

EXECUTIVE SUMMARY

In 2008, Cherokee County was awarded a grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund to develop a County-wide Farmland Preservation Plan and establish practices that will protect and preserve the valuable farm soils of Cherokee County. The county subsequently engaged the researchers to assess the County's agricultural economy and lands, and to prepare a comprehensive written report including recommendations for an actionable farmland protection plan.

In this report we suggest a variety of actions to support farming and preserve farmland, which must be seen in the context of a general goal, which we offer as:

To maintain the rural character and economic diversity of Cherokee County, first by increasing the profitability of, and opportunities for, agricultural land uses, and second by supporting landowners who favor keeping their land in agriculture.

This report is presented in three sections consisting of: 1) an agricultural development plan; 2) an agricultural land protection plan, and: 3) a final section offering specific recommendations for action to implement a robust Cherokee County Farmland Preservation Plan.

The agricultural development plan offers an economic profile of agriculture and includes an historical review of farming in the County from its days as the heart of Cherokee Tribal agricultural production to the present. Findings show that agriculture has been in general decline since the end of World War II, with the number of farms now reduced to fewer than 300. The County's agricultural output value is estimated at \$17.5 million (87th in the State), with over \$15 million of that in cattle, other livestock, and poultry operations. While over 20,000 acres are in agricultural production, only 4,663 acres are harvested cropland.

The analysis indicates that the agricultural economy of Cherokee County is fragile and subject to adverse impacts from changes both inside and outside the County and its region. Proactive programming for market development and new income streams are needed to keep existing farms in production and secure their long-term profitability. Increased public awareness and active economic support from the local population is needed to secure local revenue streams that are more insulated from national or international events. Professional education and technical support is needed for farms hoping to secure transitions of assets to the next generation or to secure their farms' future through conservation easements.

Nevertheless, positive examples of agricultural practices that are responding to new market opportunities are found in the county, and this report highlights many of those as learning examples of how to adapt to changing circumstances. Other positive examples from projects outside of the County are also presented.

The agricultural land protection plan analyzes land use patterns in the County and investigates tools that can be applied to reduce the loss of farmland. This section also includes results from a telephone survey of 400 County residents that show overwhelming support for efforts to protect

and preserve the remaining farmland in the County. Fully 86% of respondents thought local government should promote the preservation of farmland, while over 66% said they support using local, state, or federal funding to preserve farmland in the county.

An analysis of land use shows that the County contains 300,100 acres, with over 93,000 acres of United States Forest Service Land, nearly 8,700 acres of lakes, and over 5,000 acres of land belonging to the Cherokee Reservation. Over 46% of non-federal land in Cherokee County is owned by persons living outside of the County. The 84,804 acres owned by non-residents are found in every part of the County.

Unlike counties located outside of the mountains region, there is very little farmland that is free of actual or potential development pressures. The lay of the land dictates that population centers and transportation routes are concentrated in the same general areas as prime farmland. Thus, the remaining productive farmland in the County is extremely vulnerable to development.

Land use policies used to protect threatened farmland were investigated and ranked for their applicability. Only some of these tools can be used in the context of the County's effectively unrestricted, open market land use policy currently in place. As the county grows, and as population pressures increase competition for use of the scarce land resources, a formal land planning process, regulations concerning the size and type of commercial and business developments, and other policies that encompass a much broader range of land use and land conservation tools may be considered, as has occurred in other mountain counties.

Among the tools readily available is the establishment of Voluntary Agricultural Districts which the County Commission authorized in 1995 but has never pursued. A key action in this plan is to re-commit the Agricultural Advisory Board created under that ordinance as a pro-active unit that works on actionable plans to achieve its purposes and objectives.

Identifying specific farms in the County as most optimal for farmland preservation activities will be the function of the Advisory Board along with whatever planning entities County government creates or engages; however, farms in close proximity to growing population centers and areas of prime soil deserve special attention. The lands between Andrews and Murphy in the Valley River Valley, land in the Peachtree area east of Murphy on Highway 64, and land near Brasstown on the Clay County border all fit this description.

In fact, most of the 20 farms with more than 100 acres and over 50 acres of open land probably deserve favored consideration for protection. These are listed in the appendix of this plan.

A discussion of formulas for ranking land, including one used by Buncombe County is given in this plan. Both the agricultural importance of the soil and the threat of transformation to other uses are considered.

The research conducted for this plan strongly indicates that the future of farming and farmland in Cherokee County is at risk. Nevertheless, opportunities do exist for agriculture in the County to right itself through a combination of technical assistance and progressive land use policies,

sustained agricultural economic development programming, and a willingness to exploit new market opportunities, especially local direct marketing and the re-establishment of regional food supply chains.

Key recommendations discussed in the concluding section are as follows:

1. Reconstitute and strengthen the Agricultural Advisory Board to harness a broad range of skills and resources to preserve and support farms and farmland in the County.
2. Incorporate Agriculture as an explicit element in County economic development planning.
3. Refocus efforts of the Cooperative Extension Service to support innovative economic development strategies and help with farm transition issues.
4. Strengthen multi-agency and multi-jurisdictional collaboration to preserve farmland.
5. Begin the process of investigating land management policies that will strike a balance between preservation of prime farmland and the natural growth needs of the County.

Readers are referred to the final section to learn more details about these recommendations.

PART ONE: AGRICULTURAL DEVELOPMENT PLAN: FINDINGS FOR CHEROKEE COUNTY, NORTH CAROLINA

I. Statement of a Need for Action

Throughout the Southern Appalachians people have always struggled to support healthy happy communities from the fruits of the land, which is famously beautiful but generally steep and stony, often acid, and far from markets – so, also in Cherokee County, though remarkably rich and neutral soil exists here in some measure.

The Cherokee County Farmland Protection Plan focuses on two aspects of the challenge - first, controlling the conversion of land to non-farm uses through economic and policy incentives and, second, enhancing the viability of farming itself by making it a more profitable and desirable calling. This section of The Plan addresses the latter.

As illustrated in the body of the plan, farming, as measured by land area and people involved and by economic importance, has declined steadily for nearly 70 years as pressure to convert land to other uses continues to rise. If ways are not found to reaffirm agriculture as a profitable and satisfying occupation, this important component of our economy, landscape, and way of life will be lost.

Project Background

This Agricultural Development Plan follows from the North Carolina Farmland Preservation Enabling Act¹ passed by the North Carolina General Assembly in 1986. The stated purpose of this act is “to authorize counties to undertake a series of programs to encourage the preservation of farmland as defined herein.” In addition to enabling the counties to create Voluntary Agricultural District ordinances, which Cherokee County did in 1995, the act also created the North Carolina Farmland Preservation Trust Fund.

Initially the fund supported programs for the purchase of agricultural easements, but by later amendment, the General Assembly created a matching mechanism for distribution of Farmland Preservation Trust Fund monies for other projects that contribute to the viability of farms, such as support for an infrastructure project, farmers’ market, or training program, according a strong preference to counties which adopt a countywide farmland protection plan. The Cherokee County Agricultural Advisory Board established in 1995 for the establishment and oversight of Voluntary Agricultural Districts initiated the development of the current plan.

¹ NCGS § 106-735 et seq.

NCGS § 106-735(b). “Qualifying farmland” is defined in § 106-737

NCGS § 106-744(c)(1).

NCGS § 106-744(e)(1-5)

Such a plan might also be formulated by a planning agency or other advisory board such as a Soil and Water Conservation District that has responsibility for land preservation in the county.

Information Resources

Statistical data – Figures supporting the historical record of agriculture and the present county profile come principally from U.S. Census publications, the U.S. Department of Agriculture National Agricultural Statistics Service and the North Carolina Department of Agriculture & Consumer Services. General data, including population, employment, household income, come also from the U.S. Census, and the North Carolina Department of Commerce.

Local input – The N.C. State University Cooperative Extension Office in Cherokee County and regional agribusiness development officer for the North Carolina Department of Agriculture and Consumer Services interviewed numerous owners of farmland in person regarding their history on the land, their aspirations for the future and their perception of current trends. In addition farmers, land owners and business people representing particular aspects of the agricultural economy of the county were interviewed extensively on their practices and experience. These became the basis for specific recommendations in the plan.

Without exception, all expressed a keen desire to see their land stay in agriculture and a willingness to strive and even sacrifice to that end. Nevertheless, even the optimists among them felt their efforts could easily fail without community support in the form of coordinated policies adopted by county, state, and federal agencies.

Organizations – governmental and non-governmental – The following list identifies a number of agencies as they are referred to in this document when not spelled out in full.

- *Commission/Commissioners* – The Cherokee County Board of Commissioners.
- *Advisory Board* – The Agricultural Advisory Board established by the Commission in 1995.
- *Extension/Extension Service* – The North Carolina State University Cooperative Extension Service.
- *NCDA* – The North Carolina Department of Agriculture and Consumer Services.
- *LTLT* – The Little Tennessee Land Trust, a private land trust.
- *SWCD* – Soil and Water Conservation District.

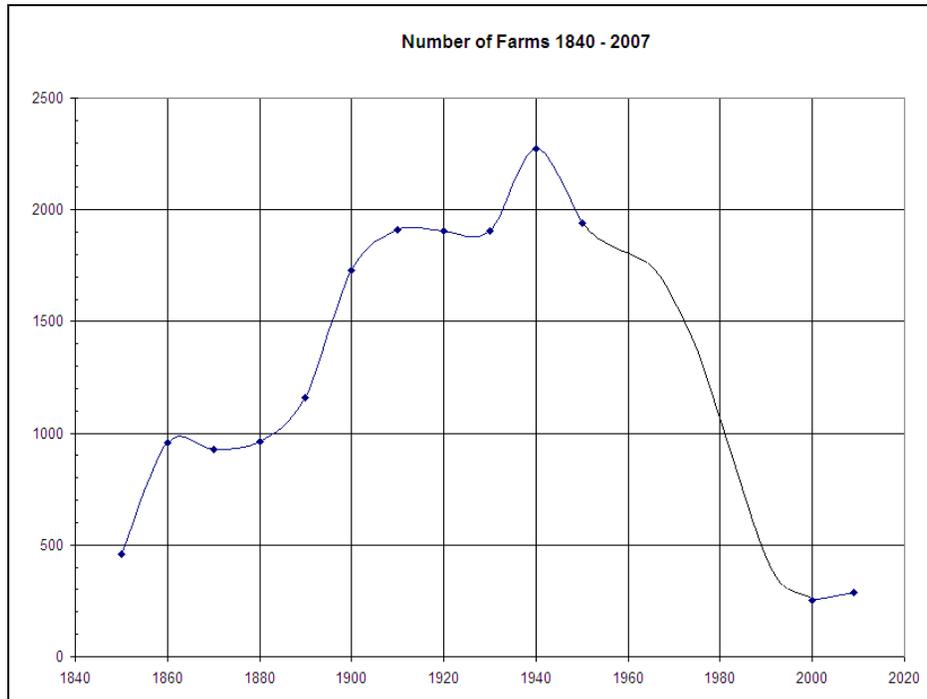
Implementing the plan

Upon acceptance by the Commissioners, the Agricultural Development Plan and the Agricultural Land Protection Plan become rough road maps for action involving several different agencies of government as well as well as private individuals, including the Advisory Board, Extension, the Soil and Water Conservation District, Municipal Governments, Tri-County Community College, and others.

Action will require allocating money and staff time, drafting specific ordinances and proposals. Progress will be monitored, progress or lack of it reported, and objectives refined. This oversight responsibility falls to the Advisory Board.

II. MAJOR FINDINGS

Farming in Cherokee County peaked in 1940 at close to 2,000 farms, most of them under 50 acres (see graph below). After 1960 the decline accelerated to the point that the 2007 North Carolina Census of Agriculture lists only 288 active farms from which they estimate a total gross dollar income of \$17.5 million. Margins and scales vary enormously, and most farm families net only supplemental income from the land.



The \$17.5 million puts Cherokee County 87th among North Carolina's 100 counties in gross farm income, but it matters considerably where per capita income of \$22,384 ranks 96 (Regional Economic Information System, Bureau of Economic Analysis, Table CA05 (NAICS) April 2008), and unemployment is 13 percent. Beyond cash flow, however, farms have traditionally underwritten social stability and economic resilience. Where wage jobs generally pay poorly and often involve seasonal or ephemeral employment like timber cutting, construction, and truck driving, a few cows on pasture, a timber sale, or a hay crop can bridge a layoff, make a down payment on a truck, or pay a college bill.

Nevertheless, in recent years raising crops or livestock has generally proven a less efficient way to enjoy the value of mountain land than just selling it. For decades farm production could generally not pay a farm mortgage anywhere in America. Today, many Western North Carolina farmers are discovering that without a high value crop like tobacco, it will not even finance a used tractor or a four-wire stock fence or pay a tax bill.

Without low-input, high-return, environmentally friendly agricultural models suitable for families who may have multiple sources of income and may not expect to be full time farmers, the pressure to sell land or convert it to “highest and best use” will continue to grow.

Already nearly 47 percent of private land in Cherokee County is registered to people living elsewhere. These absentee owners do not necessarily want to build gated communities or put commercial and resort developments everywhere. A number of them grew up on this land and hope to return one day to die on the farm or at least see it stay in their family. Others hold land because they like to live in the country, even part time. Even those who expect to make money from development generally recognize that they will do better if the County keeps its agricultural character. These owners have strong incentives to keep their land in production, even to the extent of offering grazing or hay cutting free for the benefit of not seeing their pastures and fences deteriorate.

The farm economy as well as the cause of preserving farmland needs models, policies, and support systems that enable local operators to profit through arrangements with owners who live elsewhere or do not wish to farm themselves.

As the historical review that follows indicates, over the last century-and-a-half neither individual nor public decision-makers have tended to worry about connections between the general condition of the landscape and general prosperity. Now that 47 percent of the private land in Cherokee County belongs to people who live elsewhere, helping those who choose to keep a link to the soil seems wise. And among those who live away, surely most recognize the cost-benefit significance of maintaining agricultural landscapes as a basic resource for the tourism, real estate and construction businesses – as long as all share in both cost and benefit.

Key Ag Numbers for Cherokee County	
Number of farms	288
Principal farm operators who also work off farm.	179
In nearly all farm households, someone works off farm.	
Average age of principal operators	55.8
Total Land in Farms (Includes Forest)	20,423 acres
Harvested Cropland	4,663 acres on 150 farms
Average farm size	71 acres
Average Value of Land (2007)	\$12 - \$16,000 per acre*
Receipts (Dollars and rank among 100 Counties)	
Livestock, Dairy, and Poultry	\$15,588,00 – 52nd
Crops	\$1,725,000 – 90th
Government Payments	\$164,000 – 90th
Total	\$17,477,000 – 87th

Source – Statistical Profile of Farms, NCDA & CS North Carolina 2007 Agricultural Statistics

III. How We Got Where We Are

The heartland of the Cherokee, among the most serious farmers among Native American peoples, once centered on Cherokee County because it offered fertile bottom land for cultivation, rivers full of fish, forests rich in game, herbs, and berries, and mountains of heart-stopping beauty – a sacred refuge.

The Cherokee produced corn, squash, melons, tobacco, and several other crops, at least as efficiently as their European contemporaries, if not more so, although even then cultivated land did not entirely support them. For lack of technology and market access, they learned to fill their complementary needs from their uncultivated land through practices that were evidently quite sophisticated. The Cherokee Heritage Trails Guidebook says of the river valleys that converge where the county seat, Murphy, stands today, “By the 1830’s more than 3,000 Cherokees lived in about 600 households throughout this area, making it one of the most densely settled areas of the Cherokee Nation at the time.”

Had they become peacefully integrated into the United States economy and their numbers grown, they, too, might well have overtaxed their resources, but in 1838, President Andrew Jackson had them driven out over the Trail of Tears to Oklahoma, leaving behind their name and the example of a harmonious exploitation of wild and cultivated land.

Jackson in fact failed to uproot quite all the Cherokee, and many families whose names take up columns in the local phone book claim Cherokee blood. About 400 enrolled members of the Tribe live on 5,000 acres of tribal land in Cherokee County today.

The memory of their land stewardship also remains an open challenge. One would need a great deal of evidence to prove that the fields, forests, and streams of Cherokee County have ever directly supported more people than they did in 1838 without suffering environmental damage.

After the ethnic cleansing, the land itself only gradually became aware that the Cherokee had left. Their immediate successors carried on much the same variation of slash and burn agriculture except that they had the means and inclination to clear pasture for livestock, as well, which they found necessary after decimating the wild game. Unfortunately, the increasing numbers of people plowing the steep terrain assured that “new ground” increasingly wore out faster than old fields could regenerate.

The 1840 census, the first after the deportation of the Cherokee, counted 3,427 people in the County, but that probably represented a lower density, as county borders at the time encompassed the present Graham and Clay counties also. Growth accelerated after the Civil War. The 1910 census recorded a population of 11,860 residents and farms numbering 1,912. “Improved Farmland” included about 50,000 acres. The population peaked in 1940 at 18,813 including 2,211 farm operators. Both numbers began to fall after World War II.

