



OUR ENVIRONMENT, RECREATION & COMMUNITY HEALTH

Summary

Buncombe County is abundantly rich in natural assets and recreation that provides positive health benefits to its residents. Its businesses, residents, and visitors mold their lifestyles and experiences around our forests, rivers, and parks, and are drawn to the ethic of sustainability that is forever woven into the fabric of our community.

Buncombe’s baseline conservation ethic is high—protected areas currently comprise over 27% of the county’s land area, offering a haven for native plants and animals and diverse recreational opportunities for people. Clean air improvements in recent years have increased visibility in our parks by several miles. Visitors and residents expect and appreciate clean air and clear views in natural areas. Clean air and the abundance of fresh, clean water that flows from our mountains is a critical resource to both humans and the natural environment, providing for our health & wellbeing, entertainment, and the ecosystems that sustain us.

The continued protection of these natural assets is at the core of the County’s strategic planning and policymaking efforts and has been a driving force in the development of regulations limiting human impacts on the environment as well as the adoption of strong sustainability goals. Continued focus on the conservation of natural spaces will benefit the outdoor economy upon which the County is strongly reliant. Outdoor recreation in Buncombe County is thriving, with unprecedented use of recreation facilities, blueways, parks, and greenways. The



Buncombe’s natural heritage is an important economic driver, with seasonal tourists coming from far and wide to get a glimpse of the bursting spring wildflowers, catch a brook trout and watch the fireflies in summer, or experience the fiery brilliance of fall in the mountains.

Image by Buncombe County, community garden planting, 2018.

County is in many ways keystone for a regional vision for interconnected communities through greenways and blueways. It also provides access to important regional parks.

Buncombe County leaders and stakeholders are prioritizing community health and have identified how health is connected to other aspects of the community, including natural assets and outdoor recreation.

OVERVIEW OF TRENDS & PLANNING INFLUENCES

Natural Heritage

- Buncombe’s natural heritage is an important economic driver and preservation of these resources is critical to residents’ wellbeing. There are many unprotected high-quality natural areas that still need protection within the county.
- Protection of these areas could ensure secured habitat for over 29 listed rare or endangered species withing Buncombe County.

Ridgetop & Steep Slope Protection

- Regional studies have been conducted that address development on steep slopes and mountain ridges.
- Buncombe County has Steep Slope and Protected Ridge overlay districts that limit density, height, impervious surface area, and disturbed areas.
- Research and science have concluded that slopes in excess of 25% include the initiation points of nearly all historic landslides in western NC.
- There is public awareness of visual, environmental, and safety concerns from ridgetop and steep slope development.

Open Space and Recreation

- Buncombe County provides a mix of recreation opportunities, including five regional parks and seven river parks that serve many miles of the French Broad River Blueway.
- Buncombe County is actively working on implementing several greenways in Woodfin, Enka, and Weaverville. The County’s greenway master plan ultimately envisions over 103 miles of greenway.
- Current national trends for county recreation development include the protection of natural lands for passive recreation and trails.

Community Health

- Environmental factors, such as access to recreation and natural resources, can improve our health and well-being.
- Buncombe County is prioritizing health outcomes in relation to its planning efforts.
- Mortality rates in Buncombe County are higher than the state level for chronic liver disease, respiratory diseases, and suicide.
- Mental health and maternal/birth outcomes are priorities for public health and medical practitioners to address in Buncombe County.
- Consistent with state and national trends, chronic disease and mortality disparities persist by race.

FINDINGS FROM ANALYSIS

Natural Heritage

Nestled in the Level III Blue Ridge Ecoregion, the county is famous for its mountainous terrain and the Blue Ridge Parkway that traverses its peaks, and its wide valleys that cradle the mighty French Broad and Swannanoa Rivers, the birthplace of the City of Asheville and Town of Black Mountain. At finer scales, Buncombe County spans several smaller, Level IV Ecoregions that reflect the ecological transition from high mountain to broad basin and result in a wide range of flora, fauna, and habitats. Buncombe's natural heritage is an important economic driver, with seasonal tourists coming from far and wide to get a glimpse of the bursting spring wildflowers, catch a brook trout and watch the fireflies in summer, or experience the fiery brilliance of fall in the mountains. As such, these natural assets should be major considerations in the County's efforts to determine where to preserve and conserve lands with easements in partnership with local land trusts such as the Southern Appalachian Highlands Conservancy.

The natural heritage of Buncombe County—that is, its constituent plants, animals, and other organisms, and their associations with each other and the physical environment—is both complex and dependent upon a large number of interacting

biological, ecological, and physical factors. This includes but is not limited to, climate, geology, soil, water, topography, competition, chance, and time.

NC Natural Heritage Program

The NC Natural Heritage Program (NHP) compiles, tracks, and publicly shares data about rare species and natural communities, which is needed to weigh the ecological significance of natural areas and to evaluate potential ecological impacts of conservation and development projects. The NHP also develops comprehensive inventories that describe the biodiversity and unique natural areas of a given county. Its work is highly important to landscape-scale planning.

