

LAND USE TRENDS

The use of land shapes every aspect of our society: economic, demographic, environmental, and others. Market forces, government policies, and cultural practices drive development and shape patterns of land use. Land use patterns bear a direct relationship to the costs of providing efficient and adequate public facilities such as transportation networks, water and sewer infrastructure, schools, and recreation. Similarly, patterns of development affect the everyday life of residents by influencing property values, housing availability and cost, employment opportunities and economic development costs, travel time, accessibility of services (public and private), and more. Land use patterns profoundly affect the visual quality of a community, which has implications for the quality of life and economic development potential. Because the use of land weighs heavily upon the county’s quality of life and prosperity, it is important to identify influencing factors and emerging trends, and to use that knowledge to shape governmental policy.

The following is a brief analysis of a number of indicators of land use trends affecting Henderson County.

Parcelization

Parcelization is the subdivision of land into progressively smaller tracts. Parcelization is a largely irreversible process: as land reaches higher levels of fragmentation, ownership patterns become more complex. It therefore becomes increasingly difficult for an individual to acquire large tracts of property for large-scale development, agriculture, or other purposes. As large tracts of developable land become scarce, open space and agricultural lands come under increased pressure to develop. At the same time, undeveloped tracts become further and further apart. This loss of connectivity, in turn, affects the viability of agriculture, the visual quality of the landscape, and it has profound implications for the viability of certain native plants and animals.

Figure LU.1 Average Parcel Area, 1997 and 2003 (acres)			
1997	2003	Change	Percent Change in Average Parcel Size
4.43	3.87	-0.56	-12.60%
Source: Henderson County Assessor’s Data			

Figure LU.1 shows that during the six-year period between 1997 and 2003, the average parcel size decreased by more than half an acre in Henderson County, translating to a 12.6% decrease in area.

As depicted by Figure LU.2, in 1997 and 2003 there were 48,517 and 56,462 parcels of land in Henderson County, respectively. This corresponds to the formation of an additional 8,000 parcels, or a 16% increase during that period.

Figure LU.2 shows that Crab Creek, Hoopers Creek and Mills River townships experienced the greatest percent change (increase) in the number of parcels. Hendersonville, Mills River and Hoopers Creek saw the largest increases in terms of the number of new parcels as a percentage of all new parcels.

Figure LU.2 Parcels by Township 1997 and 2003					
Township	1997	2003	New Parcels	Percent Change '97 - '03	Percent of Total New Parcels
Blue Ridge	4,065	4,909	844	20.8%	10.6%
Clear Creek	1,715	1,976	261	15.2%	3.3%
Crab Creek	3,379	4,286	907	26.8%	11.4%
Edneyville	3,656	4,324	668	18.3%	8.4%
Green River	3,602	4,323	721	20.0%	9.1%
Hendersonville	21,879	24,104	2,225	10.2%	28.0%
Hoopers Creek	4,565	5,649	1,084	23.7%	13.6%
Mills River	5,656	6,891	1,235	21.8%	15.5%
Total	48,517	56,462	7,945	16.4%	100.0%
Source: Henderson County Assessor's Data					

Though rural areas of Henderson County have experienced the highest percent change in parcelization throughout this period, almost one third of all parcel creation has taken place in the more urban and suburban areas of the Hendersonville Township. Rural areas of the county have experienced greater parcelization due to lower land costs and greater land availability. The urban areas have experienced greater total parcelization because of the ability to develop at higher-densities due to the presence of sewer and water and other factors.

Figure LU.2 demonstrates that fragmentation is occurring rapidly in the northern and western portions of the county (Mills River and Hoopers Creek Townships). Furthermore, it demonstrates that while urbanized areas have grown more in absolute terms, the percentage change represents a shift in development away from the urban core towards rural areas.