The total population dropped 11 percent between 1950 and 1960, and would not surpass its 1940 level until 1980. As noted above, the census lists only 288 active farms today, mostly part time

operations, but among those only 150 farms harvested crops on only 4,663 acres. There is of course substantial acreage in pasture and forest.

The Nineteenth Century

The demands of gold miners in North Georgia provided the excuse for clearing the Cherokee from all their territory. Hydraulic mining turned a vast area into a virtual desert that still leaves traces on the land, even though State of Georgia banned the practice in the 1880's. A small gold mine operated across the line in Cherokee County between 1861 and 1896, but did little damage, while North Carolina farmers no doubt profited from the miners' market.

A similar story unfolded just across the Cherokee County border in Polk County, Tennessee. Copper mining began there in 1843, but took off after the railroad arrived in 1890 and the open roast heap smelting of ore began. The market for labor, produce, pit props and cross ties no doubt raised living standards for families in Cherokee county. Fortunately a low ridge protected them from the sulfur dioxide fumes that killed every green plant for 50 square miles around the smelter.

Iron ore, marble, and talc have been mined commercially off and on in Cherokee County since early in the Nineteen Century, but never had such widespread impact.

The Twentieth Century

Forest Products

A hardwood lumber boom, beginning before the turn of the century, resulted in the wholesale clear cutting of the Southern Appalachians and denuded about half of Cherokee County. Growing steadily from the time the Western North Carolina Railroad reached Murphy in 1891, the timber bubble finally collapsed when the supply of accessible old growth timber ran out in synch with the onset of the Great Depression 1929. Several tanneries operated through the 1930's but the industry vanished from the whole region after World War II under the double jinx of imported leather from South America and the chestnut blight that destroyed the main source of tanbark. (Oak also supplied tanbark, but that, too, became dearer as the timber business declined.)

From the devastation of the 1920's, forests have regenerated enough that saw logs provide occasional income to landowners, but no sawmills or lumber kilns operate in the county today. The core business of the largest forest-based enterprise, Valwood Inc., is chipping less-than-mill quality hardwood as feed stock for Blue Ridge Paper Company in Canton, 84 miles away by truck. Valwood brokers sell logs harvested in the process to mills in neighboring counties.

The 30's and 40's

The onset of the Great Depression brought home many County people who had left for wage work elsewhere, particularly in the industrial Midwest. The Civilian Conservation Corps

absorbed some of the shock, but the TVA soon dominated the economy of the whole region. In Cherokee County itself, land clearing began on Hiwassee Dam in 1936, followed by Apalachia Dam a few years later. Both inundated considerable farmland but besides providing employment during construction, they would later prove to be an important recreational resource.

The TVA, fearing siltation of their new lakes, also drew attention to the serious erosion occurring on steep mountain farmland in the Tennessee River Basin because the silt threatened the new lakes. The Soil Conservation Service, Extension, 4-H and regional farm organizations joined in an intense campaign to promote reducing livestock numbers on steep slopes, contour plowing, cover crops, and check dams. New plants were introduced, including Bermuda grass, Lespedeza, Kudzu, and Multiflora Rose.

Decline sets in

The dynamism began to fade in the 1950's. Brighter employment prospects in the industrial Midwest - Detroit, Akron, Toledo - beckoned again. The population fell 11 percent between 1950 and 1960. The whole idea of small, semi-subsistence, diversified farms began to change. With rural electrification came the possibility of milk coolers and ventilated chicken houses. Mules and oxen disappeared rapidly, but roads and refrigerated transport that gave easier access to outside markets also exposed local farmers to outside competition.

Rising land values gave more access to credit. That, plus wage work at better-paying public service jobs, TVA, and the several light industries that located in the county, enabled many farmers to upgrade their facilities and try to keep a niche in the rapidly integrating national farm economy. At one point over 200 confined chicken enterprises operated in the county, most under contract to national firms. In the 1960s a dozen dairies with modern equipment sold milk to two major distributors, Sealtest and the Coble dairy cooperative that ran a creamery in Brasstown on the Clay County border.

Only one large chicken business, an egg producer, remains and one dairy that sends its product over 100 miles to a Dairy Farmers of America Co-op plant in Athens, GA.

Details of the decline point to many contributing factors, but in general the enterprises were too small, too far, inputs too dear, and arable land too poor and fragmented. The average Cherokee County farm could not grow enough grain to keep enough White Leghorn chickens laying or a confined herd of Holstein cows milking. Mountain pastures could not support high volume agriculture.

The emphasis has shifted inexorably toward the production of beef calves, because the labor, nutritional and infrastructure (capital) demands of that business are low. A working man, or his wife or child can check the fence, open a gate or put a round bale in a ring before dinner. A feeder calf can grow a big lanky frame on local grass and hay and convince a Kansas feedlot buyer that he will gain quickly on Iowa corn. The tax on the land is also low.

But the living is not great. Some try, with mixed success, to touch a higher level of profit by raising registered cattle because in theory fewer animals will return a greater profit. The margins, and the costs and risks, do pencil out much higher, but it is not a game for the faint hearted or financially challenged. Most of those who succeed are quick learners who started with deep pockets and got lucky early on. The best insurance is a second job.

Meanwhile, every year sees the sale of more farms for subdivision and residential development – the latest way to harvest money from mountain land.

IV. Models from Field and Forest

Fortunately, not all the farm stories from Cherokee County end badly. Planning for the advancement of agriculture must consider the farms and enterprises that have not succumbed and face the future with open-minded courage. The following short profiles selected from interviews throughout the County each indicate an avenue of development that county government and agencies might support.

Notla Farm

Randolph Shields' grandfather John brought his family to Cherokee County from Cades Cove, Tennessee, in 1877. His bred draft horses and mules on land on U.S. 64, 12 miles west of Murphy. Randolph was born there in 1924, though his parents, John Junior and Kate soon left for work in Akron, Ohio. Laid off in 1928, John Junior came home and took work at a filling station for a dollar a day while the county school system hired his wife Kate to teach in a succession of elementary schools, though it would take her 20 years of summer course work at Western Carolina Teachers' College in Cullowhee to earn a bachelor's degree.

Of John Senior's eight children, Randolph's dad would be the only one to settle on the farm. In 1930 he took over the farm and started buying dairy cows.

"We hand milked before breakfast. I'd sell milk at school for 10 cents a quart and washed bottles when I came home. In 1936 we bought a gasoline powered milker. Dad tried to make it work, but we still milked mostly by hand."

In 1943, they borrowed \$3,500 and bought 140 acres of additional land.

After Pearl Harbor, Randolph joined the Marine Corps, but just before shipping out to Iwo Jima (where his unit suffered 90 percent casualties) he was sent home to attend his father's funeral. His brother died in a parachute jump over Germany.

By 1948 Notla farm was milking 30 cows, but that year the power line came through.

"We're just 12 miles from Copper Hill. That was the only employer anywhere around. We'd take 20 cases of milk over there in a 1936 Ford Truck and sell it by the bottle."

A proper milking barn and cooling tanks followed in due course, then underground silos and paved handling facilities. Holstein cows replaced the original Guernsey's when bulk buyers Sealtest and Coble objected to the high butterfat, but the basic production model has changed little since World War II.

The farm provides all the feed for 120 milking Holstein cows, two bulls that run with them, and replacement heifers. On the bottomland they grow corn for silage, behind which they sow a cover crop of barley that they graze and turn under, manure and all to build soil in the spring before the pastures green up. All cattle spend some part of every day on pasture. Their best performance was 2.7 million pounds in 1998. In 2008, a drought year, the farm sold 2.45 million pounds of milk and made a good profit for the year, according to Shields. The milk price broke sharply with the onset of the financial crisis, however, and he fears losses could ensue.

Before the Financial Crisis, the 455 acre farm was appraised at \$3.6 million, on which property taxes are \$8,200 thanks to the Present Use Value program. Before the Financial Crisis “dozens of people” approached the Shields family about buying the land.

For most of the years since World War II Shields drove a mail route and his wife taught school to supplement income from the farm. Now 85, he remains engaged in the business, but his son John oversees operations and two hired hands. Thus, Notla Farms supports more people now than has through much of its history.

John's son Matthew is in the Army with orders for Afghanistan.

Observations:

- Notla Farm never abandoned the principle that the farmland would provide all the feed for the cows, which harvest it themselves from pasture whenever convenient.
- Until relatively recently, the principle operators earned wages, with benefits, off the farm.
- They kept debt low.
- They pay low taxes.
- They have had consistent management spanning four and maybe five generations.
- They benefit from a network that handles their marketing.
- Notla Farm is worth more than the present owners could afford if they had to buy it from themselves.

Concerns:

- Handing down any farm of Notla's value to the next generation will require a well-crafted estate plan to avoid a forced tax sale.
- If the real estate market rebounds, the land will be subdivided for development. It's already happened next door.
- The dairy business everywhere hangs by a thread. Continued low prices or having to find another buyer would precipitate a crisis.

Bass Hyatt

Bass Hyatt, 75, actually lives just over the line in Clay County, but for years he ran the USDA offices of what has since become the Farm Services Administration in Murphy and is well known to generations of Cherokee County farmers. Like many of them, he sells beef calves from his herd of 100 mother cows.

For the last five years he has put up no hay or silage and more recently harvested no corn at all. The cows graze year round. He claims to have made money every year since he changed his management, including the drought year of 2008, when he had to drop his numbers to 75.

Hyatt became interested in “grass farming” through reading about it, particularly in the monthly *Stockman Grassfarmer* newsletter. A field tour to Argentina led by *Grassfarmer* editor Alan Nations convinced him to become a “grazier” as practitioners call themselves.

As regards managing livestock, a wide range of adaptations and techniques qualify as grass farming, but all involve pasturing dense groups of stock in defined areas for short periods of time. A growing season plan aims at not allowing grazed plants to be grazed again before they recover, and a dormant season plan for consuming stockpiled forage, including grass left standing by the summer plan.

Hyatt generally moves all his animals every morning, except when he plans to leave them longer in one place. In August to September they strip graze standing corn which fattens calves and assures high conception rates through the winter. When dry pregnant cows need less feed they have ungrazed (“stockpiled”) grass. When they calve in May and June, they again have fresh growth to support lactation.

“It’s a good system. My son, who’s a machinist, helps me out now and then when I need two people, but mostly do everything myself. It takes about 45 minutes to an hour to move the cattle, and I enjoy that. It’s really workable, especially for people with a few cattle and steep land. If you do it like I do, you can do it with little equipment. I hardly ever run a machine anymore.”

This year Hyatt had a few animals custom processed and peddled the frozen and shrink-wrapped beef to friends and neighbors at a premium as grass fed. It sold so well he plans to do 15 animals the same way this spring.

“I did real real well on that. I don’t understand why nobody has taken this up. They like to drive tractors and talk. They don’t believe it works. They think they’ll have to cut cattle.”

Hyatt and a grazier from Buncombe offered a weekend course in Grass Fed Livestock at the John C. Campbell Folk School in Brasstown in February of 2009. All seats were taken.

Observations:

- Hyatt's grass farming breaks a number of conventions that govern most small cow-calf operations in the area. This includes the idea of moving cattle daily, but these changes have reduced input cost and capital overhead.
- Anyone attempting this approach might find water availability to be a difficult or expensive challenge.
- Hyatt has chicken manure spread on his pastures twice a year by the nearby egg producer Parker & Reichman. This mitigates fertilizer costs and highlights another local resource.

Concerns:

- Hyatt, like Randolph Shields, is past middle age. He's the fifth generation on the farm. He has three unmarried children – none committed to taking over. *"I don't have anyone coming on!"*
- Though Hyatt's description seems simple, keeping animal performance high and labor demands low in a given situation requires knowledge and skill. Training and advice is extremely important.

Parker & Reichman

Eric Reichman, 88, escaped the Holocaust in Poland as a teenager, fought the Nazis in a Polish unit based in Britain, and wound up stateless in New York after the war. There he hooked up with someone who had acquired a tannery in Marble, North Carolina, and set off to try to restart the business.

"It was a disaster. They'd dropped the tariffs, and the South Americans killed us. There we were with all these empty buildings, so we decided to try raising chickens. We're doing great right now because in a financial crisis people substitute eggs for meat."

Today Parker & Reichman have enough hens (800,000) all in one facility to rank Cherokee County ninth out of 100 in the state for non-broiler chickens – egg layers.

"When we started there were 200 farmers raising chickens here, all independent-minded producers who said, 'Don't tell me what to do.' I didn't know anything, so I just followed the directions Purdue gave us. Ignorance was a blessing. They call this agriculture. It's not. It's an industry that has nothing to do with agriculture."

Well, not quite. True, Parker & Reichman buy most of their feed by the semi load from Kentucky and the Mid West, but they are also the only market for grain produced locally that isn't fed to on-farm livestock. Their chicken manure slurry is a major source of soil fertility in the immediate area of the plant.

"In 1948 this was a good place for chickens because cool summers and mild winters meant you didn't have ventilation problems. Now, everyone, including us, has air conditioning, and the local climate doesn't matter. It's just fate that we're here."

Observations:

- Technically a CAFO (Confined Animal Feeding Operation) Parker & Reichman really is a factory, and is not land-based.
- Farmers who invested in the chicken business hoping to supplement their land-based activities wound up as share croppers to outfits like Purdue - on their own land.
- Like chicken factories everywhere Parker & Reichman depend on Mexican workers.

Concerns:

- Reichman points out that so-called foot loose industries like his can close a plant as abruptly as they open one. Three plants stand idle in the County now.
- Labor limits possibilities. People who might do rough, under-compensated work on their own farms will seek better jobs before doing stoop work for others near home. Truck farmers also hire Mexican field labor.

The Davis Farm

Tim Davis and his brother run the only fully commercial vegetable farming enterprise in Cherokee County. Family land, where Davis' wife's family relocated after TVA displaced them in the 1930's, forms only a 50 acre kernel of their 600-acre operation, which includes 350 acres of crops and 250 acres of pasture. They lease the rest, much of it from the historic Mission Farm.

"You can't buy places to farm."

They generally plant 100 acres of corn, which they sell to Parker & Reichman, and 250 acres of vegetables – peppers, tomatoes, cucumbers, squash, but predominantly greens – kale, mustard, turnip, but mostly collards. They also raise calves on upland pasture and feed them through the winter on haylage reaped from wheat and rye cover plantings sown behind their row crops. They market mostly through wholesalers in Atlanta.

"We got into collards in the 70s and grew more and more when the club root got into our cabbage. They've done real well for us."

Observations:

- Like Parker & Reichman, Mission Farms has depended on Mexican labor since the 1980's.
- They make use of P & R chicken manure, which has become more important as fertilizer prices rise.
- Their best crop, greens, fits the climate perfectly – a very long cool growing season.
- Their bottom line reflects favorable lease rates for land.

Concerns:

- Estate planning and family succession matters also to leased land operations. *"Some of our key property belongs to older folks. As long as they live, no worry, but when their kids get it, they have no interest."*
- Suitable lease arrangements are increasingly hard to find.

- “Right-to-Farm” issues threaten. *“It’s just a matter of time until we get a complaint about spraying chicken litter.”*

Jeremy Smith

When Jeremy Smith came back to live in Cherokee County, he and his wife set out a big garden.

“I’ve always just liked to grow things – vegetables, flowers, anything.”

The lack of public interest in home grown produce aggravated them. Smith began attending meetings of the Far West Small Scale Agriculture Action Team to press for a weekly farmers’ market on the Murphy town square.

“After a while, I just went to the city council and got permission. With \$1,500 of our savings we bought some canopies to rent out and T-shirts to sell and just started. This spring will be our eighth year.”

Smith still gardens and oversees the farmers’ market in its season, but he also manages Doyle’s Cedar Hill Restaurant, started by his father and known for fresh produce and eggs. A few other restaurants feature local food, as does the School in Brasstown.

Observations:

- The open-air farmers’ markets in Murphy and another one in Andrews came to be through the initiative individual producers and have become reliable fixtures over a number of years.
- Vegetables and especially fruits sell out quickly. Demand exceeds supply.
- Aside from the Farmers Market, George’s Butcher Shop sells local meat, though he does not promote grass fed meat.

Concerns:

- There is only *one* full time market garden enterprise in the county – The one-and-a-half acre Candy Mountain Farm on which Francis and Steve Juhlin farm, although many Cherokee County families have home gardens for traditional staples.
- The market for fresh produce also seems to be exclusively high end restaurants, health food enthusiasts, and the Folk School in Brasstown, all of whom seek variety as well as purity (The Juhlines bank on arugula).

Ridgefield Farm

The Whitmire family, who altogether hold over 1,000 acres, are the first and so far the only private owners of Cherokee County land to negotiate an agricultural easement on their property. Farm operator Steve Whitmire lives in Dahlonega, Georgia. He says his father began acquiring land in the early 1950s, and put together the present Ridgefield Farm over the next 30 years. It includes 400 acres of pasture where he grazes 200 mother cows. The rest is in forest.

The sale of separate business interests gave Steve Whitmire the means to buy out the other heirs, which he did in 2005. He has committed himself to raising registered Braunvieh cattle and preserving the land. Protracted negotiations with the Little Tennessee Land Trust, requiring much patience and tolerance from both parties eventually produced a workable easement that also yielded a considerable tax benefit.