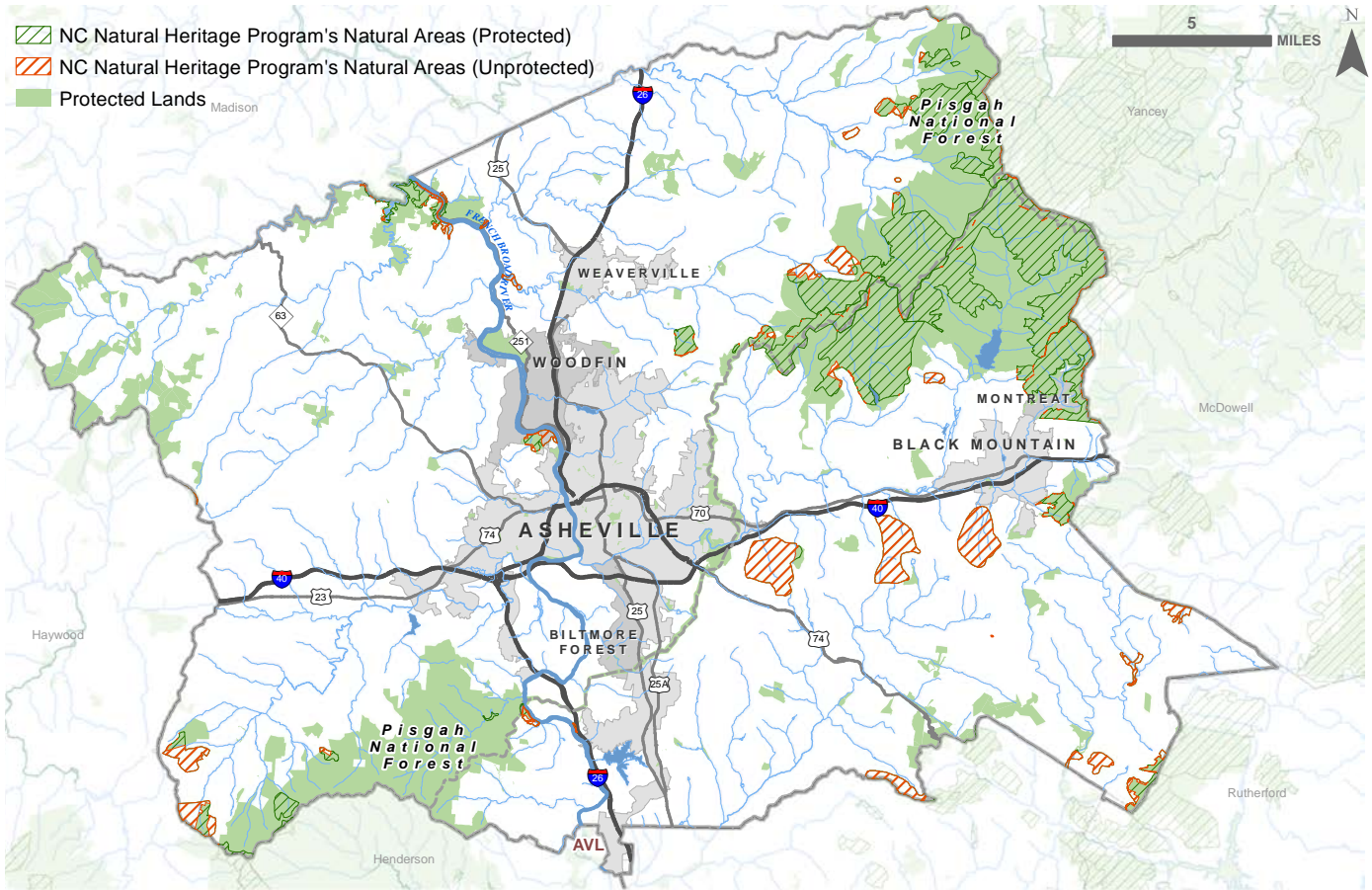
Element Occurrences

The NHP collects information on occurrences of rare plants, animals, natural communities, and animal assemblages. Collectively, these are referred to as “elements of natural diversity” or simply as “elements”—locations of these elements are referred to as “Element Occurrences (EOs)”. Buncombe County contains approximately 217 state-tracked EOs, 29 of which have a concurrent federal listing by the US Fish & Wildlife Service. These rarities are generally restricted to the least-disturbed portions of the county. Rare species are essential components of the county's renowned biodiversity, yet they are increasingly threatened by habitat loss and fragmentation. Development that is planned in close proximity to these elements should be sensitive to the needs of rare species and enacted in a manner that protects or sustains their habitat.



Shooting-star Primula meadia is one of several rare or endangered species. It occurs over nutrient rich cliffs, dry coniferous woodlands, and associated rich forests. Image by Equinox.

Protected Lands Map Buncombe County, NC



Managed/Natural Areas

According to the NHP, a staggering 27% of the county's land area is currently managed for conservation of biodiversity and ecosystem function. These "Managed Areas" include park lands, national forests, restorations, conservation easements, preserves, and other unique properties. However, only 18% of the county's total acres are permanently protected through conservation easements or protected through the government for recreational or resource value. The NCHNP has also identified numerous "Natural Areas" in Buncombe County having special biodiversity significance due to the presence of rare species, unique natural communities, important animal assemblages, or other ecological features. Currently comprising nearly 8% of the county's land area and spread across both publicly and privately owned tracts, these Natural Areas may or may not have adequate protections causing a slow reduction in acreage over time as development has chipped away at their capacity to support biodiversity. The map above

Natural areas like Sandy Bottoms along the French Broad are not always protected. Impacts upstream of these natural areas can often degrade the quality of habitat in these important natural areas. Image by Equinox. Logo to right is Fonta Flora State Trail.

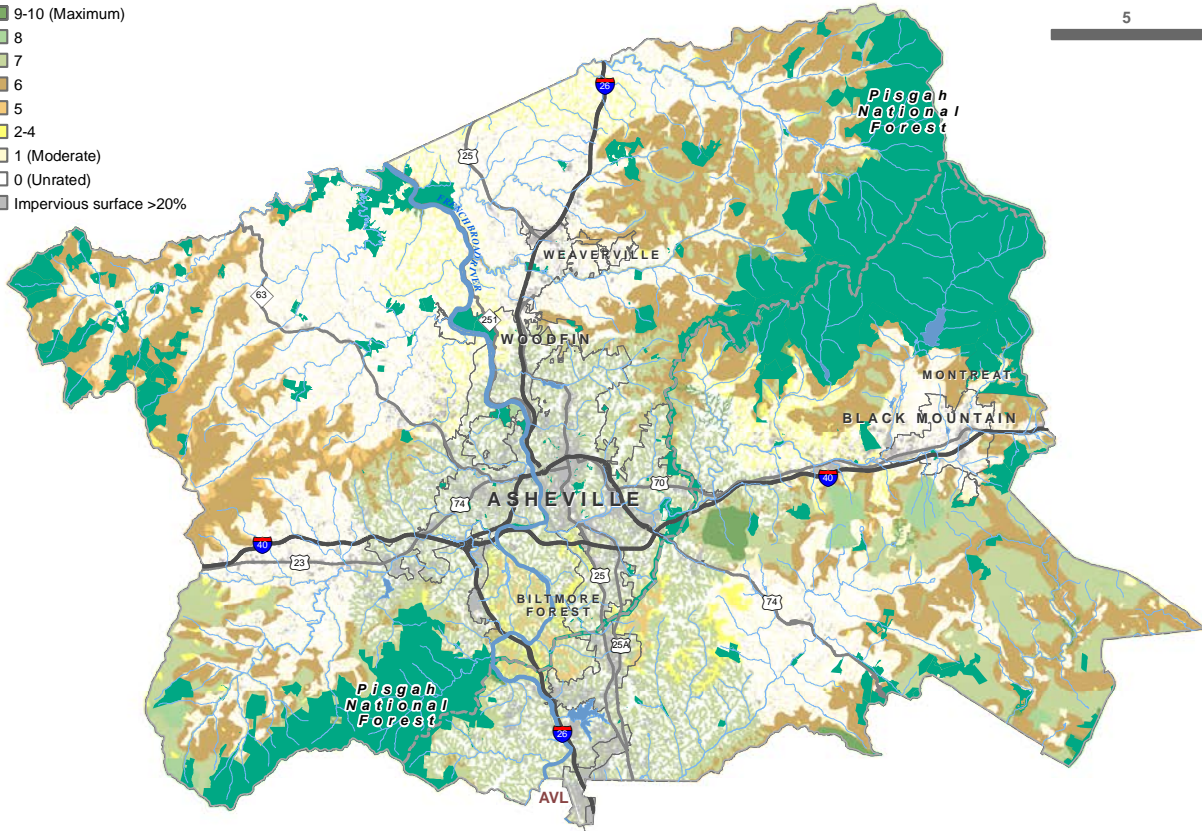


NC Biodiversity & Wildlife Habitat Assessment Map Buncombe County, NC

Biodiversity & Wildlife Habitat Assessment ■ Protected Lands

Relative Conservation Value

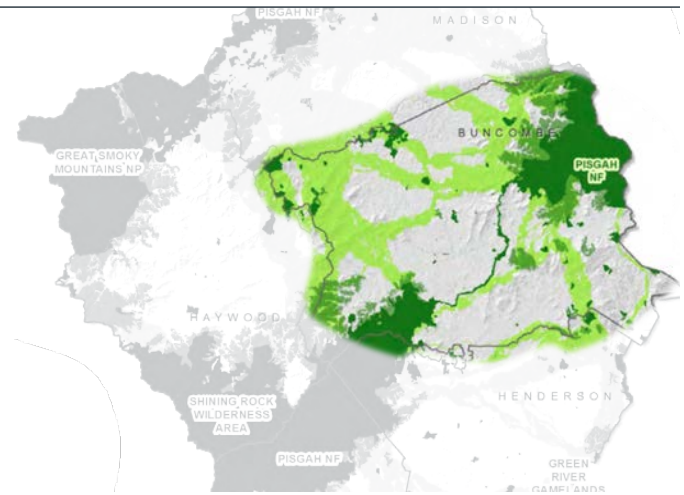
- 9-10 (Maximum)
- 8
- 7
- 6
- 5
- 2-4
- 1 (Moderate)
- 0 (Unrated)
- Impervious surface >20%



displays these identified “Natural Areas” and where they overlap with areas already protected. These areas shown in the map to be unprotected are at risk of being lost due to development.