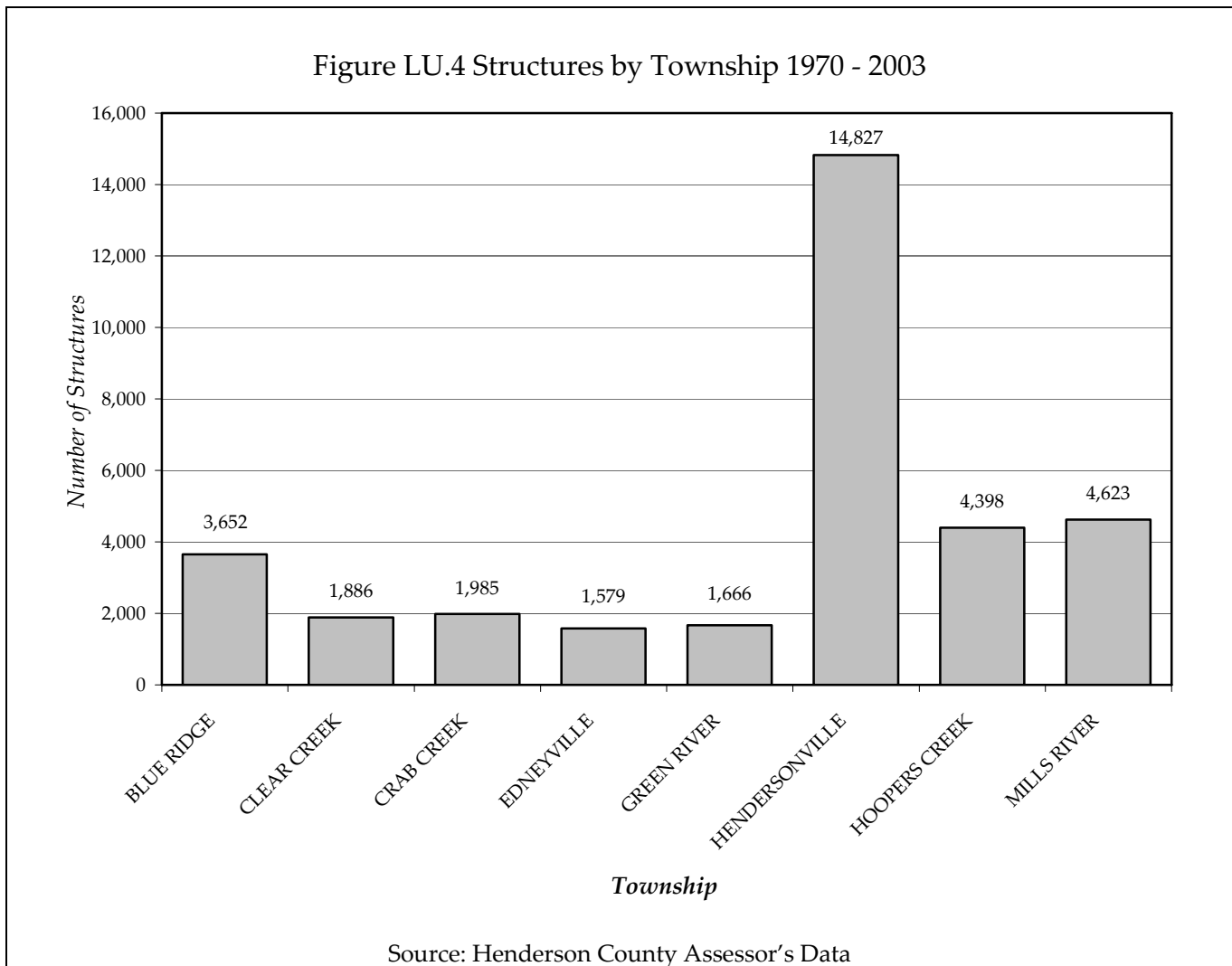
Construction Trends, Post 1970

The majority of development that has occurred in Henderson County since 1970 consists of residential dwellings (Figure LU.3). During this period residential units increased at a steady pace, and if current rates continue, it is estimated that approximately 10,000 residential structures will be built between 2000 and 2009. It should be noted that the 2000 data does not represent the structural development of an entire decade.

Figure LU.3 Construction Trend by Decade, 1970-2003				
Building Type	1970-1979	1980-1989	1990-1999	2000-2003
Agriculture/Horticulture	7	7	1	1
Commercial	238	300	264	306
Community/Cultural	82	81	110	134
Industrial	196	240	355	287
Recreation	22	34	40	38
Residential	7,876	9,257	10,172	4,229
Note: The 2000-2003 does not represent an entire decade Source: Henderson County Assessor's Data				

Map # 31 *Geographic Distribution of Structure Development* (Appendix I) depicts the cumulative geographical distribution of structural development from 1970 through 2003.

Figure LU.4 illustrates the number of structures by township. Along with the preceding parcelization analysis, Figure LU.4 demonstrates that the central and northern areas of Hendersonville, Hoopers Creek, and Mills River are where the majority of subdivision and structural development has occurred. Although Crab Creek has undergone a greater amount of parcelization, Blue Ridge has experienced a greater amount of structure development. It is likely that the central and northern areas of the county will continue to experience high rates of structural development.