“If I had a magic wand, I’d figure how, without hurting owners, to stop development on bottom land. Landowners should be compensated, but I’d like to see a charitable enterprise set up to buy land and make it available to farmers.”

Observations:

- Not all outside land buyers want to turn family farms into second home developments.
- A 100 percent donated agricultural easement can become the nucleus for preserving an agricultural landscape over a wider area, as others see the advantages.
- The Folk School serves Ridgefield farm hormone and chemical free beef.

Concerns:

- Few landowners of any kind have the means, patience, and desire to negotiate a complex easement agreement nor can they take full advantage of the tax incentives unless they can report considerable taxable income.
- Probably only an outfit as substantial as Ridgefield and an institutional buyer as committed to local sourcing as the Folk School could arrange systematic direct sales at the present time.

T.L. McNabb

The McNabb family rode every wave of change that passed through the county. Grandpa peddled produce and butter to the copper miners in a Model-T. The Hiwassee Dam flooded their land. Dad worked for TVA spraying mosquitoes on the lake. Ma taught school. They milked dairy cattle until the cost of regulation equipment caused them to quit. They had 300,000 chickens laying fertilized eggs on contract. They kept 300 hogs and milled grain, both locally grown and hauled from barges that docked in Chattanooga. Now 140 mother beef cows constitute the only agricultural activity on their 229 acre farm. They fill most of their hay needs through other landowners who no longer keep stock and let McNabb cut hay in return for the favor of keeping fields mown, clean, and healthy

“We do all right, but you can’t make it just on cattle. It’s not just that you pay for land with cattle, you can’t even build fence.”

T.L. is also a grading contractor and has done well making roads, driveways, and house sites for home builders.

“I bought new land next to mine and put ten lots on it. They all sold, so I did another small development with 20 lots. They haven’t sold. I guarantee buyers that the land they see (our farm) won’t be developed in our lifetime.”

The McNabb's children are grown but haven't yet had to make decisions about the future of the farm.

"I don't like to see farms sold off. It's dying here, farming. I've thought about easements, but I couldn't tie my hands in perpetuity. For ten years I could. I've been a proponent of land use planning since I got into grading. You wouldn't believe some of the places I've worked on."

Observations:

- All McNabb agricultural enterprises that depended heavily on capital, such as chicken houses or imported inputs such as grain proved impractical in the long run.
- Like many Cherokee County natives, the McNabbs care deeply about the way their land looks and works and have repeatedly demonstrated their willingness to make sacrifices to keep it healthy, productive, and beautiful.
- Their two developments represent the last in a long succession of enterprises designed to cover overhead cost on the farm. The new houses do not occupy or degrade any fields or pastures, and the McNabbs saw clearly that the view of green pastures and happy cattle would raise their value.

Concerns:

- The distance to sale barns and slaughter houses in Tennessee and Georgia effectively impose a tax on cattle producers like McNabb. He does market some beef locally through George's Butcher Shop; however, margins suffer when he buys in grain to offer grain-finished meat.
- "Conservation development" is an excellent idea, but not everyone has the inclination to do it or the eye to carry it out.

Valwood

Chris Logan runs the last wood processing plant in a County that once had several sawmills and a factory that made television cabinets. Valwood's core business is hardwood chips which it trucks 84 miles to the Blue Ridge Paper, Co., mill in Canton.

"If Blue Ridge goes, we go."

They chip 60 – 70 percent oak, 25 percent poplar, plus a mixture other species. They also broker saw logs and logs for plywood. Much of this comes from private land taxes as forest under the Present Use Value program, which requires that a certified management plan be registered at the local state ranger's office.

"I'll call down there and ask who's got a plan recommending a harvest in which year, and I'll give a call in that year and bid on the job. It's a good program, but there are abuses. Once people have plans, they're never audited. In my opinion, when you file a management plan saying, 'I'm growing commercial timber,' you ought to follow it."

Logan laments the massive clear cutting that occurred earlier in the last century as well as the fact that the Nantahala National Forest which covers 38 percent of the county, focuses almost exclusively on recreation and wildlife now.

“The fact is, right now there’s more trees dying in this county than being harvested.”

Observations:

- Private forest land, which comprises a significant percent of land taxed at present use value, probably does contribute significantly to farm income, especially as a reserve source of cash to pay down a debt or weather a crisis.
- Exact amounts are difficult to figure, because oversight is minimal and the logging industry extremely fragmented.
- Non-timber forest uses – recreation, game, wild plants – have received little attention.

Concerns:

- “Are woodlands as productive as they could be? No,” says State District Ranger Robert Ray. “And, yes, there is a tendency to high-grade (take just the best trees for short term gain, ignoring long term improvement)
- The state Forest Service office responsible for two counties is only a two-person operation (assuming the assistant ranger position is ever filled). Fire prevention and stream protection come before logging oversight among departmental priorities.

Smithmont Farm

Marcella Hampton was 17 and fresh out of high school when she married J. Franklin Smith, 27, at just about the bottom of the Great Depression. Nevertheless, they set off together for the two-year certification program at Western Carolina Teachers’ College, now Western Carolina University,

Over the next dozen years they each taught full-time in a succession of Cherokee County schools, parented four children, bought 239 acres of land, started a dairy farm, opened a community store and took summer classes that would eventually lead to master’s degrees. “People said dad was touched in the head to buy such rocky land,” recalls his youngest daughter, Audrey. “They were right. I dug and hauled too many of those rocks as a child.”

All four children went to college and entered professions that took them away from the land, and J. Franklin died in 1964, but Marcella carried on alone for 40 years, ultimately leasing out the pasture but keeping a sharp eye on all that went on.

Marcella died in 2004. Audrey, who had married her high school sweetheart Steve Ware, moved back to the farm with him from Atlanta not long before. “I took early retirement. I had to get back in the farming mode,” she says. Fortunately her sisters and brother wanted to stay invested in the farm and continue to support the Wares’ goal of keeping it in the family and making it a model of good management, environmental stewardship, and community enhancement.

“For an article in Progressive Farmer magazine, we outlined these goals for our farm:

- 1. Manage the existing Black Angus herd for maximum herd health, nutrition, and return on the dollar with a minimum of man-hours.*
- 2. Protect the creek banks and streams to preserve water quality, control floodwaters and pollution runoff, and protect fish and wildlife habitat.*
- 3. Establish wetlands and ponds where feasible for maximum use and aesthetics as well as a possible aquatic farm venture.*
- 4. Establish a wildlife program to increase the deer, turkey, and bird population.*
- 5. Design and implement a forest management plan with Best Management Practices for timber and wildlife-habitat improvement as well as recreational and aesthetic value.*
- 6. Establish the homestead and farm as an educational center for kindergartners to graduate students, senior and youth groups, businesses and government agencies, organizations and families...while continuing to practice rural land and woodland use that is environmentally, economically, and culturally sustainable.*
- 7. Design a logo and marketing strategies for the farm, farm products, livestock, homestead, and our rural way of life.*
- 8. Build a “multi-generational” home that can accommodate 1-year-olds as well as 90-year-olds or remodel the family farm house.*
- 9. Partner with both public and private organizations for information and resources in line with attaining these goals.*
- 10. And last, but most important!!! make the homestead and the farm self-sustainable in order to pass it along to future generations to enjoy and share with others.*

Audrey Ware brings to bear on this challenge skill she says she gained in 16 years of directing the Office of Pharmacy for the Georgia Public Health Service.

“I knew a lot more about cows at age six than I did at sixty, but I’ve learned a lot about getting things done in a chronically underfunded agency. Network, make coalitions and don’t give up.”

Ware might lack cow knowledge, but she knew how to persuade the University of Georgia to send veterinary students to Smithmont for practical work under supervision of professors. She recruited Bass Hyatt, a friend from her youth, for advice on better, cheaper grazing practices. To further the farm’s ecological objectives, she has hooked up with state and federal agencies and regional groups such as the Hiwassee Valley Coalition. When an adjacent farm spouted a

residential development that struck her as wasteful of land and resources she turned a couple of kitchen table discussions into the Southern Appalachian Sustainable Building Council to seriously press for standards, incentives, and promotion of green ethics. It's reach now extends into three states.

Observations:

- County-born people, whose careers once led away, often return bringing ideas, energy, and occasionally even capital, and when they claim a native's right to speak, they might expect to precipitate change.
- Where landowners themselves understand land stewardship to include providing public benefits such as healthy streams, fair landscapes, educational opportunities, and wildlife habitat, they might have a claim on public support.

Concerns:

- Public programs for environment, agriculture, economic development, non-profit groups overlap but do not work together enough. As Audrey Ware says, *“Generally, I’ve found that one program doesn’t know what the others are doing, and landowners also are not in contact with each other, so we all think we’re facing these things alone.”*
- Ware cites legal and business help, especially on estate and ownership transition questions and land preservation (easements), among her most pressing needs.

George’s Butcher Shop

American small towns rarely have butcher shops anymore, but if you live in Murphy, you can drive a few miles west on U.S. 64 and buy cuts of meat from George Michelsen that you won't find for another hundred miles in any direction.

In 1995, after 24 years in the specialty meat business in Florida, Michelsen moved to Cherokee County with his wife and built a house. He'd hardly held a hammer before that, but he did it all himself.

“It wasn't meat experience, but you get something from just doing it, asking people, and doing it over until you get it right.”

Then he built a second house to accommodate his parents. Then he looked around for something to do. His wife suggested the butcher shop. It opened in a small strip mall in 2007 and ran in the black within two weeks, though the recession that set in in spring of 2008 has trimmed profits considerably.

“A lot of our customers are from elsewhere, particularly Florida, but our prices compare pretty well with the supermarket, for what you get, and once people come into the store and see what we offer, they usually come back. At first they asked for antibiotic and hormone free meat, but now they want locally grown.”

Michelsen now carries the Whitmire's Ridgefield Farm beef and laments the fact that it has to make a long round trip deep into Tennessee for slaughter. "With a USDA inspected facility nearby, a family could do pretty well on goats, pigs, or poultry from their back yard. Freedom from five acres, I say. A small slaughter house, even if it was in an old truck would stimulate the whole area."

Processing costs more at small facilities because they typically can't market byproducts – offal, tallow and hides; however, enterprises such as George envisions do thrive where a butcher has the skill to handle multiple species in an efficient and customer-friendly way. George believes he can.

"You can always sell the steaks and grind everything else into hamburger, but you lose on hamburger. I have to sell the middle cuts and the bone-in cuts, the ribs, the roasts, the neck. That's the challenge. Turning pork trimmings into sausage, that's profitable."

Observations:

- Agriculture, which is turning solar energy into money, is a chain of links – plant to animal to processing to market to reinvestment. Only investing in the weak link truly strengthens the chain.
- Any poll of small livestock producers in the southern Appalachians, if not all of North America will rank processing and marketing, in that order, as the links to reinforce.

Concerns:

- Even George Michelsen subcontracted the sheet rock work on his houses. Some trades, like cutting meat, take time to learn. Recruiting and training people to a level that insures success may be the weak link that causes any system to fail.
- In animal products, including dairy as well as meat, the weak link now may be regulation. Getting USDA certification for a small slaughter facility is difficult and expensive, though it has been done. Presently in North Carolina, meat cannot be sold in open air farmers' markets, though in some states this is possible. Reforming regulations to the benefit of small producers and direct sales would be a worthy objective for a coalition of county farm enhancement programs.

The Wood Farm

The nearly 600 acres owned by members of the Wood family lie athwart the most beautiful section of the Andrews Valley including the trout-filled (hatchery supported) Valley River, the tumbling waters of Morris Creek, the four lanes of U.S. Highway 19, the main railroad right-of-way into Murphy, and the Cherokee County airport (runway lengthened to support the FBI hunt for domestic terrorist Eric Rudolph). It also includes roughly 400 acres of rich, flat, arable bottomland, the largest parcel of such ground in the county.

“Nothing around here compares to the Wood Farm, and what becomes of it will determine the future of the whole Andrews Valley,” to put it in the words of Jerry Pulliam, one of the founders of the Andrews Valley Initiative, dedicated to a green, landscape-based economic development of his birthplace.

Brothers Edgar and Keith Wood have run the farm together since their father died in 1983. He had switched it from dairy cattle to row crops in 1955, but Edgar and Keith have grown cattle, ornamentals, strawberries, trout, Christmas trees, pumpkins, tobacco, tomatoes, and sweet corn, but today they focus on a standard corn-soy rotation plus some pumpkins and sweet corn on the side. The cattle on their pastures actually belong to someone else. Virtually all the field corn goes to the chickens at Parker and Reichman. Cargill in Gainsville, Georgia, buys the soy. Edgar Wood works full time on the farm. Keith has a day job, with benefits, with Extension in Murphy.

“We found that works best for us,” says Keith, “but you don’t make much profit in crops with less than 1,000 acres. For one thing, all the machinery is designed for big operations, and a small producer can’t afford it.

“I want to keep the farm in the family. I don’t want to be looking out at buildings along the four lane, but it seems like if our land contributes so much to the quality of life in the Andrews Valley there ought to be some compensation for that. I’d like to see the county fund farmland preservation, but they tend to overlook ag as a part of economic development.”

The Wood brothers offered the farm as a study site for the Mountain Landscape Initiative, a program organized through the Community Foundation of Western North Carolina. The program brought together design teams to focus on cases representing a variety of land use issues facing Western North Carolina, and in May of 2008 they participated in a “Charrette” at Western Carolina University to work out a conservation development proposal for the farm.

The term Conservation Development comes from the work of landscape architect Randell Arendt. It stems from his observation that open space and agriculture can more often than not coexist with development, generally to the advantage of farmers, developers, and the public. Arendt nevertheless recommends good design support, well-crafted land use ordinances, and modest incentives. In the case of the Wood Farm, the design team sketched out two concept plans that would meet Wood family goals, which in Keith’s case included “Having financial resources to do new things after farming.”

By clustering the houses both proposals would leave all flat, bottom land in agriculture and much of the steeper land in trees. Selling an easement on 45 acres of streamside land and earning tax credit for donating easements on an additional 72 acres would help finance the development, which in turn would re-capitalize the farm and underwrite some new things after that.

The brothers were still considering the concept proposals when real estate prices began to collapse, but they realized that negotiating an easement sale with a land trust that doesn’t have great means on terms that would satisfy an extended family is easier said than done.

Said Keith, “I would like to see the county buying easements. People talk so much about how much the farms mean to the county and what they do for tourism and quality of life, it seems like they could pay for some of that.”

Observations

- The fate of the Wood Farm, along with a few other properties around the county, will indeed affect the success of any farmland preservation program. If public funds become available, county government will need a systematic and transparent procedure for ranking candidates for easement purchases in order of preference.
- The Wood family is understandably reluctant to relinquish any property rights, but that is the very definition of an easement. To assure that owners feel justly rewarded for their effort, non-cash factors in an easement negotiation may include appraised value, tax status, development design, sometimes public access (to trout water?), life estates, reserved home sites, and the special concerns of several funding sources and multiple owners.

Concerns:

- Transaction costs for a property as complicated as the Wood Farm will be high, while patience, time, and money may be in short supply, and public interest will be intense.
- Nationwide, with notable exceptions, few small rural counties have undertaken the politically difficult task of establishing the procedures, planning support, and incentives necessary to make conservation development the routine and favored approach to subdividing land. Typically it happens where committed landowners do it on their own initiative for personal reasons or anticipated profit.

Candy Mountain Farm

Extreme mini-farmers Stephen and Frances Juhlin represent another path of possibility in Cherokee County. They moved to Murphy 20 years ago with a dream of self-sufficiency on the land and have finally ratcheted up production and efficiency of their one-and-a-half acre Candy Mountain Farm to the point that in the spring of 2009, in spite of the Recession and a son in college, they feel they can quit their day jobs and devote full time to their beds and greenhouses.

Certified organic market gardeners, they grow a wide variety of greens, berries, fruits and vegetables 12 months of the year, which they market directly to a wide variety of customers – retirees, young people trying to eat healthy, religious groups and home schoolers, local restaurants, the John Campbell Folk School in Brasstown.

“We have no trouble whatever selling what we grow,” says Frances, “but I have to admit that our customers are almost exclusively from elsewhere. So many of the people born here have gardens of their own, and they grow the food they grew up on, like pole beans and runner beans. The traditional Appalachian cuisine doesn’t recognize arugula as food at all, although the Folk School buys a lot from us.”

Frances teaches a course there in organic vegetable production. “So many young people want to do this but can’t afford the land,” she observes, “and yet the ones who have the land, don’t want to use it.”

Observations:

- Nearly half the private land in the county already belongs to people whose principle address is elsewhere, but although development by outsiders threatens farmland, it has also created a broader farm market.
- This would seem to justify policies that enlist developers in keeping farmland in production and subsidizing farming tenants who can’t afford to buy it.

Concern:

- The pole bean eaters and the arugula eaters don’t communicate enough.

V. Examples from Other Counties

A recent national resurgence in interest in local and sustainable food systems is manifested through innovative programs in different regions of North Carolina that can serve as useful models for future agricultural development efforts in Cherokee County. We highlight a handful of such programs below, taking into consideration the County’s limited resources and distance to larger markets.