NC Biodiversity & Wildlife Habitat Assessment

Created to identify, evaluate, and prioritize areas that are important for maintaining healthy and sustainable ecosystems statewide, the NHP’s Biodiversity & Wildlife Habitat Assessment (BWAH), shown above, considers a variety of factors. These factors include, but are not limited to, proximity to and quality of water resources, containment of/contiguity with Managed and Natural Areas, presence of Element Occurrences, and degree of intactness. Although much of the area surrounding the county’s centralized urban communities has diminished ecological value, concentrated areas with moderate to maximum ecological value are still found along the county’s perimeter. These areas of intact forested terrain and relatively undisturbed watercourses are increasingly abundant and connect to other landscapes of



The Linking Lands and Communities Project is a four-county (Madison, Buncombe, Henderson, and Transylvania Counties) effort to gather information about the region’s natural resources and identify opportunities to link these important natural systems via a Regional Green Infrastructure Network. The study provides a geographically-localized example of natural asset planning that identifies key ecological corridors, prime habitat, and critical watersheds. This conservation and development network and accompanying implementation strategies provide information, tools, and inspiration to strategically guide future development for the counties.

similar nature. The State intends this assessment to be used to inform planning decisions for conservation and development.

Land conservation can protect water supplies from high intensity development and associated pollutants, resulting in lower water treatment costs. Land conservation also helps centralize development, reduce the need for or centralize town services, and provide opportunities for recreation.

Floodplain Development and Stormwater

With further regard to flooding, stormwater control and careful floodplain development are important components of maintaining and improving water quality. For more information on flooding risk and resiliency, go to the *Our Resiliency & Hazard Mitigation* section.

Stormwater runoff is the number one cause of nonpoint source pollution to waterways in North Carolina. The primary concerns with stormwater are high stream flows and the transport of pollutants off the landscape into streams. To reduce risks associated with high flows, stormwater should be collected and retained on or near the point of origin. By keeping stormwater on site, downstream peak flows are reduced, resulting in lower bank shear stress and decreased stream bank erosion. Groundwater recharge is also facilitated by stormwater retention.

Floodplains prevent and remove pollutants in stormwater by providing open space for floodwaters to slow down and absorb into the ground. This dissipates the energy and volume of floodwaters, decreasing erosion and sedimentation within the stream. It also allows pollutants such as sediment and nutrients to settle out of floodwater. Floodplains provide spawning ground for fish and unique habitat for a wide variety of plants, insects, reptiles, amphibians, birds, and mammals. Their long corridors of connected habitat make them a rich resource for wildlife and an ideal area for greenway trails. **Perhaps most importantly, it is necessary to recognize that the best and highest use of a floodplain is to flood.** Floodplains help spread the extra energy and volume of floodwaters along an entire stream or river system rather than concentrating it in one area where it can be more destructive. For example, one acre of floodplain has the potential to store 1.5 million gallons of floodwater.



Examples of green infrastructure integrated into residential and commercial development. Images by Equinox.

Stormwater and Green Infrastructure

Traditionally, stormwater has been treated as a nuisance and something to be hurried away from development. This conventional (gray infrastructure) method of stormwater control uses drains and pipes to move water from a site, usually to a single outfall. This treatment of water has historically led to increased water velocities, erosion, and potential flooding downstream. As a result, shifts in policy have required that stormwater runoff from certain developments meet quality requirements and peak flow controls. However, many methods used to meet these standards still employ gray infrastructure techniques. Contrary to gray infrastructure, green infrastructure (GI) is a system of stormwater management grounded in the function of natural systems. GI goes beyond gray infrastructure in its treatment of water by looking at water as more than a problem. GI consist of natural features that slow, store, treat, and allow water to infiltrate at its source, recharging the groundwater. As a holistic approach to stormwater, GI has a whole host of additional benefits beyond reducing and treating stormwater at its source, including social, economic, and environmental benefits like providing wildlife habitat. As the world focuses on climate change, GI can help communities become more resilient.

Currently, Buncombe County has limited authority to regulate stormwater treatment methods due to preemptive state legislation. This has prevented the County from introducing robust GI policy into the stormwater ordinance as they can only enforce state standards. However, the state does encourage GI for low density projects. GI can also be introduced in County regulations other than the stormwater ordinance. Often, GI can be encouraged by providing developers incentives such as allowing them to increase density of development or fast-tracking permitting. Buncombe County has a density bonus in its ordinance for low impact development, although the language is vague and does not specifically promote GI implementation.

Ridgetop & Steep Slope Protection

Mountain Ridge & Steep Slope Protection Strategies

The *Mountain Ridge and Steep Slope Protection*, a study prepared in 2008 by the Land of Sky Regional Council, includes a comprehensive set of research and design strategies for development on mountain ridges and steep slopes in western North Carolina.

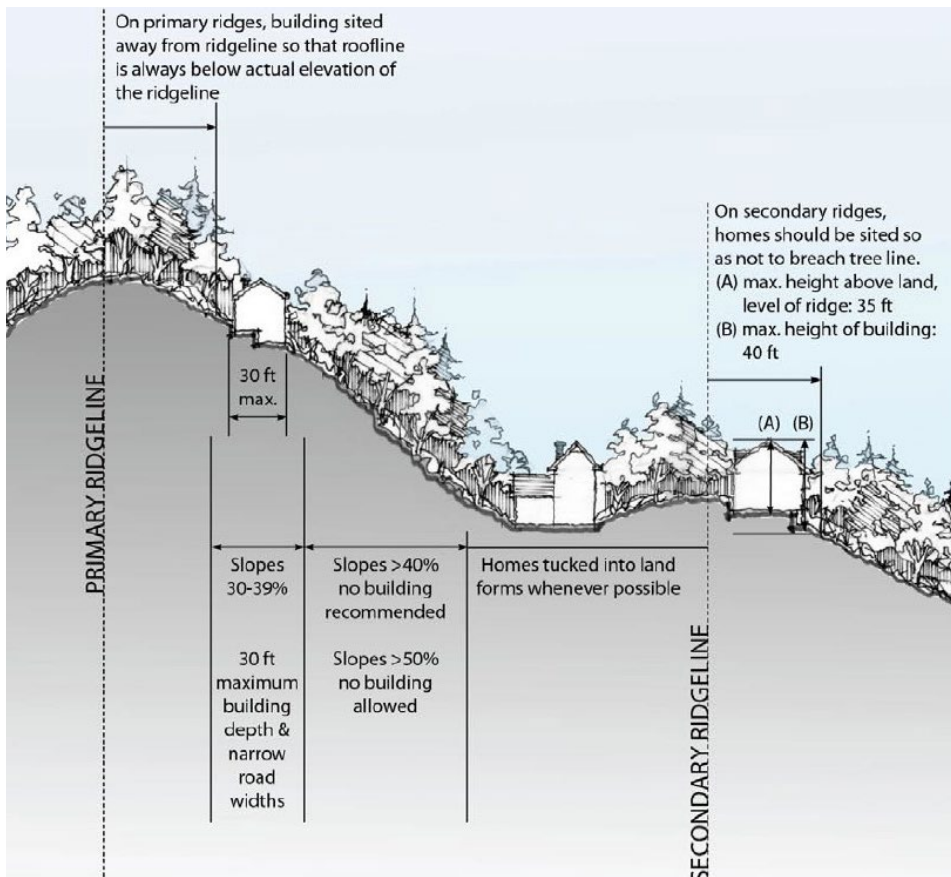
This study identified technical advice, advocacy groups, developer interests, and key issues and provided recommendations for better managing valuable resources.

