

MEMORANDUM

To: Commissioners

Thru: Marcus Jones
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From: Environmental Advisory Committee

Subj: Tree Preservation

Date: June 6, 2024

Recommendation:

The Environmental Advisory Committee (EAC) is recommending that the Commissioners task the Planning Committee or other appropriate County department with reviewing the rules related to tree preservation, protection, and maintenance contained in the current Land Development Code (LDC). With the recent adoption of the 2045 Comprehensive Plan, the EAC believes that this review is timely and should be included among the priorities. The purpose of the review would be to assess the adequacy of protections provided by the current LDC, and to recommend changes as deemed appropriate. The EAC believes this review is necessary considering the following factors, which will be discussed in more detail below:

- the age of the controls currently in effect;
- increased recent and projected future population and development pressures;
- the County initiative to preserve and protect agricultural land and its effect on development;
- the priorities identified in the development of the 2045 Comprehensive Plan.
- the necessity of protecting Henderson County forests and residential tree canopy, especially in mountain/ hillside areas and ridgetops, in order to reduce erosion and stormwater runoff, preserve water quality and maintain scenic, environmental and economic quality for county residents and visitors.

The EAC suggests that, as part of the assessment of the current LDC recommended above, the County consider forming a Tree Canopy Committee consisting of a variety of stakeholders from the following groups: developers, environmental conservation groups, landscape architects, real estate and community representatives and experts with background in tree science and forest ecology. The Tree Canopy Committee would participate in the review of the current rules and in the development of recommendations for amendments.

The EAC also suggests that the County incorporate periodic surveys of tree canopy for comparison over time and to help evaluate the effectiveness of controls

Discussion:

Current LDC Controls

The original LDC was adopted by the Board of Commissioners in December 2006. While there have been several amendments made to the LDC since then, the controls related to tree preservation, protection, and maintenance have not changed. During that time, the County has experienced significant population growth with associated development. Considering the other issues discussed below, the original LDC requirements are likely insufficient going forward and should be reviewed.

Population Growth and Development

Increasing population requires construction of residential developments, businesses, and industries to support the growth. Inevitably, construction will move to previously undeveloped, uncleared lands. Development trends have already shown movement from the incorporated sections of the County outward to the unincorporated areas. Projections from the NC OSMB indicate that this trend is likely to continue with demand for an additional 19,000 housing units in the next 30 years.¹ Controls will be needed to ensure that construction is done in a way that protects, to the extent possible, beneficial tree canopy.

The 2045 Comprehensive Plan states that there are currently 58,811 (as of the latest draft) housing units in the County. More than 15,000 units have been constructed between 2000 and 2019. The Comp Plan, citing BlueRidgeNow.com, states that recently approved developments are expected to add more than 2,600 new homes over the next several years.

Except for Buncombe County, Henderson County experienced more growth than any other county in Western NC in the years since the 2006 LDC was adopted. The EAC looked at population data from 2000 – 2022, as well as future projections through 2050 for 14 WNC counties (see Table 1 below). Between the years 2000 – 2022, Henderson County experienced a population increase of 31.7%, second only (and very close) to Buncombe County at 32.1%. Closest behind Henderson County is Jackson County at 29%, and the rest fall off from there to a low of 3% for Rutherford County.

In actual numbers, Henderson County again ranks second among the 14 counties in our study, adding 28,444 residents between 2000 – 2022. This does not include part-time residents, only those that identify as full-time. Again, our residential growth ranks second only to Buncombe County (66,437). Behind Henderson County the numbers decline rapidly, with Watauga County in third with 12,184 added residents during that time, down to Swain (14th) with 926 added residents.

Population density is a good indicator of the challenges ahead. While Henderson County ranks second in both actual number and percentage population increase from 2000 – 2022, our land area ranks 11th compared to the other 13 counties in the study. Despite less land area, population

¹ Data available at osmb.nc.gov

density of Henderson County increased from 240 people per square mile (p/sq mi) in 2000 to 317 p/sq mi in 2022. Our density ranks second behind Buncombe, and is almost double that of the Watauga, which ranked third. More surprisingly, as of 2022, Henderson County ranked 17th in population density among the 100 counties of North Carolina.

Longer-term projections in population growth for our county suggest increases of 11.4% (2020-2030), 10.7% (2030-2040), and 10% (2040-2050).

Given these trends, growth without adequate land use protections will likely result in significant tree canopy loss and degraded environmental conditions.

Initiative to Preserve and Protect Agricultural Land

The new Farmland Preservation Taskforce has the important responsibility of preserving and protecting agricultural land throughout Henderson County while supporting local producers and the rural character of the County.

In recent years, the County has lost significant tracts of agricultural land to development. Since much of this land had already been cleared, the impact on tree canopy thus far has been relatively small. However, the increased effort to preserve these areas and protect them from development will inevitably result in developers moving to undeveloped, uncleared, wooded tracts of land. Without stronger controls, we can expect to see significantly higher rates of tree canopy loss in the future.

Priorities Identified in the 2045 Comp Plan

Protection and preservation of forests was identified as a high priority by community members in the planning process for the 2045 Comprehensive Plan.

In surveys of community members leading up to the drafting of the 2045 Comp. Plan, protection of open space/forests ranked as the #1 priority for respondents overall (55%). Preservation of farmland ranked #2 (45%). Protecting natural areas, streams, and water quality was among the themes that were documented in small group discussions and exercises at the public workshop held at Blue Ridge Community College in November, 2021.