Agricultural leaders in the County will stay abreast of existing and developing projects in other parts of the state and nation. Good resources for investigating such projects are two of the three major grant-making agencies developed from the Master Settlement Agreement of 1998 between tobacco companies and North Carolina. The websites of the North Carolina Golden LEAF Foundation (www.goldenleaf.org) and the North Carolina Tobacco Trust Fund Commission (www.tobaccotrustfund.org) offer numerous examples of agricultural development projects that may be replicable in Cherokee County and the surrounding region.

Madison Farms

The link between harvest and market is often the weak point in the agricultural production chain by which farmers turn solar energy into money. Institutional buyers demand packaging they can handle and store in bulk. Even tailgate buyers expect clean, well-sorted food.

To serve the small scale producer who doesn’t have the space, the water, the drainage, the stainless steel work surfaces, or the refrigeration needed to make a run of blueberries, apples, or greens acceptable to the cook at the middle school down the road, Madison County established the Madison County Multi-Purpose Agricultural Center (MCMAC) in 2005.

With \$810,000 from the general budget, the County purchased the land and buildings of a defunct glove factory and then raised another \$400,000 in grants to refurbish it. Besides the Extension office and a conference room, the center houses grading, washing, and packing facilities, a loading dock and a small commercial kitchen. Extension led the undertaking and

sponsored establishment of a 501 (c) 3 corporation called Madison Farms to process and promote local food.

Volunteers and part-time workers originally handled all the administration until 2009, when another grant permitted hiring a full time manager. By then 40 farmers were marketing under the Madison Farms brand. The county charges no rent and pays for heat and light. A ten percent commission on sales covers running costs. Self-sufficiency remains a longer-term goal. Institutional buyers include six Madison County Schools, Mars Hill College, the University of North Carolina – Asheville, and the Mission Hospital Cafeteria.

So far produce accounts for most of the sales. The schools take lettuce, apples and potatoes in quantity, plus fair amounts of squash, sweet potatoes, blueberries, broccoli, and greens. Several producers do sell meat through Madison Farms, but a full service meat program remains in the future.

The Madison Farms website www.madisonfarms.org gives contact information for 105 Madison County farms.

Madison Farms also sponsors events at the MCMAC and promotion booths at fairs and festivals throughout the area. It has become a symbol of the County's commitment to continued support of agriculture following the decline of Burley tobacco as the regional cash crop. It also figures in promotions of the County as a place to visit and shop for locally grown food.

Observations:

- Madison County government, with a population and tax base smaller than Cherokee County's, made a tangible monetary commitment to the future of agriculture through purchase of the land and former glove factory.
- Madison Farms has raised public awareness of local agriculture through sales to public schools and colleges- its very existence has strengthened local support for local agriculture.
- Cooperative Extension in Madison County has been the driving force behind securing county support for local agriculture and the development of this project.

Concerns:

- Madison Farms remains a fledgling operation with limited revenues. A challenge for this project is to expand sales and develop a profit margin in the business to support a full time manager without grant support.

Columbus County Community Farmers Market

In the 11 years since it opened in 1998, the Columbus County Community Farmers Market has evolved into a solid player in the agricultural economy of southeastern North Carolina.

The original half dozen or so vendors who sold garden vegetables from pop-up tents and pickup trucks on a Whiteville parking lot soon began looking for a place where they could have shelter.

They incorporated, negotiated for a new site near the Cooperative Extension office, applied for a small grant, and bought a couple of temporary shelters where they opened the market Tuesday, Thursdays and Saturdays, during the growing season. In 2002 they sought money from the North Carolina Tobacco Trust Fund for expansion, and by 2005 had their own 7,200 square foot open-sided building complete with electricity, public rest rooms and parking and space for 20 vendors.

A 2008 grant from the Tobacco Trust Fund is being used to construct an additional 600 sq. ft. facility on the current Farmers Market site to house a commercial honey extractor. In addition, a 10' x 10' walk-in cooler has been installed on-site to accommodate short-term storage of fresh fruits and vegetables.

Market vendors now participate in the North Carolina Women, Infants and Children (WIC) Farmers Market Nutrition Program and the Columbus County Department of Aging Nutrition Program which allow them to cash government food vouchers for local fresh vegetables. The market's website www.columbuscountyfarmersmarket.com also reports that "Whiteville Primary School is one of 25 North Carolina schools participating in a five-year pilot project called the Fresh Fruit and Vegetable Program.... In coordination with the program more than 200 Whiteville Primary youngsters have visited the Farmers Market and other local farm operations in order to learn more about the foods that help them stay healthy."

Observations:

- A permanent farmers market with amenities was a natural outgrowth of a temporary tailgate market in a town parking lot.
- Grant funds were used incrementally to secure additions over several years.
- The farmers market is raising public awareness of local agriculture through cooperative educational programs, a well-developed website, and press releases.

Concerns:

Small farmers markets do not generally address the economic concerns of large wholesale producers or of producers growing for larger production chains (grain and cattle).

Grayson Natural Foods

Grayson Natural Foods, a farmer-owned company marketing grass-raised beef from Grayson County, Virginia, grew out of a meeting in 2006 that brought together local producers, extension, the Virginia Department of Agriculture, and the New River Land Trust. Some of its roots, however, go back two decades to the Land Care Movement in Australia and the activity of a textile millionaire from North Carolina and his wife.

Grayson is a steep (Elevations 1,500 to 5,600 feet), poor (per capita income \$22,000), beautiful (New River Gorge) county, with 17,000 people and 31,000 cows adjacent to Ashe County, North Carolina, according to the 2007 reckoning of the U.S. Census Bureau.

Land Care began in 1986 when a group of Australian farmers organized to persuade agricultural

research and extension services to address ecological issues such as erosion and declining water resources. The idea quickly spread through the country and eventually came to the attention of Jim Johnson, Associate Dean of Outreach and Professor of Forestry at Virginia Tech.

About the same time Philip and Charlotte Hanes of Winston-Salem began buying farms that would otherwise have sold to developers near their vacation destination in Grayson County. By 1992 they had acquired 1,200 acres and were negotiating easements with the New River Land Trust. Their search for ways to keep all this land in production had led them to New Zealand and a keen interest in grass farming and a desire to promote sustainable agriculture in the Grayson county.

Through a happy association of the Hanes, the Land Trust and Virginia Tech University in nearby Blacksburg, the Appalachian Land Care Center opened at Virginia Tech in 2006 with the Grayson Land Care Group as its principle client. Over 200 producers attended their first conference that year, on value-added beef.

Management intensive, low-input grass farming by then had a substantial foothold in Grayson County, and launching an enterprise to market branded beef was a logical next step. A parallel initiative, the Blue Ridge Forest Co-op, was launched to market forest products, plants and herbs as well as timber.

Three years after the conference, Grayson Natural Foods is finally beginning to move beef. “I believe we can eventually reach the whole East Coast,” says general manager Gary Mitchell, himself one of five producers joined in the enterprise, “but it has taken us a lot of work and a lot of learning to get where we are.” Organizing previously independent cattle growers to be able to offer a consistent product, year round, requires coordination of breeding, genetics, and management.

As for many entering the grass-fed, direct sale, meat business, processing has proven to be a major obstacle. “We considered building our own facilities and doing everything in-house, but we figured we had to process at least 45 head a week to justify that, and we were afraid to risk that kind of money until we had our production and marketing organized. Now I believe we should have gone ahead. It would have given us the flexibility to access markets that we can’t serve now.” The LandCare Center recently received a \$23,000 grant to study the options.

Learning the market has also taken time. Mitchell says he and the other partners only found the nerve to start Grayson Natural Foods when Wake Forest University in Winston-Salem expressed a desire to buy from them. In fact they have sold little to Wake Forest. “In the end a university cafeteria can’t afford to buy four dollar hamburger,” Mitchell says. “Virginia Tech buys some meat from us, but we’re doing better with restaurants. The Virginia Department of Agriculture’s Farm to Table program, which helps Washington, D.C., area chefs and restaurateurs find local suppliers has opened numerous doors.

Observations:

- The beef business was started with close cooperation between agricultural service providers, land trusts, and private investors;
- The business is financed by wealthy individuals concerned about the land and farming;
- The business is supported through small grants for market research.

Concerns:

- Coordinating independent-minded cattle producers is complicated and requires many areas of expertise.
- The project has taken three years to get started from its original inception. Processing of beef is a major challenge.

Buncombe County

Buncombe County leads the state in preservation of farmland through easements. Since 2005 it has budgeted \$4.6 million toward the purchase of development rights and covering the transaction costs of people who want to sell them. Matching money from private philanthropy, the North Carolina Farmland Protection Trust, and other sources have greatly extended the impact of county funds. In addition, almost all participating landowners donated part of the value of the easement.

As of March 2009 the county had contributed to the protection of 16 easements involving 2,758 acres and budgeted for protecting eight more covering another 2,118 acres.

Also, in 2009, the county funded a full-time farmland protection coordinator in the Soil & Water District office to promote the program, organize community meetings and seminars with experts in the field, and guide individual cases through the maze of appraisals and negotiations inherent in the transaction.

According to current Buncombe County Farmland Advisory Board Chairman John Ager, the strong public support for the program grew out of a campaign to establish Voluntary Agriculture Districts. At one point it had more land in VAD than any county in the state. The next step involved passing an ordinance and setting up a legal structure that allows to county to hold easements.

In 2008, the Farmland Advisory Board received a \$65,000 grant from the Asheville Merchants' Association to promote farmland protection, signifying the degree to which the wider community has recognized importance of farms to urban as well as rural prosperity.

Observations:

- Farmland protection, when not confused with zoning, has broad public support in Buncombe County, and a well-organized program can draw financial support from several sources.
- As the grant from the Asheville Merchants' Association confirms, other commercial interests accept it as an important element in economic development. In the case of Buncombe,

active supporters include a number of real estate developers who recognize the role open space and orderly development play in maintaining stable land values.

Concerns:

- Because Buncombe County has both assets and pressures that other mountain counties don't share, it is easy to dismiss its example as irrelevant, when it may in fact be an image of the future.

VI. Agricultural Development Plan Conclusions

As it exists today, the agricultural economy of Cherokee County is fragile and subject to adverse impacts from changes both inside and outside the County and its region. For example, the demise or relocation of the County's sole egg plant would eliminate a market for local grain as well as a source of abundant and rich fertilizer. The closing of Blue Ridge Paper in Haywood County would probably spell the end of Valwood, the County's sole remaining wood plant. Another huge spike in oil prices could make production of feeder cattle for Midwest feedlots economically infeasible.

Proactive programming for market development and new income streams are needed to keep existing farms in production and secure their long-term profitability. Increased public awareness and active economic support from the local population is needed to secure local revenue streams that are more insulated from national or international events. Professional education and technical support is needed for farms hoping to secure transitions of assets to the next generation or to secure their farms' future through conservation easements.

The Summation and Recommendations section of the overall Farmland Preservation Plan will present recommendations for the following key areas for action:

Farm transition, assistance in passing land on to a new generation or a new operating arrangement.

Methods and enterprises that demand minimum capital and recognize the strengths and limitations of location, soils, topography, and climate.

Marketing through direct sales or local networks so that more income goes back to the farm.

Education and training targeted for the part time farmer and the entrepreneur interested in local sources and markets.

Planning services for landowners interested in developing some land as a way to capitalize farm operations on the rest.

PART TWO: AGRICULTURAL LAND PROTECTION PLAN: FINDINGS FOR CHEROKEE COUNTY, NORTH CAROLINA

I. Introduction

This section of the plan concentrates on analyzing land use patterns in the county as well as discussing citizen attitudes towards land use. It discusses various land management policies and evaluates specific tools for farmland preservation in the context of conditions in Cherokee County – political, geographical, and economic.

With a mountainous geography and large tracts of public lands, only a small part of Cherokee County's landmass is suitable for farming, but what farmland the county does possess is often of extraordinary quality. Much of this farmland is concentrated in valleys and along waterways, most notably the Valley, Hiwassee, and Nottley rivers and their tributaries. The loam soils in these valleys are classified as prime farmland by the USDA Natural Resources Conservation Service.

An analysis of land use patterns makes a strong case for preserving the farmland remaining in key areas. Furthermore, both random polling and targeted interviews indicate deep public concern over the rapid transformation of the rural landscape and political support for action by the County government to address the issue. That said, Cherokee voters, like those in other Western North Carolina, have a long history of resisting government policies that restrict free exploitation of private property. The following discussion of citizen attitudes towards farming and farmland is designed to give policy makers a measurement of support levels for these activities.

II. Citizen Attitudes towards Farming and Farmland in Cherokee County

In February 2009, researchers commissioned Telephone Strategies Group, a nationally recognized telephone call service, to administer a survey of 400 randomly selected registered voters in Cherokee County. The purpose of this survey was to gauge the level of interest in, and support for, efforts to preserve farmland in the county. Respondents were asked 15 questions pertaining to farmland and agriculture in the county. Survey results have a margin of error of plus or minus 5%, with a 95% confidence level.

Survey respondents were 53% female and 47% male. Just over 86% said they own land in Cherokee County, and 77% said they live near farmland in the County.

Survey results show a strong level of support for keeping farms viable and maintaining the rural characteristics of the county. More than 77% of respondents said they were concerned about Cherokee County losing its rural character, and over 78% said they were concerned about losing farmland in the county. Over 75% of respondents said they have seen open farmland converted to residential housing developments in recent years.

Are you concerned about Cherokee County losing it's rural characteristics?

		Frequency	Valid Percent
Valid	Yes	310	77.5
	No	78	19.5
	Not Sure/Don't Know	12	3.0
	Total	400	100.0

Are you concerned about losing farmland in the county to residential developments?

		Frequency	Valid Percent
Valid	Yes	313	78.3
	No	77	19.3
	Not Sure/Don't Know	10	2.5
	Total	400	100.0

In recent years have you seen farmland or open spaces in the county converted to residential housing developments?

		Frequency	Valid Percent
Valid	Yes	302	75.5
	No	77	19.3
	Not Sure/Don't Know	21	5.3
	Total	400	100.0

Respondents were in favor of public efforts by local government to preserve farmland. Fully 86% of respondents thought local government should promote the preservation of farmland in the county. Over 66% of respondents said they support using local, state, or federal funding to preserve farmland in the county.

Do you think local government should promote the preservation of farmland in the county?

		Frequency	Valid Percent
Valid	Yes	344	86.0
	No	34	8.5
	Not Sure/Don't Know	22	5.5
	Total	400	100.0

Do you support using local, state or federal government funding to preserve farmland in Cherokee County?

		Frequency	Valid Percent
Valid	Yes	265	66.3
	No	89	22.3
	Not Sure/Don't Know	46	11.5
	Total	400	100.0

Respondents were asked about their familiarity with conservation easements and land trusts. Only one-third (33.3%) were familiar with conservation easements, and only 41.3% were familiar with land trusts. After reading a short description of conservation easements and land trusts, 59% of respondents said they would like to see more agricultural easements in Cherokee County.

Are you familiar with conservation easements?

		Frequency	Valid Percent
Valid	Yes	133	33.3
	No	258	64.5
	Not Sure/Don't Know	9	2.3
	Total	400	100.0

Are you familiar with land trusts?

		Frequency	Valid Percent
Valid	Yes	165	41.3
	No	226	56.5
	Not Sure/Don't Know	9	2.3
	Total	400	100.0

Would you like to see more agricultural easements in Cherokee County?

		Frequency	Valid Percent
Valid	Yes	236	59.0
	No	77	19.3
	Not Sure/Don't Know	87	21.8
	Total	400	100.0

Respondents were also asked about public and consumer support for local farms. Fully 93% of respondents said they support buying more produce and meat from local farms to support their economic survival, and 70.5% said they currently buy local produce or meat from area farmers.

Do you buy locally grown produce or meat from area farmers?

		Frequency	Valid Percent
Valid	Yes	282	70.5
	No	114	28.5
	Not Sure/Don't Know	4	1.0
	Total	400	100.0

Do you support buying more produce and meat from local farms to support their economic survival?

		Frequency	Valid Percent
Valid	Yes	372	93.0
	No	20	5.0
	Not Sure/Don't Know	8	2.0
	Total	400	100.0

Respondents expressed a high level of interest in learning more about farmland preservation in the county. Over 50% said they would like to receive more information about farmland preservation, and 43.8% said they would be willing to come to a meeting to discuss farmland preservation in Cherokee County.

Would you like to receive more information regarding farmland preservation in Cherokee County?

		Frequency	Valid Percent
Valid	Yes	204	51.0
	No	193	48.3
	Not Sure/Don't Know	3	.8
	Total	400	100.0

Would you be willing to come to a meeting to discuss farmland preservation in Cherokee County?

		Frequency	Valid Percent
Valid	Yes	175	43.8
	No	203	50.8
	Not Sure/Don't Know	22	5.5
	Total	400	100.0

Respondents were asked to name any farmland they knew of that should be preserved. A total of 198 respondents named specific farmland that they recommended for preservation. Of those, the most popular recommendations were for preservation of farmland near the airport, land adjacent

to major highways and four-lane roads, land near Brasstown on the Clay-Cherokee County line, and land along Highway 64 near Peachtree.