The report covers the following key areas:

- Economic Impacts of Development and Preservation
- Public Safety Issues
- Public Health (water supply, wastewater, air quality)
- Water Quality/Quantity and Impacts (fish and aquatic species)
- Loss of Natural Areas, Forests, Wildlife and the Role of Land Conservation
- Preferred Development Processes and Best Management Practices

Three major findings and recommendations from the study included:

1. Policies need to be based on the best available scientific data (e.g., geotechnical analysis, landslide hazard maps, etc.).
2. Governments across the mountain region need to work together to ensure policy consistency. Without coordinated actions by governments, there will be no easing of the problems associated with mountain ridge and steep slope development, but rather a shift to steep slope development in other parts of the area.



The diagram in the *Mountain Landscape Initiative* illustrates guidelines for best practices for siting, designing and building on steep slopes. Note that best practices avoid construction on primary ridgelines and the roofline is below actual elevation of the ridgeline.

- Decision-makers need to consider the inter-relatedness of these development-related issues and acknowledge that trade-off exists among policy recommendations, and trade-offs will occur as a result of a particular recommendation.

Southwestern Commission’s Region A Toolbox: A Pilot of the Mountain Landscapes Initiative (MLI)

The Southwestern Commission, supported by numerous funding entities and stakeholders, developed a “Toolbox” and a set of supporting practices for regional sustainability to help shape more livable and more economically viable communities in the southwestern most counties of North Carolina. This toolbox is a companion to the Mountain Ridge and Steep Slope Protection Strategies document. While the toolbox addresses development on unstable mountain slopes, the Mountain Landscape Initiative provides a comprehensive approach to suitable mountain

development and land and water resource protection.

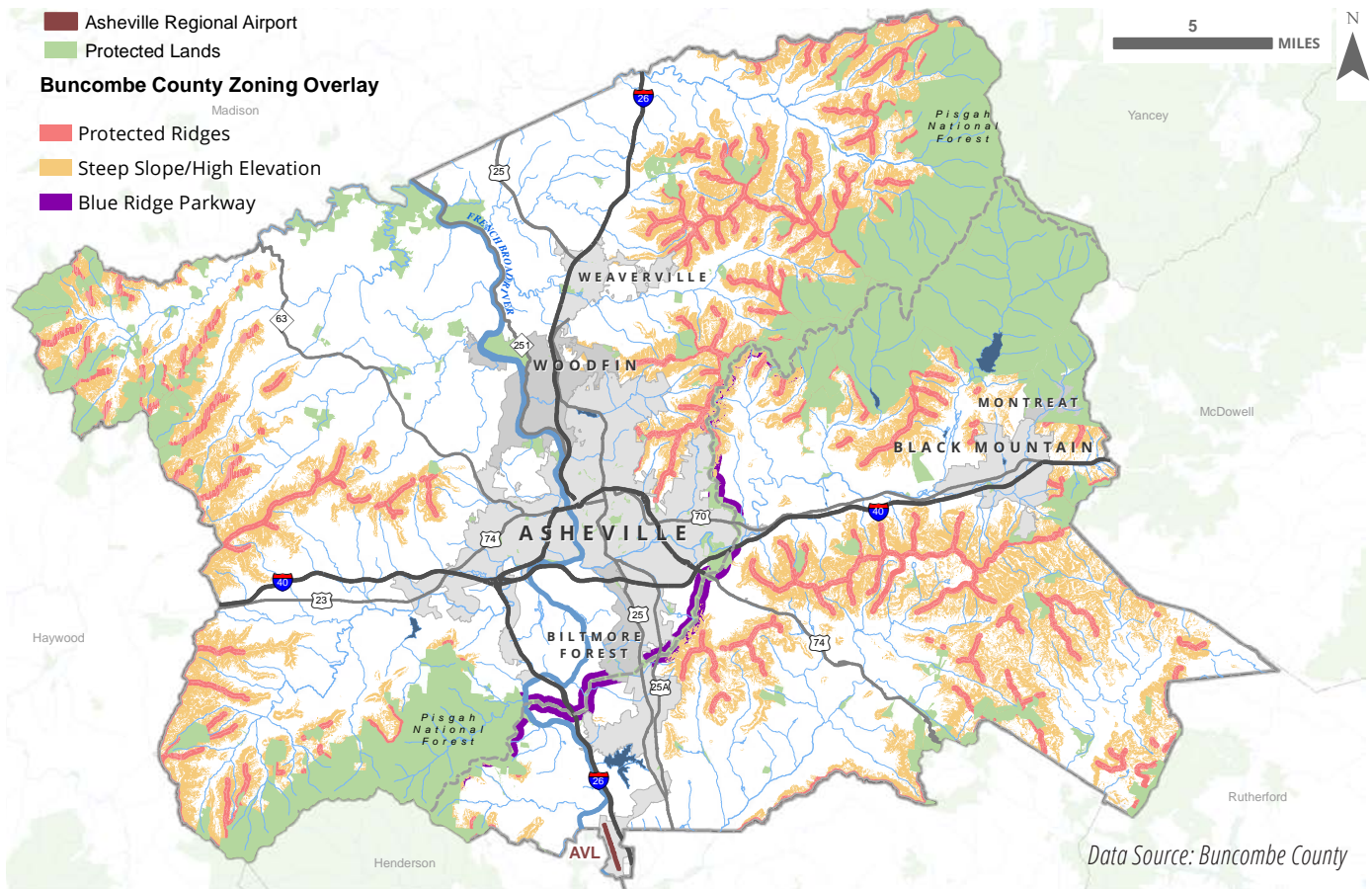
The MLI states that, “Although there is no single agreed definition of ‘steep slope,’ those over 35% have historically proven to be at risk for most landslides in western North Carolina. The NC Geological Survey maintains a database of historical landslides, and based on this data, a threshold of 35% slope would be needed to include the initiation points of nearly all of those historic landslides for which accurate slope measurements are available.”

This study also notes that it is generally accepted that septic systems do not function properly on slopes in excess of 30% and sewer systems should not be constructed within slopes that exceed 40%.

Buncombe County Steep Slope/High Elevation and Protected Ridge Overlay Districts

The Steep Slope/High Elevation and Protected Ridge Overlay District was established in recognition that

**County Zoning Overlay & Protected Lands Map
Buncombe County, NC**



the development of land in steep, mountainous areas involve special considerations and requires unique development standards.

Steep Slopes/High Elevation Overlay

The Steep Slopes/High Elevation Overlay District was designed to “limit the intensity of development, preserve the viewshed, and protect the natural resources of Buncombe County’s mountains and hillsides.” The steep slope overlay applies to areas that meet conditions where the elevation is greater than or equal to 2,500 feet above sea level and have a natural slope of 35% or greater.

