Water-Quality Information]</p>

The Buncombe County Department of Health's Division of Environmental Health is responsible for septic permitting in the County. Correctly installed septic systems protect public health by preventing groundwater contamination resulting from improperly treated wastewater and sewage discharges to the surface of the ground.

In FY 2009 – 2010, Environmental Health Services provided the following services to county residents to assure safe well water and proper disposal and treatment of wastewater.

- 3,500 well inspection services, ranging from well sitting and evaluation to well abandonment and water sampling.
- 5,600 on-site septic system inspection services, including new, existing and repair permits.



<b>Category</b> Physical Environment	<b>Food Safety</b>
<b>Indicators</b>	Inspections at restaurants
<b>Why is this important?</b>	<p>Unsafe food causes many acute and life-long diseases, ranging from diarrheal diseases to various forms of cancer. World Health Organization estimates that foodborne and waterborne diarrheal diseases taken together kill, worldwide, about 2.2 million people annually, 1.9 million of them children. (World Health Organization)</p> <p>Food poisoning or foodborne illness can affect anyone who eats food contaminated by bacteria, viruses, parasites, toxins, or other substances. But, certain groups of people are more susceptible to foodborne illness (pregnant women, older adults, those with chronic disease and weakened immune systems)</p> <p>Harmful bacteria are the most common cause of food poisoning, but other causes include viruses, parasites, toxins, and contaminants. The bacteria and viruses most frequently associated with food poisoning cases in the United States are: Salmonella, Vibrio Infections, Botulism, Listeria, Norovirus (Norwalk Virus), Hepatitis A, E. coli, B. cereus, Campylobacter, Staphylococcus. [FoodSafety.gov]</p>

The Buncombe County Department of Health’s Environmental Health Division is charged with enforcing North Carolina laws and rules to safeguard health and protect the environment in Buncombe County. Inspectors are required to regulate restaurants, motel/hotels, food stands, and day care centers to insure safe handling and preparation of food. They also investigate food poisoning outbreaks.

To find current inspection results online, go to: <http://buncombe.digitalhealthdepartment.com/>

In FY2009-2010, Environmental Health services provided the following services to Buncombe County residents to assure safe handling, preparation and serving of food:

- Restaurant inspections are 52.75 % of required annual inspections. This drop compared to FY 2004-05 is due to the change to a risk-based frequency inspection rate that began July 2007.
- As of September 30, 2010 the inspection compliance rate was 98.85%.



<b>Category</b> Physical Environment	<b>Environment (and Built Environment)</b>
<b>Indicators</b>	Lead screening in children
<b>Why is this important?</b>	<p><b>Lead poisoning</b> is one of the most common public health problems for children. According to the Centers for Disease Control and Prevention (CDC), lead poisoning also remains the foremost preventable disease of childhood. Early detection of blood lead levels can prevent brain damage and harm to other organs. [CDC; and Lead Poisoning Prevention Project]</p> <p><b>Built environment:</b> The variety, price, and availability of healthy foods in the local environment can play a role in which foods are consumed. Likewise, the availability of liquor may influence alcohol-related behaviors and health outcomes. [MATCH County Ranking Report]</p>

**Lead Screening, Inspections and Training** is offered to Buncombe residents through a partnership with the Lead Poisoning Prevention Project (LPPP), Warren Wilson College and Buncombe County Department of Health. Children, ages 1 and 2, should be screened by their doctor and if risk factors exist, children up to age 6 may be screened annually. Depending on the results of the screening, families and children may receive additional testing and services. Blood lead levels are measured in micrograms per deciliter (m g/dl). Blood lead levels are currently classified as:

- 5-9 mg/dl = early detection
- 10-19 mg/dl = elevated, state action level
- 20 mg/dl + = poisoned

### 2009 NC Childhood Blood Lead Surveillance Data

	Ages 1 and 2 Year Tested for Lead Poisoning					Ages 6 months to 6 Years		
	# Target	# Tested	% Tested	# Lead >10	% Lead >10	# tested	Confirmed 10-19m g/dl	≥20 m g/dl
<b>Buncombe County</b>	<b>5,602</b>	<b>3,325</b>	<b>59.4</b>	<b>8</b>	<b>0.2</b>	<b>3,994</b>	<b>1</b>	<b>0</b>
North Carolina	261,644	129,262	49.4	581	0.4	160,558	143	38

In 2009, 59.4% of children ages 1 or 2 were screened for elevated blood levels. Eight children were identified with levels greater than 10 mg/dl, and were referred to LPPP for follow-up testing in their homes and extra assistance and education to reduce the child's exposure to lead. LPPP provides family education, training for professionals exposed to lead, home builders and others in order to prevent lead exposure especially focusing on young children and pregnant women.

For more lead information: <http://www.warren-wilson.edu/~lpp/>