Survey Conclusions

The Cherokee County survey confirms that residents, by a large margin, want to see farmland protected and they want to see farms continue to be a part of the geography and economy of Cherokee County. These results are similar to response rates found in other mountain counties, particularly surveys conducted in Haywood County in 2006 and in Watauga County in 2009. Contrary to conventional wisdom about public opinions in mountain counties concerning land use planning, survey results show a high level of support for local government promotion of farms and farmland, and even of public financing to preserve farmland.

However, only one-third of survey respondents are familiar with conservation easements, and less than half are familiar with land trusts. Opportunity exists for a comprehensive educational outreach to let citizens know about established programs for supporting the preservation of farmland.

The survey results also show a high level of interest in private economic support for farms. With over 90% of respondents supporting increased purchases of locally grown produce and meats, opportunity appears to exist for increased direct marketing of farm products to consumers in the County.

III. General Overview of Land and Land Use Patterns

Cherokee County's agricultural industry is a modest but well-established economic sector for the County.² In 2007, agricultural cash receipts totaled \$17,477,000, of which \$15,588,000 (89%) was from cattle, livestock, and poultry operations.³ There were 138 self-employed full-time farm operators, plus another 150 part-time farm operators in Cherokee County. Sixty four farm operators employed 272 workers on their farms, mostly on a part-time basis. 2007 payroll for farm workers totaled just over \$2.2 million. Agriculture is a significant land use in the County with 20,423 acres (just under 7%) of the land in farms. Of those acres, 4,663 are harvested cropland, with almost all remaining productive farmland in livestock (mostly cattle) production.

This section analyzes land use trends for Cherokee County and their implications for the County's agricultural industry.

Population and Housing

In recent decades, Cherokee County has experienced a moderate rate of growth, with a projected growth rate of 16.2% for the 2000 to 2010 period. Growth projections for the 2010 to 2020 period anticipate a growth rate of 11.5%, reaching a total population of 31,500 by 2020.

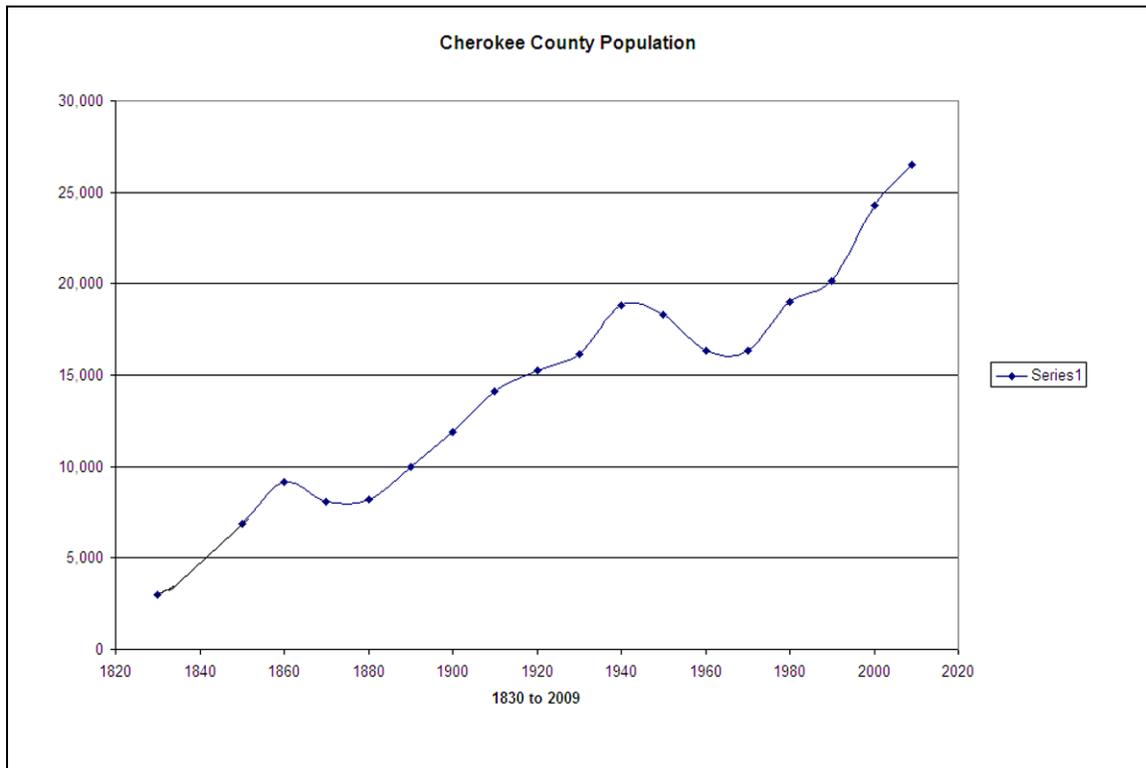
² Except where noted, economic data is derived from the 2007 Census of Agriculture

³ 2008 NCDCA Agricultural Statistics.

Figure 1: Cherokee County Population Projections							
	2000	2007 Est.	% Growth 2000-2007	2010 Projection	% Growth 2000-2010	2020 Projection	% Growth 2010-2020
Cherokee County	24,298	27,026	11.2	28,246	16.2	31,500	11.5
North Carolina	8,046,491	9,069,398	12.7	9,502,904	18.1	10,966,956	15.4

Source: NC Office of State Management & Budget

This growth rate, while lower than that of North Carolina as a whole, is a continuation of increases that began about 1970 after a steady decline in the post-war period when many residents migrated to the North for factory jobs. Recent population increases can be attributed to an influx of new retirees attracted by the mild climate and scenic beauty of the Southern Appalachian Mountains. This helps to explain why the percent of the population over age 65 is 19.7% compared to a state rate for rural counties of 13.5%.⁴

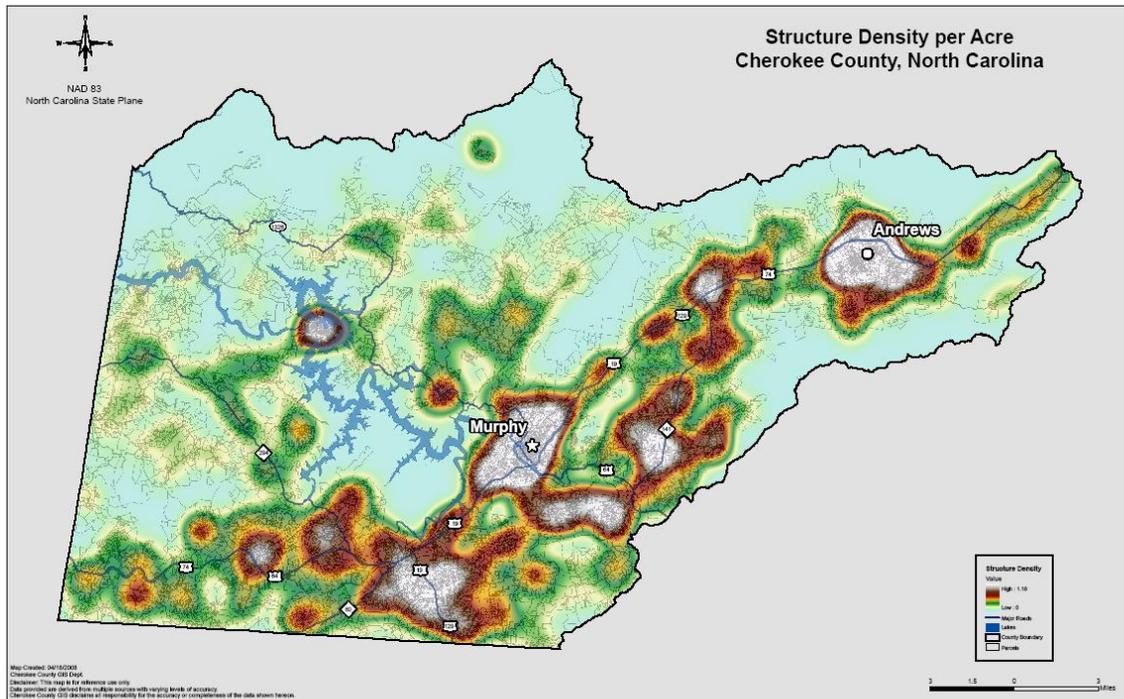


Cherokee's high home ownership rate of over 82% and low percentage of housing considered as unaffordable (14.7%) belies the fact that much new residential development in the county has been for very expensive retirement homes and second homes. Many of the buyers of these homes in the past ten years are not full-time residents of the county, nor are many of them voting or paying income tax in the state.

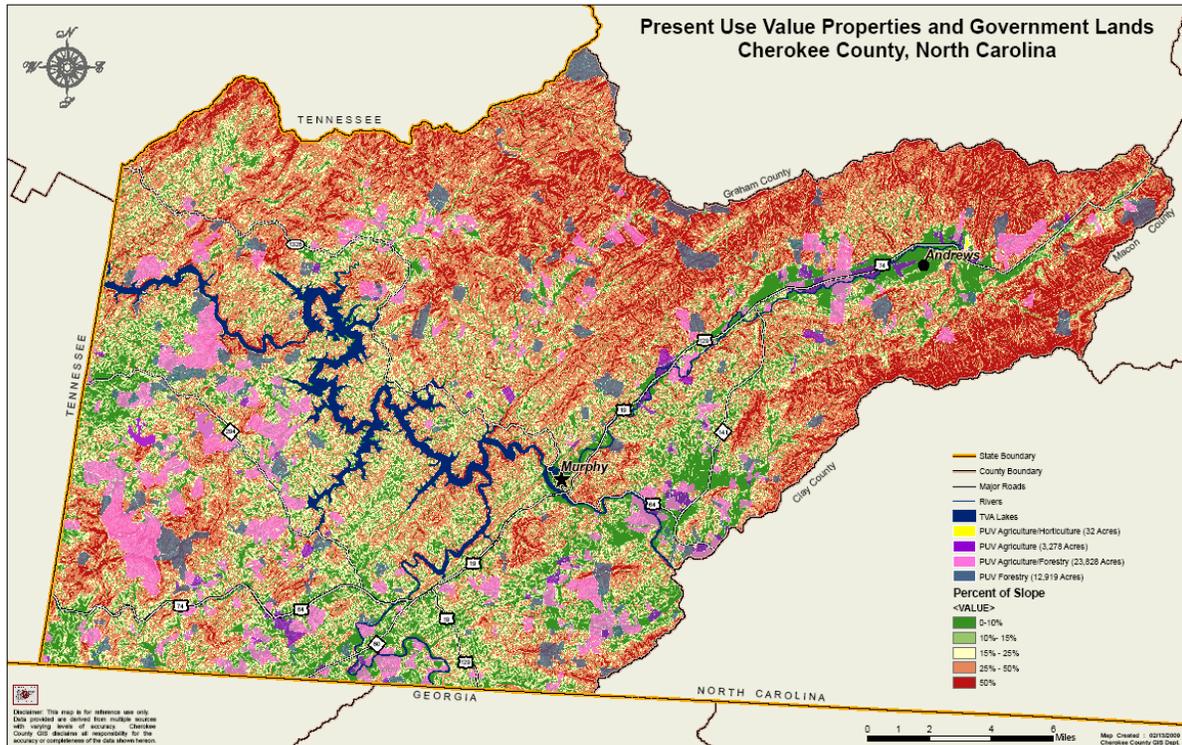
⁴ North Carolina Rural Economic Development Center Rural Data Bank

Land Use and Ownership

The structural density map below gives an excellent representation of where population centers are located:

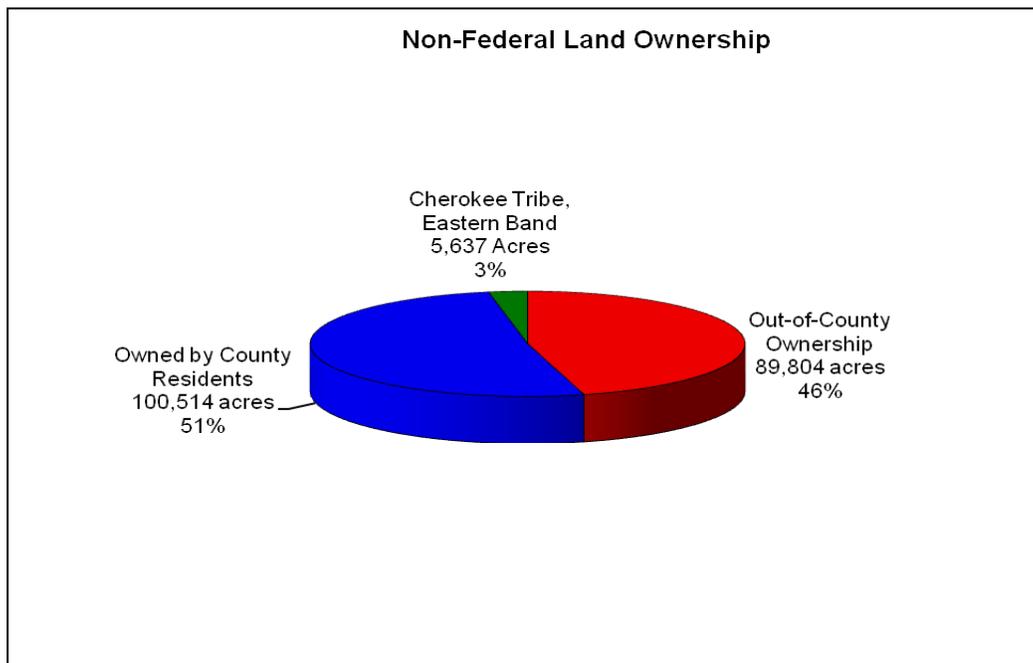
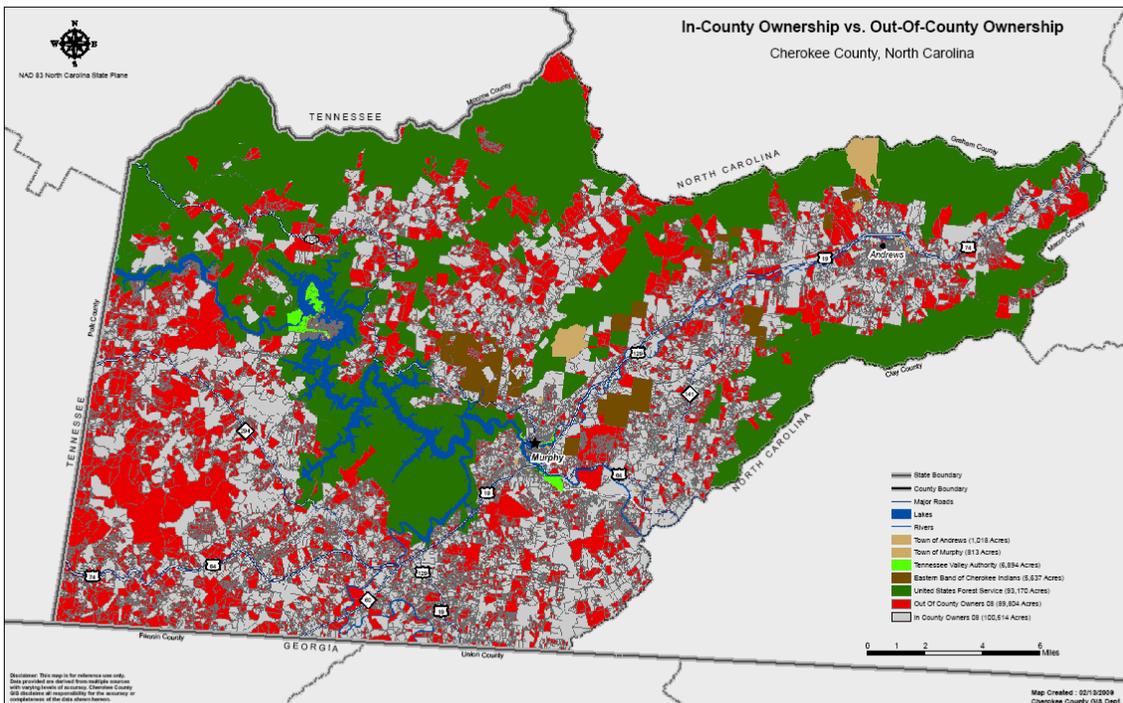


Not surprisingly these population centers are located along the very waterways where the most fertile farmland is found. A map showing slopes by percent of grade illustrates that most prime farmland is located in the same areas where structural density is highest. Areas colored in green are of optimal slope gradient for farming, housing, commercial, and transportation activities:



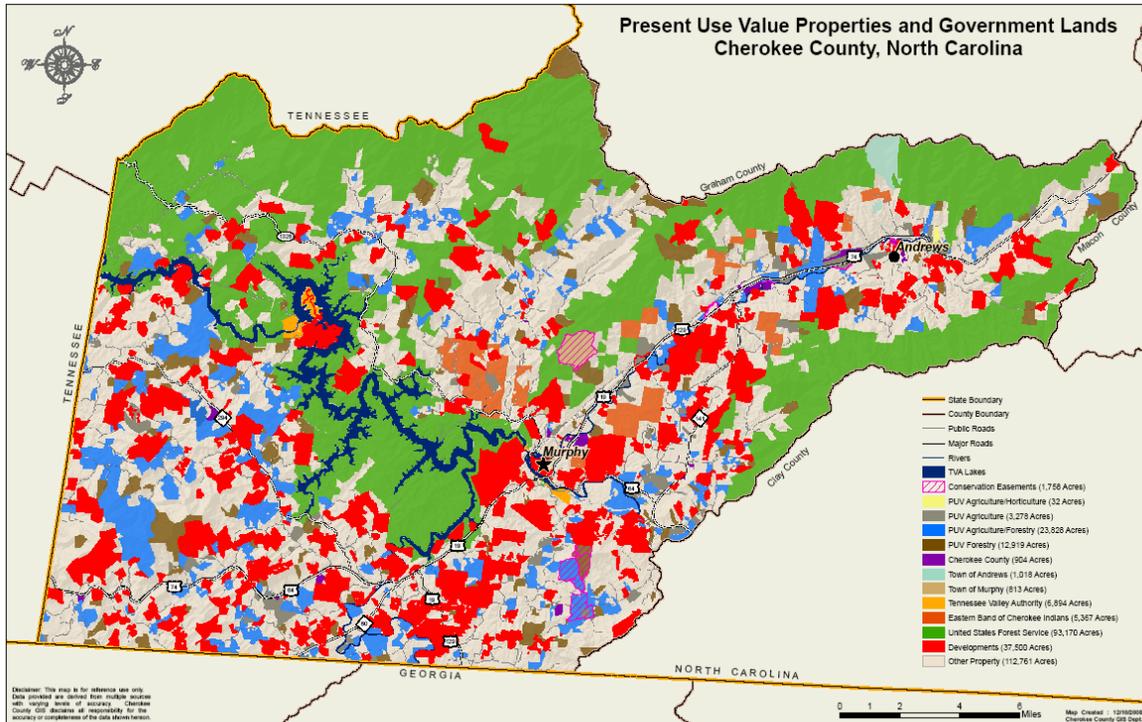
The lay of the land dictates that population centers and transportation routes are concentrated in the same general areas as prime farmland. Unlike counties located outside of the mountains region, there is very little farmland that is free of actual or potential development pressures. Thus, the remaining productive farmland in the County is extremely vulnerable to development.