Protected Ridge Overlay

Similar to the Steep Slopes Overlay, the Protected Ridge Overlay District is “intended to limit the density of development, preserve the viewshed, and protect the natural resources of Buncombe County’s protected mountain ridges.” This is consistent with the recommendations of the 1998 Buncombe County Land Use Plan and supplemental to the provisions of the Mountain Ridge Protection Act of 1983. The Overlay applies to all mountain “ridges” within the county with an elevation of **at least 3,000 feet above sea level** and **500 feet above an adjacent valley floor**, and protects across 500 foot buffers measured horizontally from the center line of the ridge as noted on the County’s zoning map. The Overlay includes several requirements such as:

- Limits on lot size, disturbance, and impervious areas to reduce the intensity of development.
- Geotechnical Report Requirements: A geotechnical engineer is required for development in areas of a tract within the Steep Slope/High Elevation Overlay District in excess of 35% natural slope, and for all areas designated as high hazard or moderate hazard on the Buncombe County Slope Stability Index Map (prepared by the North Carolina Geological Survey), including an investigation for colluvial deposits. A global stability analysis is also required for building sites on a 35% or greater slope or in an area designated as high hazard or moderate hazard on the Buncombe County Slope Stability Index Map. Prior to final approval, the geotechnical engineer is required to certify that their recommendations were followed during construction.
- Screening Plan & Planar Surface Calculation
- Height & Building Width Standards

The Blue Ridge Parkway & Viewsheds

Buncombe County has a Blue Ridge Parkway Overlay District which provides some protection for the immediate viewshed of the parkway. Realizing the importance of the Blue Ridge Parkway to the economy of Asheville, Buncombe County, and western North Carolina, the Blue Ridge Parkway Overlay District was created to protect and preserve the unique features of this asset to the city, the county, and the region. Standards were established to protect the scenic quality of the Blue Ridge Parkway and reduce encroachment on its rural setting. This Overlay applies to all properties within 1,320 feet of the centerline of the Blue Ridge located within Buncombe County’s zoning jurisdiction.

The following development standards include:

- Setback requirements of 50 feet
- Building height limits
- Screening standards

The planning department notifies the National Park Service and provides the opportunity to make recommendations on the proposed project.

The National Park Service and partners have developed a prioritization of the viewshed analysis along the parkway and this data may be useful in consideration in future planning. In addition, the USDA Forest Service developed *Landscape Aesthetics: A Handbook for Scenery Management*. This handbook provides a system to be used within the context of ecosystem management to inventory and analyze scenery in a national forest. This system could have application for the viewshed along the Blue Ridge Parkway.



View from near the Blue Ridge Parkway. Image by Equinox.

Open Space and Recreation

Parks

Buncombe County operates four regional parks and seven river parks along the French Broad River. There are also five outdoor swimming pools located in each school district. The following parks include:

- **Buncombe County Sports Park:** Known for its soccer fields, this park also boasts a disc golf course, walking trail, community garden, dog park, volleyball courts, bocce ball courts, playground, and large picnic shelter.
- **Lake Julian Park:** Known for fishing access, with 2 ADA fishing docks, 2 playgrounds, multiple picnic shelters, outdoor grills, boat rentals, a disc golf course, and a quarter mile of greenway trail.
- **Charles D Owen Park:** This park is mostly passive but also has 3 baseball fields, 2 large picnic pavilions, a walking trail, a playground, and fishing ponds with a ADA dock.
- **Hominy Valley Park:** This park has multiple sports fields, courts, and an outdoor swimming pool. It also includes a playground and sand volleyball court.
- **The County's River Parks:** These seven parks are scattered along the French Broad River and serve as important nodes for blueway/river access. Many of these also will be important nodes along the County/City of Asheville's proposed greenways when they are built.

A recent study was done by the Buncombe County Recreation Services and the National Recreation Parks Association (NRPA) to determine the current level of park service provided to residents based on comparable communities. A summary of these findings can be seen in the *2021 NRPA Agency Performance Key Findings* (see graphic below). The study found that the amount of park facilities provided were at or below the median of other comparable communities nationally.

A Parks and Recreation Comprehensive Plan is a typical guiding document for parks, greenways, blueways, and open space. The County has not developed this type of plan. A plan like this comprehensively looks at how the County can provide a level of service that is comparable to other



Playground at Buncombe County's Lake Julian Park in South Asheville

similar communities, and where and what new park and recreation investments might be needed.

Open Space

County-preserved open space for recreation and natural resource benefit is a growing national trend. Many counties are beginning to work with conservation and recreation partners to purchase and maintain natural lands that have low-cost recreation access and basic amenities like unpaved trails and overlooks. The County's Collier Cove Nature Park is an existing local example of this. About 27% of Buncombe County is currently protected open space but much of that is only accessible through longer vehicle commutes. Increased access to natural open space would especially benefit areas of the county that are underserved by publicly accessible open space or areas that have lower vehicle ownership.

Blueways

Buncombe County's river parks play a significant role in the French Broad River Blueway (or water trail), which is a thriving outdoor recreation destination for water sports. These parks offer watercraft launches and fishing access critical to the success of the blueway.

The French Broad River Paddle Trail and the French Broad River Partnership are two alliances that support the promotion and stewardship of this blueway. This alliance of partners is working to increase blueway access points and ensure for better water quality of the French Broad River. Blueway access within the county's urban core are seeing heavy use and exceeding capacity, suggesting additional blueway access areas are needed.

The Town of Woodfin, in partnership with the County, is envisioning a blueway/greenway that supports additional access to the river. One project of note is the proposed Whitewater Wave at Woodfin's Riverside Park—an important part of a larger multi-million-dollar project across several municipalities to revitalize an industrialized riverfront into a major regional recreational destination.

County-led Greenways

The County's *Greenway Master Plan* has set the direction for greenway development. Woodfin, Black Mountain, and Asheville have either independently planned or teamed with the County to plan and implement greenways. The County's plan envisions over 103-miles of future greenways, with approximately 14 miles of greenway currently built, mostly by municipal partners. The County is currently prioritizing certain corridors for planning and in some cases construction. This prioritization has been driven by partnership and funding opportunities.

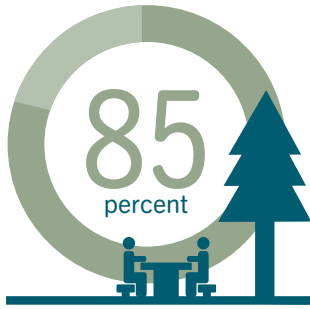
Current County-led Greenway Priorities:

- The French Broad (Highway 251) Greenway:** This greenway will travel from the Woodfin/Asheville municipal boundary north through Woodfin to Elk Mountain Road. This project is part of what is known as the Woodfin "Blueway and Greenway" project to revitalize and improve access to the French Broad River waterfront.
- Enka Heritage Trail:** This greenway is currently being designed and will soon be constructed. It provides important pedestrian and bicycle facilities in the Enka area and connects to Buncombe County Sports Park.
- Reems Creek Greenway:** The County oversaw a feasibility study and is assessing next steps to construction. This would connect Lake Louise and the Karpen Soccer Fields and is just outside of downtown Weaverville.



In 2021, Buncombe County Recreation & The National Recreation and Parks Association assessed how comparable the County's services are compared to other communities'. This graphic represents the County vs. comparable communities. Blue indicates national median for all agencies. Orange indicates current county statistics.