Controls that require smarter development incorporating tree canopy protection, preservation, and maintenance will help meet the priorities identified in the new Comprehensive Plan.

Evidence of Disruption: Changes in County Land Cover Between 2001 and 2021

Rapid commercial and residential development in the last 20 years has produced substantial changes to our county land cover. These changes should be examined as evidence of the need to upgrade tree canopy and other environmental regulations.

According to data collected by the Multi-Resolution and Land Characteristics Consortium (MRLC), a group of federal agencies producing a National Landcover Database (NLCD) based

on Landsat satellite imagery and other monitoring and national map sources,² Henderson County lost 5.72 square miles of forest between 2001 and 2021. Nearly 10 percent (-9.98 percent) of evergreen forests have disappeared, while deciduous forest has decreased a relatively small 3.33 percent.

MRLC comparisons over these past two decades show that county grassland has grown 140 percent and barren land 85.98 percent. The county has also lost nearly 6 percent ((-5.85%) in emergent herbaceous wetlands, a source of ground water recharging and flood protection, wildlife and plant productivity.

The MRLC indicates that medium-intensity development in Henderson County has grown 58.86% and high intensity development 38.40%. Land cover changes already account for 18.64 square miles of county land or 4.97 percent of the total. Without stronger guidelines and standards for tree canopy and wetlands preservation, disruption to land and water resources is expected to continue

Importance of Tree Preservation

Housing, commercial and industrial business development are all important for meeting the needs of an increasing population. Development serves not only as a response to these emerging needs but also propels economic growth by attracting businesses, driving job creation, providing services and recreational opportunities, enhancing living standards, and providing for a more livable and enjoyable community.

However, preservation of open space and urban forests are increasingly being recognized for their importance to the community. By their very nature, trees and green space provide benefits and add value to developments. The ability of trees to improve and maintain the quality of water, soil, and air and to remove pollutants from the air is well known. Trees also provide shade and help lower temperatures during hot weather. They enrich people's lives and beautify landscapes and help to preserve the character of a community. As mentioned above, protection of open space/forests ranked as the #1 priority for 2045 Comp Plans survey respondents.

While preserving trees has positive effects on the image and attractiveness of developments and the overall community, it also has been shown to provide economic benefits for developers and homeowners. Preserving trees in developments increases a project's attractiveness, monetary value, and marketability by providing aesthetic and functional values. Lots where trees are preserved can be sold more quickly and at higher prices, and at the same time enhances developers' reputations and profits.

Research has shown that mature trees increase the worth of a property up to 12 percent. Developers who understand these values realize that it is in their best interest to encourage the preservation of trees and green spaces.

² A complete MRLC survey of Henderson County's land cover changes can be seen at www.mrlc.gov/data.

The conservation of trees is also a critical factor in our collective environmental stewardship. Trees play an indispensable role in maintaining ecological balance and biodiversity preservation. They act as the planet's lungs, absorbing CO₂ and releasing oxygen, mitigating the harmful effects of climate change.

Furthermore, trees are a vital habitat for countless species of flora and fauna, aiding in biodiversity preservation. They also prevent soil erosion with their deep-rooting systems and regulate water cycles, thus contributing to a stable ecosystem.

In both urban and rural settings, trees offer shade, reducing the need for air conditioning, and absorbing pollutants, creating healthier environments.

Conclusion

Our Henderson County Land Development Code (LDC) Needs Specific Improvements

The current tree protection regulations available for Henderson County LDC are restricted almost exclusively to landscaping design requirements for developers (see Article V, LDC). Content includes buffer restrictions, credits for preserving trees, and specifications for plant materials, among other items. There is some additional documentation for “regulated land-disturbing activity,” including agricultural exemptions from a local erosion program, along with regulations addressing permitted activities for logging and mining.

However, the “big picture” guidelines for preserving large tracts of forest on public and privately held lands remain unaddressed. Both Hendersonville municipality and our neighboring Asheville and Buncombe County have endeavored to document tree canopy and other types of vegetation loss through surveys and consultations with environmental experts.^{3,4} And officials have tightened regulations to ensure that viable percentages of tree canopy are preserved everywhere, including in residential, commercial and rural/recreational settings.

To our knowledge, Henderson County has no comparable regulations on the books for preserving mountain/hillside and ridgetop forests to prevent erosion and clearcutting,⁵ even though 61% of our county is still forested (MRLC data). The County has not yet set tree canopy protection areas which should be designated in perpetuity. There are no tables outlining canopy requirements (percentages and kinds of trees preserved) according to land use (i.e., residential, multi-family/office, institutional, commercial, industrial, etc.),

These and other gaps should be addressed by the appropriate stakeholders in Henderson County. We need to modernize and upgrade our land development code to preserve and protect the beautiful forests, wetlands, rivers, and other water and vegetation sources that attract so many to our area.

³ See Ordinance 4824, Ordinance Amending Chapter 7 of the code of ordinances of the city of Asheville to establish tree canopy preservation standards. Available in PDF.

⁴ A complete survey of Hendersonville township and ETJ land cover is available from PlanIT Geo: Tree Canopy Cover Assessment, Hendersonville, NC, October 2023. Available in PDF.

⁵ Buncombe County Government, Environmental Advisory Committee, Tree Preservation on Ridge Tops and Hillsides in Buncombe County. Available in PDF.