As seen in the map and chart below, over 46% of non-federal land in the Cherokee County is owned by persons living outside of the County. The 84,804 acres owned by non-residents are found in every part of the County.



The County contains 300,100 acres, with over 93,000 acres of United States Forest Service Land, nearly 8,700 acres of lakes, and over 5,000 acres of land belonging to the Cherokee Reservation. The County is surrounded by the Nantahala National Forest. The highest elevation in the County is about 5,100 feet, on the corner where Cherokee and Clay counties meet at Fires Creek. The lowest elevation is about 1,200 feet, where Apalachia Lake crosses into Tennessee.

The GIS office of County government tracks land parcels by certain types of designation. The map below shows parcels designated as developments, US Forest Service, TVA, Cherokee Reservation, county or municipal lands, and lands designated for preferential taxation under Present-Use Value (PUV) laws in North Carolina. These PUV lands contain most of the productive farmland, but also include significant amount of land used for commercial forestry. The 23,826 acres under a PUV designation of agriculture/forestry (shown in blue below) contain most of the acreage recorded by the 2007 Census of Agriculture. Of this amount 4,663 acres on 150 farms are harvested cropland.



The important contribution of PUV designation to the continuation of farming in the County is discussed elsewhere in this report.

The amount of land developed for residential use far exceeds lands under PUV agricultural designation. The areas in red above show parcels designated as developments and total 37,500 acres.

Infrastructure Assessment

Infrastructure, including water lines, sewer lines, roads, electricity, and telecommunication services, is both a blessing and a curse to farming operations. While good infrastructure such as safe and well-maintained roadways help farmers to move equipment, receive goods and services and ship farm products, these very amenities make the likelihood of attracting large scale gated communities on prime farmland much greater.

Current infrastructure in the County is supportive of agriculture, given the geographic limitations posed on land use due to mountainous terrain and significant allocation of land to national forests. The major road systems are US Highway 74 and US Highway 64, which bisect the County predominately on an east-west axis. Highway 74 runs from the Nantahala Gorge on the extreme eastern edge of the county, through Andrews Valley and on to Murphy, where it merges with Highway 64 coming from a more southerly route from Hayesville. The merged highways then run together from Murphy into Tennessee on the extreme western edge of the county.

The road layout, developed through geographical necessity, has the effect of concentrating both development and traffic into a central corridor dominated by the Andrews Valley and Valley River. Some of the most visible and productive agricultural lands are located along this corridor, which is also the largest concentration of population, homes, and businesses in the county. While secondary county roads are generally user-friendly for farm traffic, the high-speed corridors of US 74 and US 64 are becoming increasingly hazardous for farm traffic. A new bypass for US 64 heading east towards Brasstown has lessened high speed traffic on old 64 where several larger farms are located.

Of some concern is the fact that the municipal water lines of Andrews and Murphy have now been connected, providing water along the major traffic corridor of US Hwy 74 along Valley River Valley. This corridor is also home to some of the most visible prime farmland in the County. The County has no natural gas lines and very limited sewer capacity (confined to areas in and around the two municipalities). Lack of these infrastructure pieces may help slow conversion of prime farmland to large scale rural subdivisions.

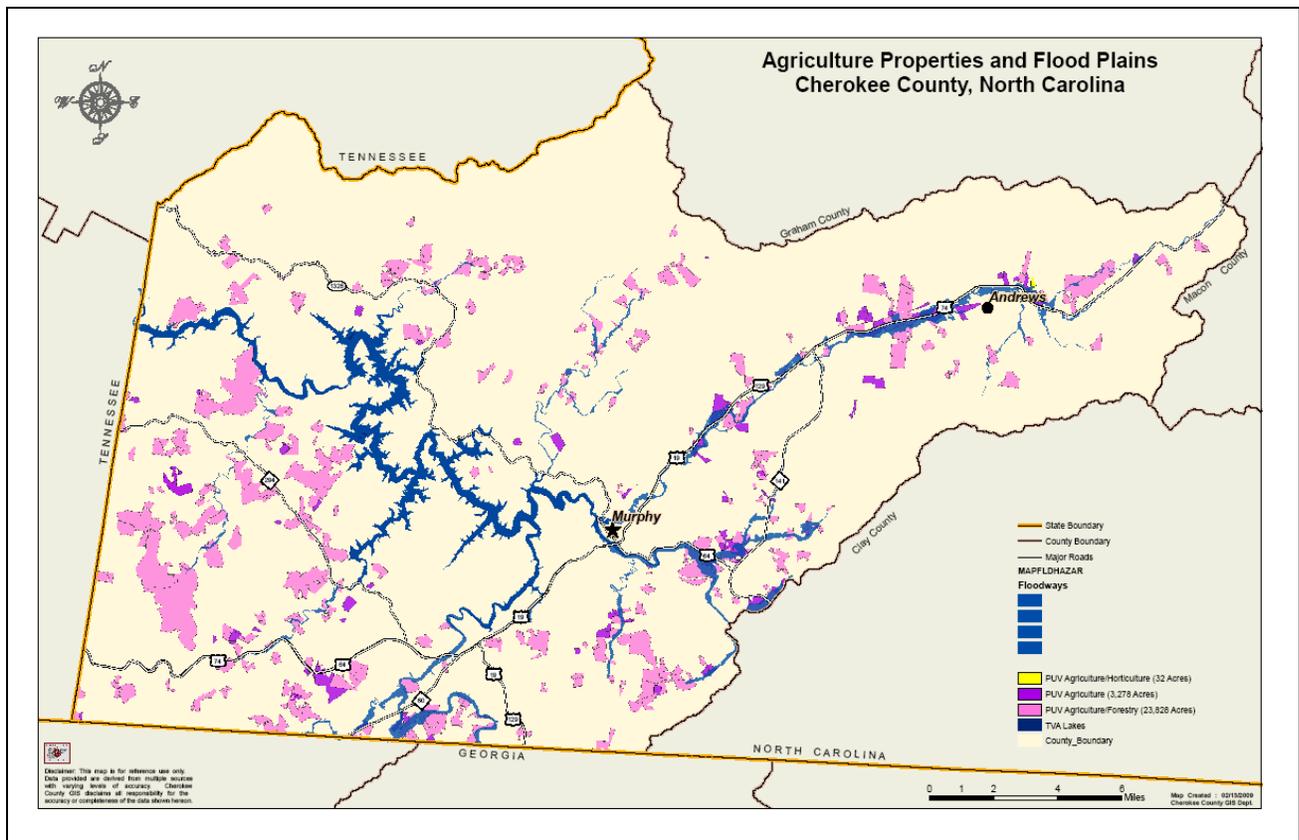
Land Use Controls Assessment

Cherokee County has long adhered to an unrestricted, open-market land use policy. Aside from recently passed standards for road building, other land use policies, such as rules for trailer parks, water and sewer lines, conservation incentives, and property tax relief for farmers represent state, Federal or municipal initiatives.

Land use controls are only employed by the two incorporated municipalities in Cherokee County. The County itself has no zoning, and there are no ordinances or planning oversight committees for developments outside of the incorporated towns of Murphy and Andrews.

The Town of Andrews has a zoning ordinance that allows farm operations to be located within both Single-Family Residential Districts and in Heavy Commercial Districts. Farm supply stores are permitted in Highway Business Districts. The Town of Murphy has similar zoning regulations.

Perhaps the most important ordinances are enforced at the state level for protection of water quality and to prevent significant physical losses from potential flooding. The County's floodplains shown in the map below are home to the best soils and most level farmland in the County. These are of course also transportation corridors and subject to high development pressure.



As discussed, North Carolina’s Present Use Value (PUV) tax program, which protects farms from being taxed on the “highest and best use” value of the land is well-used in Cherokee County.

As the county grows, and as population pressures increase competition for use of the scarce land resources, a formal land planning process, regulations concerning the size and type of commercial and business developments, and other policies that encompass a much broader range of land use and land conservation tools may be considered, as has occurred in other mountain counties.

IV. Land Use Management Tools and Techniques

In the United States, a wide range of policies exist to support the continuance of agriculture and preservation of open farmland. These are expressed through combinations of incentives, regulations, ordinances, and protocols as varied as the communities that have developed them.

The following general management tools are discussed in order of their perceived viability in Cherokee County. These include Voluntary Agricultural Districts, tax policy, easements,

support for farms in transition, comprehensive development planning, and subdivision ordinances including “conservation development” incentives.

A separate subsection outlines a position on county-wide zoning ordinances because controversy over zoning is on-going throughout Western North Carolina; however, that issue should not blunt the focus of this plan - protecting farmland. Zoning may take many forms and be tailored to produce many different outcomes, but close analysis shows that the standard form of zoning ordinance, operating in 99 percent of the jurisdictions that have adopted zoning, has accelerated the conversion of farmland as often as protecting it. There is no off-the-shelf version ready to discuss here.

This fact implies one further position concerning farmland protection tools – a recognition that among the thousands of rural counties facing similar issues across the United States new ideas and approaches are continually emerging, and Cherokee County plans to remain open to them.

Voluntary Agricultural Districts

In North Carolina, Voluntary Agricultural Districts (VADs) were authorized in the state Farmland Preservation Enabling Act of 1985. Local VADs are areas where commercial agriculture is encouraged and protected. They provide a series of benefits to farmers willing to restrict non-agricultural development for ten years. County commissioners appoint advisory boards to administer the districts. VADs are, as their name implies, entirely voluntary for participating farmers and they may remove their land from VAD designation at any time.

While VAD ordinances are nonbinding, they are a good starting point for raising community awareness of farmland preservation, both among farm owners and the general public. Also, the Farmland Advisory Board gives farmers a direct and official voice in county government and thus a way to contribute to economic development planning, road and utility design, and other decisions involving land and development.

Many counties in North Carolina have successfully used VADs as a means of developing broad consensus for pro-active approaches to farmland preservation and support for local agricultural economies.

Cherokee County authorized the creation of VADs in its Farmland Preservation Program adopted in December 1995. This eleven-page document also authorized the creation of the Cherokee County Agricultural Advisory Board to oversee the VAD program and consider applications for inclusion in VADs. The board currently consists of 5 active farmers and is selected by the County Commissioners, along with recommendations from the Soil & Water Conservation District, the Cooperative Extension Service, the Farm Service

Cherokee County Farmland Protection Program Goals

- To promote the health, safety, rural agricultural values, and general welfare of the County;
- Encourage the economic and financial health of farming;
- Increase protection from undesirable, non-farm developments;
- Increase the protection of farms from nuisance suits and other negative impacts on properly managed farms.

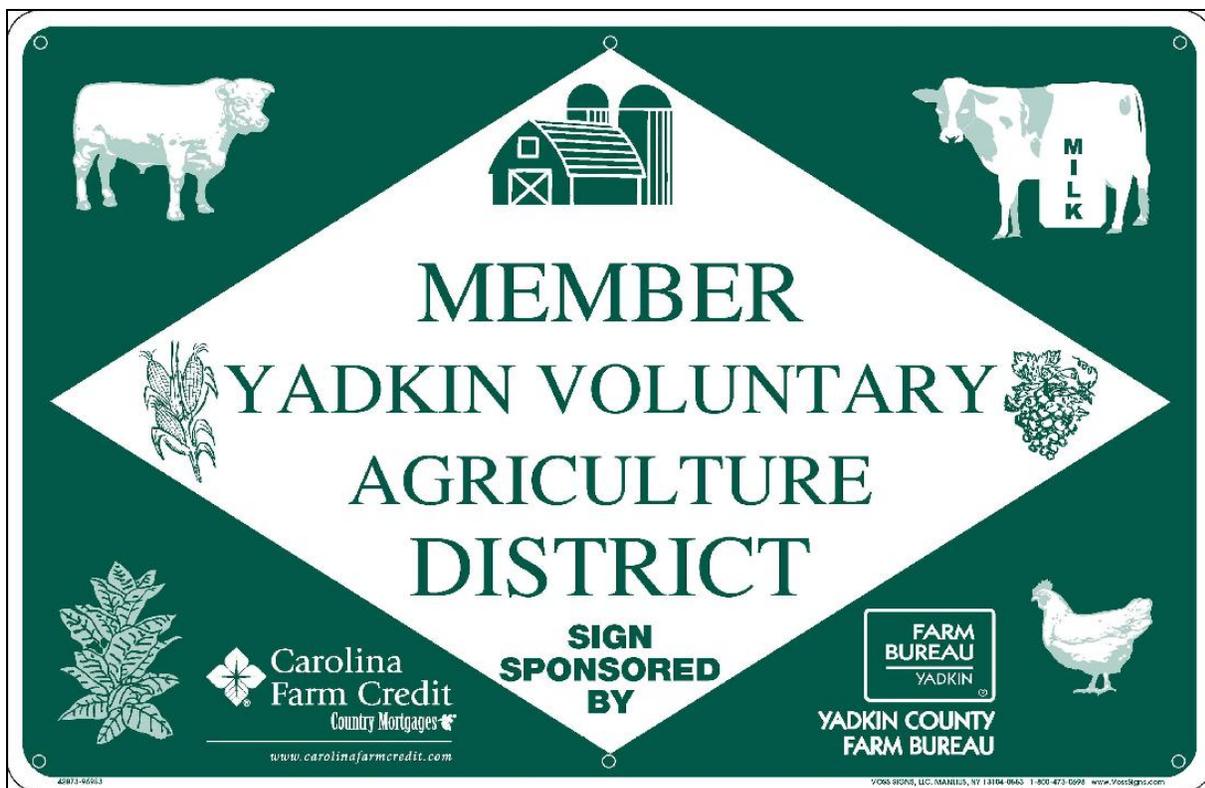
1995 County ordinance

Agency Committee, and the Cherokee County Farm Bureau. A copy of this ordinance is included in the appendix.

A VAD requires a minimum of 20 contiguous acres of qualified farmland, or of two or more qualified farms which contain a minimum of 20 acres and are located within one mile of each other. Participating farms agree to forego conversion to non-agricultural development for ten years, with an allowance for the creation of up to three lots. Each VAD is assigned an existing member of the Agricultural Advisory Board as its representative.

A county may delegate a number of power to an agricultural advisory board. The Cherokee County ordinance grants two important ones. It may hold public hearings on any proposed actions to condemn land in a VAD. It also can notify property owners, residents, and other interested persons in or near a VAD that farming and agricultural activities may take place at any time day or night. These activities may include pesticide spraying, manure spreading, machinery and truck operations, livestock operations, sawing, and similar activities.

Types of notification include signs identifying approved VADs on rights-of-way of major roads. An example of such signage used in Yadkin County is shown below:



Furthermore, maps identifying approved VADs are provided to the Register of Deeds office, the Natural Resources Conservation Service, the Cooperative Extension Service, the Farm Services Agency, and the County's Inspection Department. These agencies are then bound by law to honor the rights of farmers under the VAD. The Register of Deeds, for example, must include

notice on the title information of property adjoining a VAD that farm operations are permitted next door, so a buyer/developer cannot later file a nuisance complaint about manure spreading.