Canopy Cover and Deforestation Assessment

Forest cover is a proxy measure of developed and open space. The Henderson County Assessors Office and GIS Department periodically analyzes changes in forest canopy cover by measuring changes in forest canopy depicted in aerial photographs. Figure LU.5 portrays a general trend of deforestation in Henderson County by analyzing canopy cover variation between 1992 and 2001. During this nine-year time frame, a 9% change in canopy cover occurred, which translates to approximately 6,024 forested acres (640 acres per year, on average) having been cleared. Note that these figures are not associated with any specific geographic location other than Henderson County; therefore, localized patterns cannot be established and analyzed. Also, no data exists concerning the specific uses of cleared acres. Nonetheless, this analysis does depict a decline in canopy cover within the county, symptomatic of a substantial change in land use patterns.

Figure LU.5 Canopy Cover Assessment, 1992 and 2001 (acres)				
Land Cover	1992	2001	Change	Percent Change*
Cleared	70,575	76,815	6,240	9.0%
Forested	162,839	156,815	-6,240	-3.6%

Source: Henderson County GIS
 *Percent change based upon 1992 baseline for cleared and forested property
 Note: Laurel Park and Hendersonville were excluded from this assessment based upon the lack of data

Deforestation has numerous implications for the Henderson County. On one hand, it is an indicator of a healthy and beneficial rate of growth and development. On the other hand, it raises concerns regarding the destruction of scenic vistas, fragmentation of habitat and loss of species diversity, threats to water and air quality, and the loss of open space as well as other aesthetic qualities of Henderson County. Furthermore, it is symptomatic of a general decline in the availability of developable space.

Analysis of Current and Historical Land Use Data

Over time, land use data for Henderson County has been collected through a variety of means. In order to compare historic and current data sets, it is necessary to aggregate land use categories. As a result, the overall conclusions should be considered general in nature.

Figure LU.6 shows changes in land use composition in Henderson County. It depicts a general increase in developed space and a corresponding decline in undeveloped space. Residential and non-residential land uses have increased in area dramatically over the past thirty years while open space, including agriculture, has considerably decreased. The most significant period was between 1993 and 2003 when open space declined by more than 50,000 acres, or approximately 22%. Conversely, during this same period, urban non-residential and residential land uses increased by 4.7% and 12.04% respectively.

Figure LU.6 Current and Historical Land Use by Type			
Land Use Type	1977	1993	2003
Urban Non-Residential	2,014.16	3,046.62	9,513.12
Residential	10,456.84	14,454.18	43,251.93
Open Space	229,439.00	224,420.20	175,265.03
Other	N/A	N/A	12,073.37
Total	241,910.00	241,921.00	240,103.45
Land Use Type	1977	1993	2003
Urban Non-Residential	0.83%	1.26%	3.96%
Residential	4.32%	5.97%	18.01%
Open Space	94.84%	92.77%	73.00%
Other	N/A	N/A	5.03%

Sources: Henderson County Assessor’s Data, 1977 Land Use Plan, 1993 Comprehensive Land Use Plan
 Note: The "Other" category exists only for 2003 land use data and is mostly composed of road and rail right-of-ways. Also note that the discrepancy in total acreage is the result of improvements in area calculations through the County’s Geographic Information System.

Agricultural Lands Assessment

Change in agricultural acreage is another good measure of change in development patterns over time. Figure LU.7, below, indicates that Henderson County is second only to New Hanover County in terms of farmland loss in North Carolina between 1987 and 1997. Furthermore, according to the North Carolina Census of Agriculture and the United States Department of Agriculture, Henderson County lost farmland at 3.4 % per year in the mid-1990s. It is anticipated that if the rate of farmland loss continues unchanged, the county farmland base will decrease by half to roughly 23,000 acres by 2017.

Figure LU.7 Land in Farms (acres)				
North Carolina Counties	Agricultural Census Year			% Change
	1987	1992	1997	
New Hanover County	8,858	3,486	5,435	-38.64%
Henderson County	59,232	52,281	44,511	-24.85%
Madison County	101,408	93,320	80,041	-21.07%
Haywood County	79,672	69,961	65,212	-18.15%
Buncombe County	103,876	93,584	87,382	-15.88%
Transylvania County	14,315	12,388	12,675	-11.46%
Rutherford County	58,090	55,309	61,147	5.26%
Polk County	26,073	23,140	30,701	17.75%
State of North Carolina	9,447,705	8,936,015	9,122,379	-3.44%
Sources: N.C. Department of Agriculture, Census of Agriculture U.S. Department of Agriculture, Census of Agriculture				