THE CASE FOR RECREATION INVESTMENT



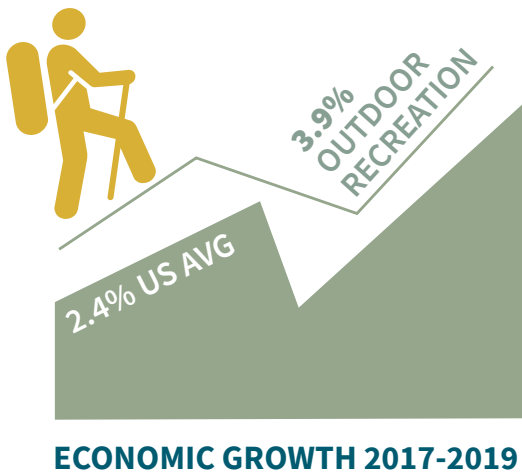
The percent of US residents that identify proximity to parks, trails, & open space as a key factor in deciding where to live

\$4
B I L L I O N

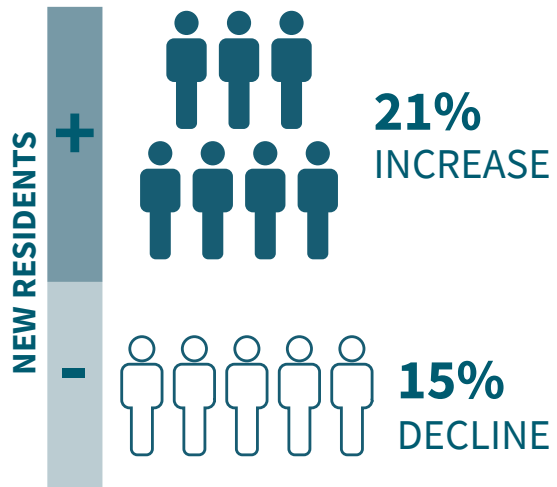
NORTH CAROLINA'S OUTDOOR RECREATION ECONOMY CONTRIBUTES \$4 BILLION TO THE STATE'S GROSS DOMESTIC PRODUCT

outdoor RECREATION

IS ECONOMIC DEVELOPMENT & A BOOST TO THE TAX BASE



NATURAL ASSET RICH COUNTIES



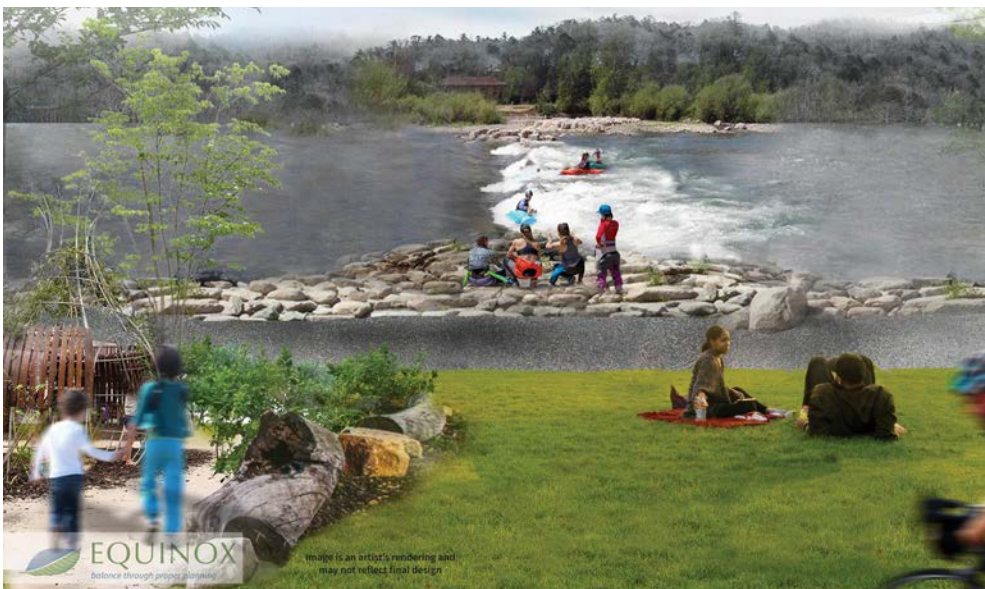
COUNTIES WITH LESS NATURAL ASSETS

Data compiled from multiple studies developed by Headwaters Economics

Greenways and Trail Efforts Led by Municipalities or Others

The Town of Black Mountain and the City of Asheville continue to plan for the implementation of greenways. The City of Asheville's *Greenway-ADA Transition-Pedestrian (GAP) Plan* could inform future updates to the County's plan. Black Mountain also continues to extend the Riverwalk Greenway. The French Broad River Metropolitan Planning Organization plays an important role in acquiring federal and state funding for greenway projects.

Asheville Unpaved is a recent effort of the City of Asheville and several non-profits to develop natural surface (unpaved) trails throughout the city. If this effort can be expanded, more miles of trail can be built for less cost than traditional greenways. This is a trend occurring regionally and nationally with model "Trail Towns" like Bentonville, Arkansas or the Knoxville Urban Wilderness leading the way. Knoxville has built over 60 miles of trail in the last 10 years, most of which are just minutes from downtown, making it a national destination.



Left: The Woodfin Blueway and Greenway is an example of the larger revitalization effort of many of the county's communities to realize their waterfronts as an asset and public treasure.

Below: French Broad Greenway users in Asheville. Image by Equinox.



Regional Greenway Connections

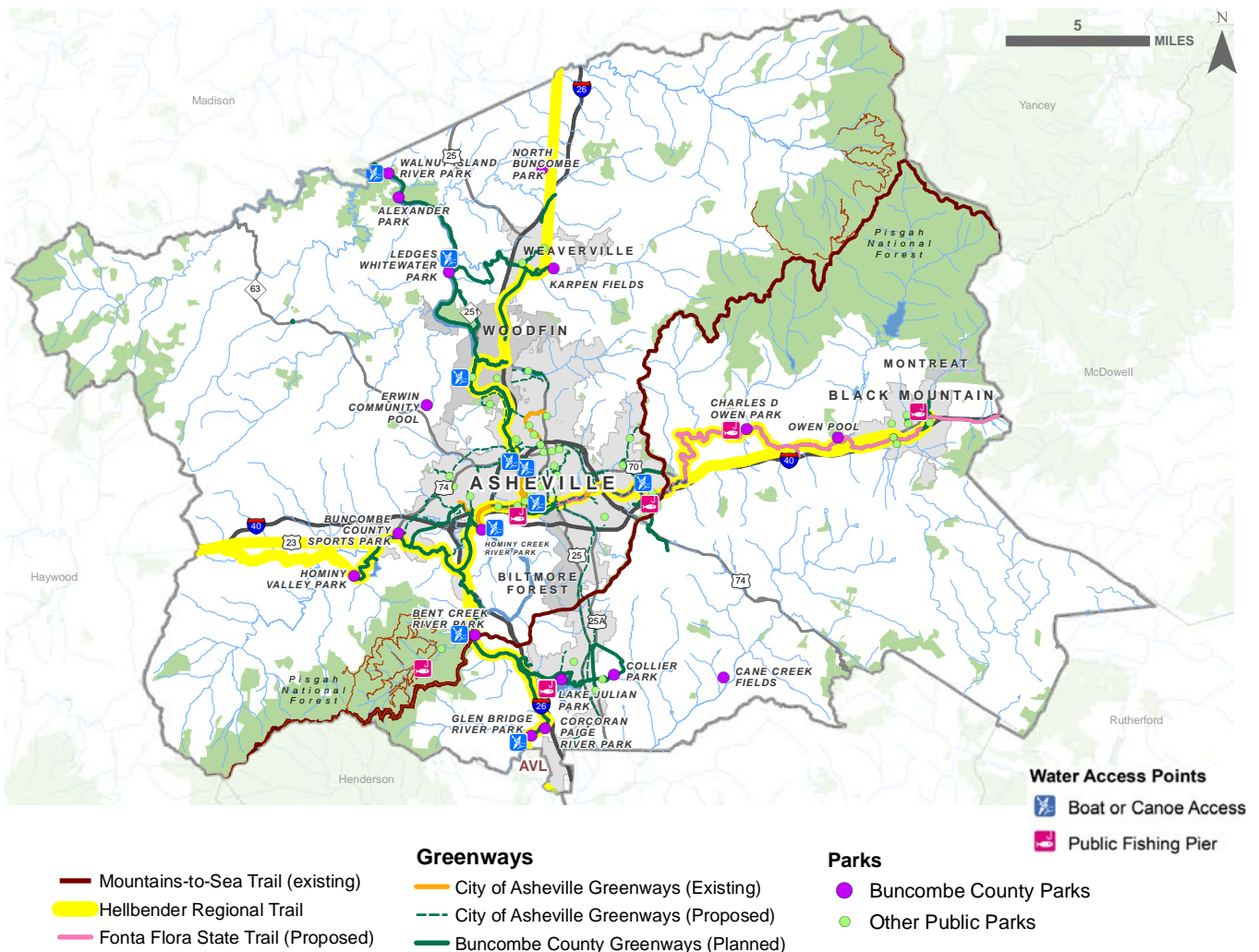
The Hellbender Trail a regionally envisioned trail network led by the French Broad River Metropolitan Planning Organization in partnership with many local governments, including the County. This regional plan connects the “spines” of many existing proposed greenway systems. Routes were chosen from existing plans that could serve as major cross-county connections. The Hellbender Trail system is shown on the map below.