Despite having been authorized to do so for over thirteen years, Cherokee County has yet to establish a single Voluntary Agricultural District. Nevertheless, the County has in place an existing ordinance that can be acted upon, without impacting the local tax base or of introducing more controversial land use policy options. A key recommendation of this report is to re-commit the Agricultural Advisory Board as a pro-active unit that works on actionable plans to achieve its purposes and objectives. Specific recommendations for action are included in the Summation and Recommendations section at the end of this report.

The notification requirements of G.S. 106-741, governing Voluntary Agricultural Districts:

(a) Any county that has a computerized land records system may require that such records include some form of notice reasonably calculated to alert a person researching the title of a particular tract that such tract is located within one-half mile of a poultry, swine, or dairy qualifying farm or within 600 feet of any other qualifying farm or within one-half mile of a voluntary agricultural district.

(b) In no event shall the county or any of its officers, employees, or agents be held liable in damages for any misfeasance, malfeasance, or nonfeasance occurring in good faith in connection with the duties or obligations imposed by any ordinance adopted under subsection (a).

(c) In no event shall any cause of action arise out of the failure of a person researching the title of a particular tract to report to any person the proximity of the tract to a qualifying farm or voluntary agricultural district as defined in this Article. (1985 (Reg. Sess., 1986), c. 1025, s. 1; 2005-390, s. 3.)

Enhanced Voluntary Agriculture Districts

Authorized by the state legislature in 2005, Enhanced Voluntary Agriculture Districts (EVADs) are a logical progression for a county and its agricultural advisory board to implement after it succeeds in establishing vigorous and fully functioning VADs. EVADs offer landowners an additional tier of benefits in exchange for a *binding* ten-year agreement not to convert farmland to other uses.

EVAD benefits include:

- Permission to receive up to 25 percent of revenue from the sale of non-farm products, while still retaining their bona fide farming exemption from county zoning policies. (The production of non-farm products that the Department of Agriculture and Consumer Services recognizes as a "Goodness Grows in North Carolina" product that is produced on an EVAD farm is a bona fide farm purpose.)
- Enrolled farms have much lower cost-share requirements for NC Agricultural Conservation Cost Share funds.
- Counties and cities may hold all utility assessments in abeyance for any enrolled farms that choose not to connect to the utility lines.
- State and local agencies are encouraged to give priority to participants in an EVAD when considering funding through grant programs.

A county may add additional benefits, but it must pass an additional ordinance to join the EVAD program. Although this is not complicated, only a few counties have done so and begun to explore the possibilities. Cherokee County will monitor their experience closely.

Tax Policy

Tax relief is an important issue for farmers. Farms need land to operate and property taxes on farmland are a significant expense. Taxes on farm buildings are often substantial as well. Several studies indicate that farmland provides more in property tax revenues than it requires in public services. Keeping farmland in agricultural production may help control the cost of community services.

Since overtaxed agricultural land may be more susceptible to conversion to non-agricultural uses, tax relief measures may also be considered a farmland protection tool. Farmers' savings from property tax relief programs can be significant and may make the difference between staying in business and selling out. Several federal, state and local programs now exist to offer various kinds of property tax relief for farmers.

Property - As with the entire state, Cherokee County's single most effective policy tool for keeping land in production is the employment of present use valuation (PUV) for farm and forestry lands. Under North Carolina General Statutes 105-277.3 through 105-277-7, present use valuation allows for a reduction of appraised value of land employed for agricultural, horticultural and forestry use, with per acre valuation of best agricultural lands capped at \$1,200.

In Cherokee County, applications for entering land into PUV must be filed in January. Individuals and corporations are both eligible for PUV under certain key restrictions. Individuals or their close relatives must either live on the property, have owned the property for four years before applying for PUV, or must have acquired land that is already under PUV designation. Corporations must have farming or forestry as their principal business activity. All shareholders or their close relatives must be actively engaged in the farming or forestry operations on the land.

For agricultural PUVs, a single tract must have at least 10 acres in active production, while horticultural operations must have at least 5 acres in active production. PUV designation for forestry must have at least 20 acres in active production. For agricultural and horticultural operations, income from production must average at least \$1,000 annually over the previous 3 years. There is no income requirement for forestry.

As of 2008, there were a total of 40,057 acres in PUV designation in the County, with 23,828 acres designated under agriculture/forestry, 12,919 acres in forestry alone, 3,278 acres in agriculture alone, and 32 acres under an agriculture/horticulture designation.

In addition to PUV, Farmers are entitled to a state income tax credit equal to the amount of property tax paid on farm machinery, attachments and repair parts.

Sales - Commercial farms can receive an exemption for sales tax on items used in their farm operations, such as farm machinery, containers, tobacco drying equipment, grain storage facilities, fuel, potting soil, feed, seed, and fertilizers. Farmers must obtain an

exemption number from the North Carolina Department of Revenue. Furthermore, farmers selling their own unprocessed agricultural products (such as fresh vegetables, eggs, and basic cuts of meat) are not subject to charging sales tax to consumers.

Estate - The donation or sale of an agricultural conservation easement usually reduces the value of land for estate tax purposes. The Internal Revenue Code also contains certain valuation exemptions, which can reduce estate taxes for working farms.

Income – Local jurisdictions may use tax policies to stimulate investment in agricultural sectors. In other states, this has included providing incentives such as a reduction in property taxes for participants in VAD programs or the elimination of business taxes for value-added processing facilities.

Easements

An easement is a restriction on property rights that can be sold, traded, or donated in the same way as a water right, mineral right, or hunting right. Rights-of-way for access roads and transmission lines across private property are common easements attached to a title deed. The right to alter a landscape or build upon it can also be described in a conservation easement and attached to a deed. For tax and market purposes, the value of such an easement is the difference between the appraised value of the property with the easement and without it.

A conservation easement contract typically includes considerable negotiated detail, permitting for example, farm-related construction but not residential or other commercial structure. It may reserve house sites for heirs of the present owners or explicitly forbid the alteration of an historic building. Some restrictions may have sunset dates. They can be tailored to fit a wide range of circumstances and create a number of opportunities for local governments interested in preserving farmland.

Purchase of Development Rights (PDR)

Under a PDR program the county buys development rights from willing landowners or brokers. The landowner retains title, minus the rights, and may sell the land or pass it to heirs. However, the restriction remains forever, along with the certainty that taxes will always reflect the agricultural use valuation. Public access to land is not required.

Selling an easement allows farmers to cash in a percentage of the equity in their land, thus creating a financially competitive alternative to development. Agricultural producers often use PDR program funds to buy and/or improve land, buildings and equipment, retire debt and increase the viability of their operations. The reinvestment of PDR funds in equipment, livestock, and other farm inputs also may stimulate local agricultural economies.

A county itself or a Soil and Water Conservation District may hold an easement and enforce its terms, but most easements are passed on to independent non-profit land trusts. In Cherokee County, the Land Trust for the Little Tennessee River (LTLT), dedicated to conserving the landscape of the upper Little Tennessee and Hiwassee River valleys, is most active. According to its website, LTLT had protected 2,679 acres through conservation easements and another 540 acres through acquisition, as of February 2007.

LTLT has experience in purchasing working farm conservation easements, mostly utilizing funding from the USDA Farm and Ranchland Protection Program, the NC Clean Water Management Trust Fund, and key donations from LTLT members and supporters. It is open to working in partnership with the County.

Most conservation easements are permanent, with the exception of time-limited easements associated with VADs and EVADs.

Transaction Costs – Individual landowners who wish to preserve a family farm through the donation or sale of a conservation easement face up front expenses for surveys, appraisals, and legal help in negotiating and drafting the easement contract. For a significant property, the cost of merely exploring all the options can easily touch \$50,000 over a period of two years before any transfer contract is signed.

Only seriously committed landowners of considerable means can afford to even begin this process on their own, but experience shows that many will, if transaction costs are covered and competent advisors guide them through the steps. Properly organized, the County can contribute significant expertise from within existing departments and agencies, and a relatively small amount of county funding can bring many options within reach of the average land owner. Fortunately all the state grant programs will also support transaction costs.

Ideally, a county can carry out a fairly significant PDR program without having to pay the whole purchase price from county funds simply by promoting the idea in targeted areas and making it easy for owners to participate, realize tax benefits from donated value, and raise extra support from grants and other donations. In this context, a campaign to engage wealthy absentee landowners may yield critical support.

Buncombe County ranks properties through a formula that gives weighted scores to:

- Soil quality
- Tract size
- Percentage of tract in agricultural use or open space
- Proximity to public water and sewer
- Probability of conversion to other uses
- Proximity to planned development
- Proximity to Agricultural Preservation Areas (as designated in a county land use plan)
- Capital investment in the farm
- Enrollment in a conservation program (or VAD)
- Historic, scenic, and environmental qualities
- Specialty products

Funding Program Costs – Federal and most state programs (including North Carolina’s) require a local dollar match from the land owners, a land trust, county or municipal government, or other source for the implementation of PDR projects. Local communities can finance PDR programs include issuance of bonds, allocating funds from general revenues, and real estate transfer taxes, and mitigation requirements.

Several North Carolina counties have held a referendum on a *transfer tax* on real estate sales that would fund open space protections, but voters have overwhelmingly rejected this in every case. Federal *mitigation requirements* exist for designated wetlands. Where such mitigation requirements have been established for farmland, anyone wishing to convert agricultural land to other uses within a designated agricultural district must either secure an easement on other land or contribute to a mitigation fund dedicated to that purpose. No local jurisdiction in North Carolina has attempted to protect open space or farmland in this way, and Cherokee County voters would almost certainly reject the idea.

State Programs Supporting Purchase of Easements

The 1985 **Agricultural Development and Farmland Preservation Trust Fund** (ADFPTF) gave out \$2.4 million between 1998- 2002, protecting 4,412 acres on 33 farms. House Bill 607, in 2005, revived the fund for \$8 million, which is now guided by a 19 member advisory committee.

The North Carolina Tobacco Trust Fund Commission has provided funding to land trusts for transaction costs necessary to purchase development rights on tobacco farms in transition.

The **Clean Water Management Trust Fund** issues grants to local governments, state agencies, and conservation nonprofits to purchase conservation easements on farms that serve as riparian buffers to priority waterways.

Support for Farms in Transition

Farmland is frequently sold and converted to other uses when an owner dies and the land must be sold for taxes or to settle an estate, even when heirs would rather have kept it in the family or seen it at least remain intact as a farm. Sometimes this occurs even sooner when age or illness destroys an owner’s capacity to run the farm or pay for retirement. And often the people who acquire land under such circumstances, even though they would like to see it remain in agriculture, but do not have the skills or capital to manage that.

Nearly all the people interviewed in the preparation of this plan, both landowners and the agents and others who work with them, cited and regretted these scenarios. Extension and other county-level agencies have not traditionally gotten involved in estate planning, brokering operating leases, or counseling non-agricultural buyers of farmland, but great demand exists for these services.

Without creating new positions and recruiting people with the knowledge and experience to fill them, government entities such as an Advisory Board, Planning Department, Extension, of Economic Development Board, can develop a network of independent professionals, make referrals and in some cases even subsidize the cost.

Comprehensive Land Use and Economic Development Planning

All efforts to predict and promote certain kinds of development in certain places fall under this heading, regardless of whether a county has a formal planning or economic development entity. A thoroughly comprehensive county plan typically identifies important resources, defines areas where they will be developed or protected, designs programs to promote this, and suggests a prioritized list of actions to carry them out. Comprehensiveness is nevertheless a matter of degree. Some level of planning must attend many routine decisions concerning land use – to extend a sewer line, to establish an industrial or recreational park, to pave a road – and farmland protection fits easily among other considerations.

In the preparation of this plan, Extension, along with the Agricultural Advisory Board, identified 22 properties of 100 acres or more with at least 50 acres in agricultural use as particularly important contributors to the overall health and beauty of the rural environment. Also, the County Manager has suggested adding agriculture as a specific interest of economic development activities, which have hitherto focused primarily on business development and attracting industry.

With the establishment of Voluntary Agricultural Districts and the mapping of prime soils, spontaneously developing corridors, etc., it will become possible to target incentive and support programs on the most critical areas as part of an increasingly comprehensive plan.

Development pressure in Cherokee County falls heaviest on the best farmland, as noted earlier, because all transportation corridors, level building sites, and deep, fertile soils derive from the rivers that carved our mountain valleys. Thus, protecting prime soil ranks high among the motivations for this plan; however, other factors also carry weight.

The Agricultural Development and Farmland Preservation Trust Fund website offers a risk assessment model to assist in prioritizing lands for preservation. Farmland is scored according to two broad criteria: Viability and Threat level. Viability of lands are prioritized using a complex scoring system that includes proximity to other types of agricultural assets such as feed mills, farmers markets, tractor supply stores, livestock markets, slaughter houses, etc., and whether such land is enrolled in a VAD or in close proximity to other protected lands. The threat level assessment is determined by proximity to sewer and water lines and defined urban areas.

Subdivision Ordinances and Development Buffers

Subdivision ordinances guide how development will actually occur and exactly what form it will take. Subdivision ordinances can specify whether a development of a certain size must maintain open land, how developments must treat steep-slope areas, or whether development must take into consideration factors such as critical habitat or wildlife areas, historic sites, and public access to resources such as streams stocked with trout from taxpayer-supported hatcheries. Frequently, an ordinance will require subdividers to make up front contributions if a project will incur major public costs such as school construction, fire, police and road maintenance or water

and sewer line extension.* Subdivision ordinances often include buffer requirements that specify the distance of homes or wells from farm operations.

Such regulations can have a major impact on the viability of adjacent or nearby farmland.

In Macon County North Carolina, Commissioners recently adopted a subdivision ordinance with the following purpose:

“The purpose of this Ordinance is to establish procedures and standards for the development and subdivision of land within Macon County. It is further designed to promote the orderly growth and development of the County; for the coordination of roads and highways within proposed subdivisions with existing or planned roads and highways and with other public facilities. It is also designed to provide the County Commissioners, Planning Board, Planning Department, Tax Assessor, Land Records Office, Code Enforcement and other local government agencies and officials with information regarding land development taking place in Macon County. This information will assist county officials in projecting the need for various public programs and facilities, in estimating population growth, and in projecting revenue and expenditures. It is not the intent of this ordinance to regulate the divisions of land by gift so long as it is not held for sale or building development contrary to N.C.G.S. §153A-335”

Macon County’s subdivision ordinance allows for the designation of Conservation Communities, which have as their purpose to incorporate all primary conservation areas into undivided or relatively undivided, permanent open space. Primary conservation lands include agricultural lands in a contiguous area.

Development Buffers apply to interface between farmland and residential or industrial land where conflict can often lead to pressure against agriculture. In Cherokee County development activity often occurs adjacent to active farm operations. Development buffers specify physical barriers between potentially incompatible land uses. They often designate that strips of land separate residential lots from farmland. Other ordinances specify that vegetation such as shrubs or trees be planted to obstruct views between houses and farms. Some subdivision ordinances require the developers to provide the buffers. To be effective, buffers must be designed on a site specific basis and adapted to address different types of agricultural operations.

Conservation Development refers to a category of subdivision ordinance that by incentives or regulation encourages the protection of open space or agriculture within a development. A substantial number of jurisdictions, including some in North Carolina, have adopted this approach in various forms. It is generally associated with the landscape architect Randall Arendt, who observed that a great many “standard” developments could return as much or more to their investors and immeasurably more to the larger community by rearranging lots, structures and roads to leave large spaces open rather than simply subdividing a farm into lots of equal size.

* Note that designation s a Voluntary Agricultural District exempts a farm from assessments for utility services for developments that would otherwise apply.

A number of developers in Western North Carolina have embraced this idea without compelling government regulations or incentives, because they saw profit in it. Part 1 of this plan cites T.L. McNabb, who sold a fairly dense cluster of lots contiguous to his farm by assuring potential buyers that the farm itself would remain undivided during his lifetime.

Conservation development can be encouraged in numerous ways. In Madison County, for example Extension employs a landscape architect who can help a farm owner who wants to generate income from the real estate value of the land without selling out the whole farm or destroying its viability as a farm. Subdivision ordinances that allow greater overall density of development, if agricultural land is also preserved, represent another kind of incentive. Securing an easement that will keep property tax on the protected farm or forestland at the Present Use Value is another.

A Position on Zoning

In its standard form, a county zoning ordinance designates wide areas as residential, commercial, agricultural, resort, etc., within which certain restrictions apply. An R-20 zone, for example, permits only residences on lots of 20 acres or more. A Board of Adjustment oversees compliance and can grant waivers (and is often exposed to accusations of favoritism for doing so). Typically, existing land uses are grandfathered in, and frequently major areas are left unzoned in deference to special interests or general political opposition.

Randall Arendt, in his previously cited work on *conservation development*, shows conclusively that the standard zoning ordinance accelerates the transformation of agricultural land unless radically customized. The R-20 designation becomes a green light for carving the best bottom land into 20 acre lots, and boards of adjustment commonly bend to pressure to grant waivers to big projects and powerful investors of any kind.

Although a properly customized form of zoning possibly offers some protection against unwanted conversion of farmland, this plan assumes that other measures are far more practical, doable, and acceptable. The deep public support for the basic idea that democratically elected government should act to maintain a rural/agricultural landscape and economy must be honored in ways that do not fragment that consensus.