The Fonta Flora State Trail (see map below) is a recent regionally planned trail and is part of the State Trail system. This trail would travel from Lake James State Park, through McDowell and Burke Counties, Black Mountain, Swannanoa, and into Asheville’s River Arts District. The trail through the county is designated as part of the planned and

existing Swannanoa Greenway. Many governmental and non-profit partners are working to complete this trail. Currently, there are no detailed plans to complete Buncombe County’s section, though there has been discussion about redefining the route through Swannanoa and utilizing existing trails that connect Black Mountain to Old Fort.



Parks & Recreation Map Buncombe County, NC



Community Health

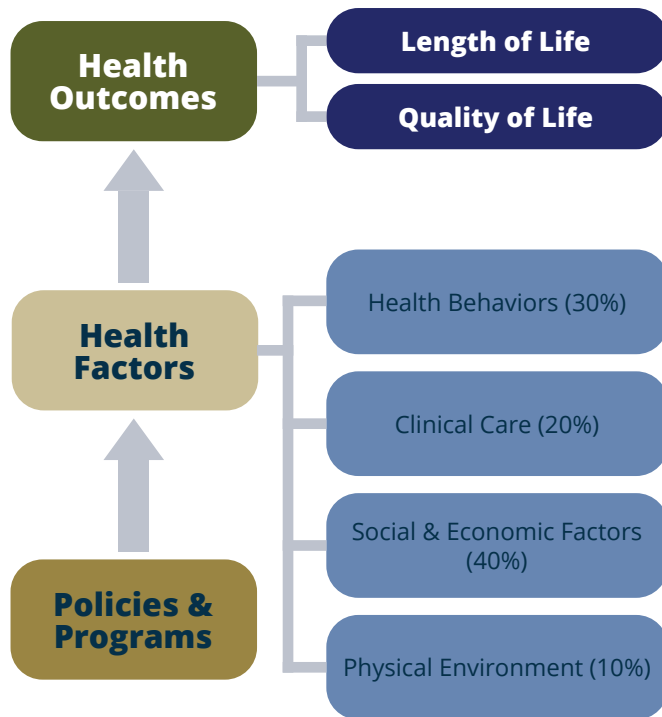
Social Determinants of Health

According to the World Health Organization, the **social determinants of health are all the “non-medical factors that influence health outcomes.”**¹ This is widely understood to include people’s access to power, money, and resources, as well as the environment in which they are born, grow, work, live, and age. Healthy People 2030—the most recent set of health priorities identified by the U.S. Department of Health and Human Services—frames social determinants of health as the major drivers of health inequities, or the “unfair, unavoidable, and remediable differences in health” among people.²

Research demonstrates that the social determinants of health are responsible for 30-55% of health outcomes, which can make them more important than individual lifestyle choices.³ Important health outcomes include reducing the burden of chronic diseases, improving quality of life, and increasing life expectancy. Over half of premature deaths in the United States are preventable, and many are influenced by environmental and socioeconomic factors.⁴

The state’s prioritization of health contributors, Healthy North Carolina 2030, utilizes the Population Health Model from the County Health Rankings and Roadmaps (right). This model visualizes how health behaviors, clinical care, social and economic factors, and physical environment make up our health factors. Individual health factors, in addition to policies and programs, produce our health outcomes, which determine our length and quality of life.

To build a healthier future for all, the future Buncombe County must prioritize the social determinants of health for the people who live, work, and play here. Buncombe County can improve the health of residents by supporting economic stability, education access and quality, healthcare access and quality, social and community factors, and neighborhood and environmental factors. This chapter focuses on the environmental factors, including environmental quality, safe public spaces, and access to recreation and open space, all of which support mental health, physical health, active living, and overall well-being.

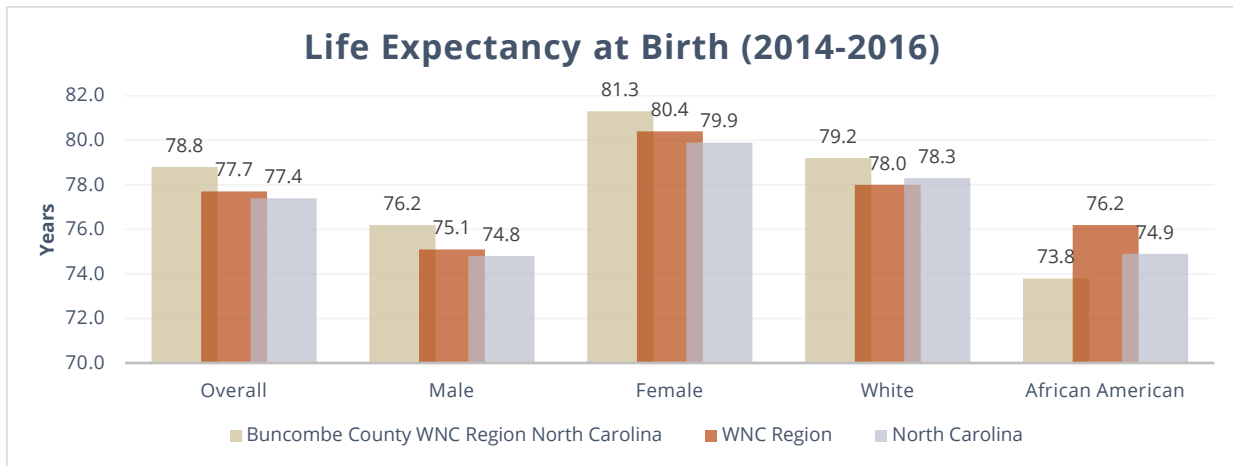


Source: County Health Rankings & Roadmaps, County Health Rankings Model, from the North Carolina Institute of Medicine. *Healthy North Carolina 2030: A Path Toward Health*. Morrisville, NC: North Carolina Institute of Medicine; 2020.
<https://www.countyhealthrankings.org/explore-health-rankings/measuresdata-sources/county-health-rankings-model>

Buncombe County Health Findings & Priorities

Buncombe County is ranked among the healthiest counties in the state overall for health behavior, clinical care, social and economic, and physical environment metrics.

While people in Buncombe County have a lower mortality rate than Western North Carolina regional averages, the Buncombe County Community Health Assessment identified priorities for improving the health and wellbeing of residents. The overall life expectancy for residents is 78.8 years, higher than the average life expectancy for Western North Carolina regional average and the North Carolina state average.⁵ Consistent with state and national trends, there are significant disparities in chronic disease and mortality rates by race. The graph on the next page indicates significantly worse outcomes for Buncombe County residents by race compared to both the state and region. In comparison, Buncombe County residents have



longer life expectancies than residents in the state and region by gender.

Out of 100 North Carolina counties, Buncombe County ranks 14th overall for health outcomes. Buncombe County placed:

- 3rd for clinical care
- 23rd for length of life
- 10th for quality of life
- 8th for social and economic factors, and
- 5th for health behaviors.

The Buncombe County Community Health Assessment noted that mortality rates in Buncombe County are higher than the state for three key indicators: chronic liver disease and cirrhosis, chronic lower respiratory diseases, and suicide. Mental health is an increasing concern in comparison to the region and the state, as suicide rates have continued to increase in Buncombe County. In 2018, 18.9% of residents reported having more than 7 days of poor mental health in the past month, compared to 11.5% in 2015, according to the 2018 Buncombe County Community Health Assessment (CHA). The CHA was developed by Buncombe County Health & Human Services in partnership with Mission Health, Mountain Area Health Education Center, and WNC Health Impact Network. Rates of suicide are measured to better understand and measure mental health in a community. General mental health and depression/anxiety/stress were identified as critical to address by Community Health Assessment stakeholders.

Our physical environment has both direct and

indirect effects on our health. The safety and quality of water; access to affordable, safe, and healthy food; air quality and environmental exposures can directly cause health issues, such as respiratory conditions, heart disease, and preterm birth or poor birth outcomes. In addition to safe and accessible water sources, air pollution—or the fine particulate matter—is an important measure of environmental health. Data from the Environmental Public Health Tracking Network indicates that Buncombe County is improving in this measure and has less air pollution than North Carolina and the United States overall.

Ground level ozone is another pollutant that exacerbates respiratory conditions including asthma. Since 2000, air pollution monitors in Buncombe County have shown a 31% reduction in highest ground level ozone concentrations and a 60% reduction in average annual particulate matter concentration. Both of these pollutants are accounted for in EPA’s Air Quality Index, which is updated daily on the Air Now website and also featured in local weather forecast reports.



Image provided by Buncombe County.

Buncombe County is one of 22 areas in the state that has air pollution monitors and for which this metric is available.

As this area continues to grow there is increased traffic on our roads and energy usage associated with more homes and commercial buildings. Research continues to find health impacts at lower levels of air pollution and as such, there is a need to continue to improve air quality to protect the public health. Additionally, climate change is expected to cause higher ground level ozone concentrations and more frequent wildfires, resulting in higher fine particulate levels.

Indoor air quality is an important consideration since indoor air pollution levels can be 2 to 5 times higher than outdoor air pollution levels. Radon is the second leading cause of lung cancer and has been found at high levels inside homes in WNC. Fine particles from wood smoke associated with wood stoves used for heating have also been found at elevated levels inside homes. Climate change is expected to impact indoor air quality. More flooding from extreme weather events impacts homes and can lead to mold growth indoors, which can cause respiratory symptoms and exacerbate asthma. Higher temperatures and heat island effects in urban areas are also impacting underserved residents. All of these issues represent impacts from climate change that are occurring now and disproportionately affect underserved communities.⁶

Benefits of Natural Heritage, Environment, and Open Space

The benefits of nature are intuitive for the residents of Buncombe County. Mental health concerns, such as depression, anxiety, and stress, were among the top concerns identified by community leaders in Buncombe County. There is overwhelming research evidence suggesting the powerful benefits of access to open space, nature, and outdoor activities, all of which improve mental and physical health outcomes. Nature-based recreation improves cognition, decreases symptoms of anxiety and depression, and improves overall well-being.⁷ Access to green spaces such as parks, open space, and natural environments is linked to lower instances of stroke, coronary heart disease, hypertension, asthma, and preterm birth.⁸ There may be an association between an increase in the greenness of a community and a decrease in overall mortality rates.⁹ In particular, the mental health of children and teenagers benefit greatly from nature.¹⁰

Community health can be supported by promoting active living and Complete Streets (see the Transportation Chapter), reducing housing cost burden and improving social connection in communities (see the Land Use and Housing Chapter), and financial stability and economic opportunity (see the Economic Development chapter).



Image provided by Buncombe County, picture of smiling youth from the Buncombe County Special Olympics.

CONSIDERATIONS FOR THE FUTURE

Overview

Buncombe County's open spaces, parks, and natural areas support the health and recreation of residents and visitors and are an important factor for protecting and growing many of the county's economic sectors. Protection of these resources for current and future generations is paramount to the success of the County. Given the facts, trends, policies, and regulations listed in the previous sections, these are additional ideas to be considered through the planning process.

Preserve the County's Natural Heritage:

- Consider prioritizing conservation of intact forestlands, wetlands, and other unique habitats to protect and increase the capacity to sustain the county's existing biodiversity. Focus on acquisition of NHP Natural Areas that are currently unprotected.
- Consider protecting connections between natural landscapes and avoid fragmentation of large forest blocks in order to benefit wildlife migration.
- Promote ecosystem preservation, enhancement, and restoration projects across public and private lands.
- Consider encouraging the preservation of suburban and rural working agricultural lands as they serve as habitat for flora and fauna.
- Find opportunity to work with conservation partners to conserve priority habitat or develop land use planning policies to minimize impact to these areas.

Protect Ridgetops and Steep Slopes:

- Consider an update to the Steep Slope Overlay and Ridgetop District Ordinance.
 - » Consider creating illustrations to support and clarify the zoning ordinances for the Steep Slope/High Elevation and Protected Ridge Overlay.
 - » Consider evaluating the current Overlays to determine if they are achieving their intent and how the requirements can be improved even further to reduce ridgetop and steep slope development in Buncombe County.
 - » Consider limiting building locations so the roof line does not exceed the landform (surface layer) of the ridge, not just the existing tree line. The most intrusive visual impact is when the building breaks the landform of the slope up to the ridge and trees are cut down along the ridgeline.
- Consider utilizing new and updated tools such as the NC Geological Survey Landslide Hazard Mapping program and update information based on new tools on a yearly basis.
- Collaborate and coordinate with the National Park Service to prioritize historic overlook viewshed protection along the section of Blue Ridge Parkway that passes through Buncombe County.

Support Open Space Conservation and Recreation Enhancement:

- Continue to implement the County's Greenway Master Plan and update if necessary, with an emphasis on completing ongoing projects and working on prioritized trails by other partners like the Hellbender Trail and the Fonta Flora Trail.
- Continue to assess current conditions of parks and ensure that deferred maintenance is being addressed.
- Consider developing a County Comprehensive Parks and Recreation Plan, to address prioritized needs, expansion, and

direction for parks and recreation for the next twenty years. This is a standard plan that most counties have to guide park operations.

- Consider evaluating lower-cost opportunities to expand outdoor recreation such as conserving more natural lands that provide public access and recreation or developing natural surface trails that connect to under-served areas of the county.
- Continue to support and expand the French Broad Blueway, especially where County river park facilities are seeing overuse during the peak boating season.

Improve Community Health:

- Continue to prioritize the protection of green space and environmental resources.
- Consider conducting a health impact assessment and updated community health assessment to gather health data for the County.
- Collaborate with community partners to identify ways in which health can be improved for people living and working in Buncombe County.
- Consider integrating equity considerations into projects that improve air, water, and land quality by utilizing tools including red lining maps of Asheville and EPA's Environmental Justice Screening Tool.
- A new Community Health Assessment (CHA) is in progress for Buncombe County. Consider integrating health priorities and other information from the latest CHA into the development of the Comprehensive Plan.

Endnotes

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