V. Prioritizing Preservation

The researchers of this report were asked to identify farmland in the County that is most optimal for farmland preservation activities, with a heavy focus on soil quality. While preservation of prime farmland is an obvious priority, other factors must be considered when ranking farmland for priority in protection needs. The Agricultural Development and Farmland Preservation Trust Fund website hosts a risk assessment model to assist in prioritizing lands for preservations. Farmland is scored according to two broad criteria: Viability and Threat level. Viability of lands are prioritized using a complex scoring system that includes proximity to other types of agricultural assets such as feed mills, farmers markets, tractor supply stores, livestock markets, slaughter houses, etc., and whether such land is enrolled in a VAD or in close proximity to other

protected lands. The threat level assessment is determined by proximity to sewer and water lines and defined urban areas.

County leaders should refer to this model to prioritize lands as it is further developed. The model, including GIS maps and a description of rankings, can be found at:

<http://www.ncadfp.org/NorthCarolinaDepartmentofAgricultureFarmlandPreservationModel.htm>

Soil Quality

The Natural Resources Conservation Service inventories land that can be used for the production of the nation's food supply. "Prime farmland" is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Prime farmland, as defined by the USDA, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. Slopes range mainly from 0 to 6 percent.

The Natural Resources Conservation Service of USDA has identified the types of prime soils and other important soils in Cherokee County in the following table:

Prime and other Important Farmlands

Cherokee County, North Carolina

Map symbol	Map unit name	Farmland classification
BcB2	Braddock clay loam, 2 to 8 percent slopes, moderately eroded	All areas are prime farmland
BkB	Braddock loam, 2 to 8 percent slopes	All areas are prime farmland
BrB	Brasstown-Farmer complex, 2 to 8 percent slopes	All areas are prime farmland
DrB	Dillard loam, 1 to 5 percent slopes, rarely flooded	All areas are prime farmland
NhB	Nantahala channery loam, 2 to 8 percent slopes	All areas are prime farmland
RsA	Rosman loam, 0 to 3 percent slopes, occasionally flooded	All areas are prime farmland
StB	Statler loam, 1 to 5 percent slopes, rarely flooded	All areas are prime farmland
ThB	Thurmont-Dillard complex, 2 to 8 percent slopes	All areas are prime farmland
BfD2	Braddock cobbly clay loam, 15 to 30 percent slopes, moderately eroded	Farmland of local importance
BgB	Braddock gravelly loam, 2 to 8 percent slopes, very stony	Farmland of local importance
BgC	Braddock gravelly loam, 8 to 15 percent slopes, very stony	Farmland of local importance
BrD	Brasstown-Farmer complex, 15 to 30 percent slopes	Farmland of local importance
JbD	Junaluska-Brasstown complex, 15 to 30 percent slopes	Farmland of local importance
JtC	Junaluska-Tsali complex, 8 to 15 percent slopes	Farmland of local importance
JtD	Junaluska-Tsali complex, 15 to 30 percent slopes	Farmland of local importance
LcB	Lonon-Northcove complex, 2 to 8 percent slopes, stony	Farmland of local importance
LkC	Lonon-Northcove complex, 8 to 15 percent slopes, bouldery	Farmland of local importance
LkD	Lonon-Northcove complex, 15 to 30 percent slopes, bouldery	Farmland of local importance
NhD	Nantahala channery loam, 15 to 30 percent slopes	Farmland of local importance
SeD	Soco-Stecoah complex, 15 to 30 percent slopes, stony	Farmland of local importance
BcC2	Braddock clay loam, 8 to 15 percent slopes, moderately eroded	Farmland of statewide importance
BkC	Braddock loam, 8 to 15 percent slopes	Farmland of statewide importance
BrC	Brasstown-Farmer complex, 8 to 15 percent slopes	Farmland of statewide importance
DeB	Dellwood fine sandy loam, 0 to 5 percent slopes, occasionally flooded	Farmland of statewide importance
HpA	Hemphill loam, 0 to 3 percent slopes, rarely flooded	Farmland of statewide importance
JbB	Junaluska-Brasstown complex, 2 to 8 percent slopes	Farmland of statewide importance
JbC	Junaluska-Brasstown complex, 8 to 15 percent slopes	Farmland of statewide importance
NhC	Nantahala channery loam, 8 to 15 slopes	Farmland of statewide importance
RdA	Reddies-Dellwood complex, 0 to 3 percent slopes, occasionally flooded	Farmland of statewide importance
ThC	Thurmont-Dillard complex, 8 to 15 percent slopes	Farmland of statewide importance
AkA	Arkaqua loam, 0 to 2 percent slopes, occasionally flooded	Prime farmland if drained
CwA	Cullowhee fine sandy loam, 0 to 3 percent slopes, occasionally flooded	Prime farmland if drained
TxA	Toxaway loam, 0 to 2 percent slopes, occasionally flooded	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
BaA	Biltmore sandy loam, 0 to 3 percent slopes occasionally flooded	Prime farmland if irrigated

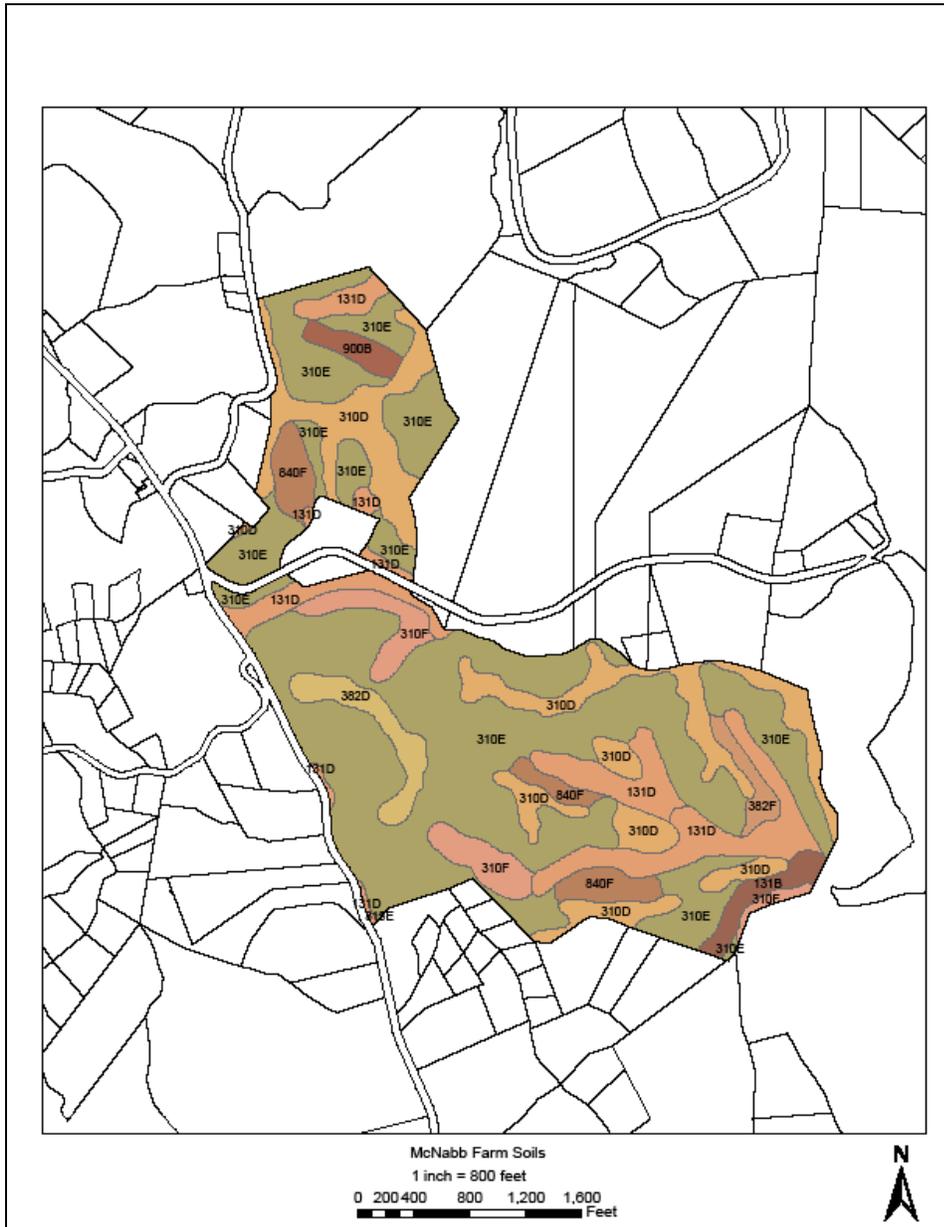
NRCS is currently mapping all soil types in Cherokee, and NRCS officials estimate that a comprehensive map will be made available to the public sometime in 2010. In the meantime, in order to assist this plan, NRCS staff has developed soil maps for a handful of larger farm parcels in Cherokee County, including the Wood Farm, Wells Farms, and McNabb Farm. These maps and soil types are discussed below as examples for prioritizing farmland for preservation.

The Wood Farm- The Wood Farm is located adjacent to the Andrews-Murphy Airport and straddles both sides of Highway 74 in the Valley River Valley just west of Andrews. The map below shows soil types found on the farm, many of which are considered farmland of local importance by NRCS:



NRCS correlates the numerical system of identifying soils in the map with specific soil types through a detailed soil map legend. In the northern section of the farm, predominant soil types are Junaluska-Tsali complex (382), much of which has 15 to 30 percent slopes. This soil is listed as farmland of local importance by NRCS. In the southern portion of the farm, south of Highway 74 and straddling the Valley River, predominant soil types are Rosman loam (82A), Arkaqua loam (85A), and Toxaway loam (72A). Rosman loam is listed as prime farmland, and Arkaqua and Toxaway loams are considered prime farmland if properly drained.

McNabb Farm- The McNabb Farm, located on a tributary of the Nottley River in the south southwestern part of the county, is comprised primarily of Junaluska-Brasstown complex soils of varying grades (310D and 310E), with 15 to 30 percent slopes of this type classified as farmland of local importance. A smaller portion of the farm consists of Thurmont-Dillard complex, with slopes of 2 to 8 percent (131B) classified as prime farmland and slopes of 8 to 15 percent (131D) classified as farmland as statewide importance.



In addition to soil quality, a ranking system for prioritizing preservation must take into account several other factors as recommended by NCDA&CS and as implemented by other counties. In

Buncombe County, for instance, a complex ranking system is used that take into consideration site assessment criteria as well as soil assessment criteria. To determine ranking scores, total scores for the two components are added together. The complete ranking system for Buncombe County is included in the appendices of this plan.

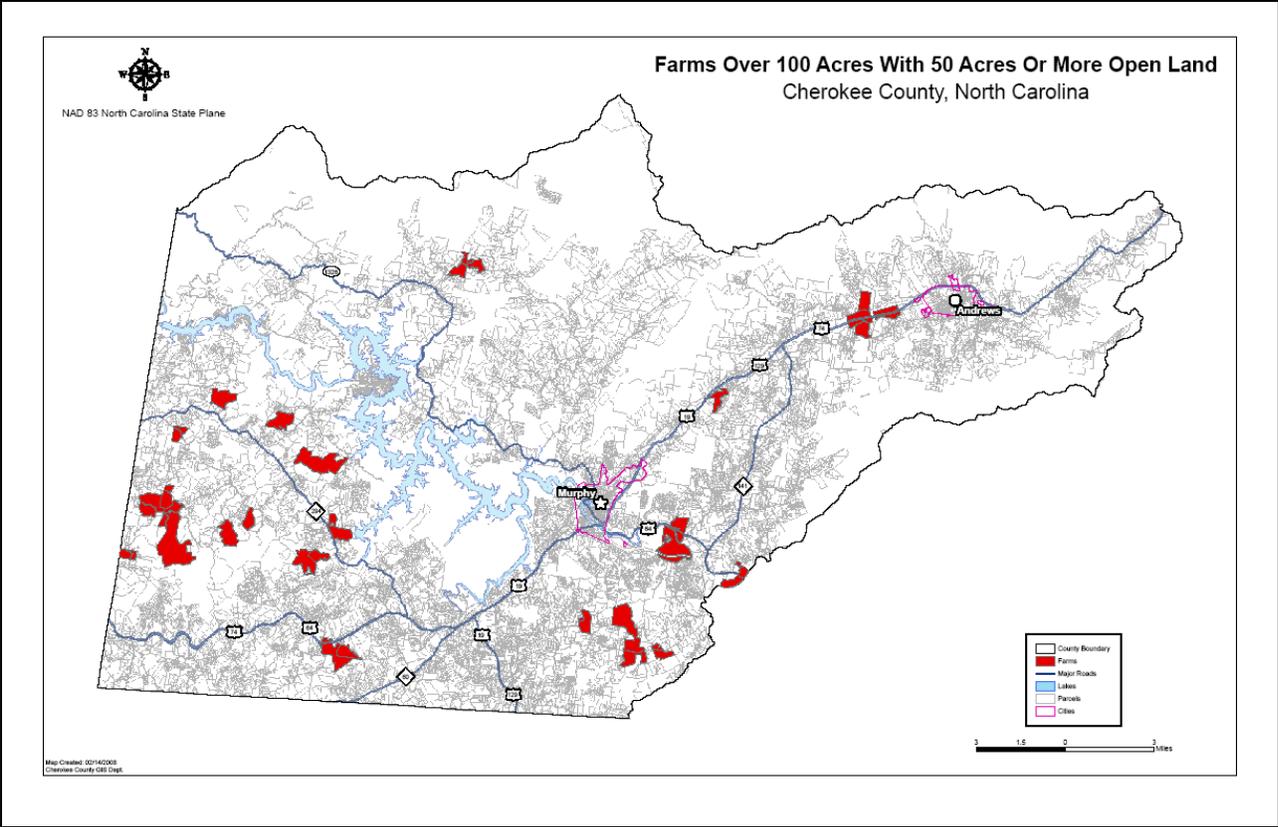
For site assessment scoring, Buncombe County assigns a parcel of land with point values to the following criteria:

- 1) Tract size (weight 100 points). A score of one point per acre is given up to a maximum of 100 points.
- 2) Percentage of tract in agricultural and/or open space use (weight 100 points). A score of one ranking point per percentage point of land in production or open space compared to total tract size is given up to a maximum of 100 points.
- 3) Proximity to public water and sewer (weight 100 points).
- 4) Probability of conversion (weight 100 points).
- 5) Proximity to planned development (weight 50 points).
- 6) Proximity to agricultural preservation areas (APA) (weight 50 points).
- 7) Capital investment in farm operation (weight 200 points). (Dwellings are not included in this determination other than employee housing)
- 8) Conservation program (weight 200 points). A score of two ranking points per percentage point of land meeting the "T" formula of conservation is given up to a maximum of 200 points.
- 9) Historic, scenic, environmental qualities (weight 50 points).
- 10) Specialty products (weight 50 points).

Cherokee County may want to consider a ranking of farmland prioritized for preservation using the following criteria:

Farms containing prime soils;
Proximity to high population densities;
Eligibility for and enrollment in a VAD;
Adjacency to important watersheds;
Size of contiguous open farmland;
Historical importance;
Visibility from major tourist and visitor sites

Based upon a fair ranking system, most of the 20 farms with more than 100 acres and over 50 acres of open land would meet priority designation for protection. These farms are shown in red in the map below:



Of particularly high importance should be land in close proximity to growing population centers. These include land between Andrews and Murphy in the Valley River Valley, land in the Peachtree area east of Murphy on Highway 64, and land near Brasstown on the Clay County border.

PART THREE: SUMMATION AND RECOMMENDATIONS: IMPLEMENTING A CHEROKEE COUNTY FARMLAND PROTECTION PLAN

The research conducted for this plan since late 2008 strongly indicates that the future of farming and farmland in Cherokee County is at risk. Nevertheless, opportunities do exist for agriculture in the County to regain its vitality through a combination of technical assistance and targeted land use policies, sustained agricultural economic development programming, and exploitation of new market opportunities, especially local direct marketing and the re-establishment of regional food supply chains.

Actions to support farming and preserve farmland, which must be seen in the context of a general goal, which we state again:

To maintain the rural character and economic diversity of Cherokee County, first by increasing the profitability of, and opportunities for, agricultural land uses, and second by supporting landowners who favor keeping their land in agriculture.

Cherokee County will:

1. Reconstitute and strengthen the Agricultural Advisory Board to harness a broad range of skills and resources to preserve and support farms and farmland in the County.

The Commissioners, or parties designated by them, will determine the size, composition, and responsibilities of the new Advisory Board in accordance with Chapter 106, Article 61 of the North Carolina Statutes; however, it will have the following characteristics:

- Leadership committed to dynamic action in support of this plan.
- Size and membership that can make decisions unencumbered by chronic difficulties in gathering a quorum.
- Formal and routine communications with other County boards and departments concerned with land use, planning, and economic development.
- Representation of non-agricultural but related interests such as tourism.

2. The reconstituted Advisory Board will:

- a) **Aggressively promote creation of and enrollment in Voluntary Agricultural Districts.**
The 288 existing farm operations in the County should all be contacted by phone, mail, and email on a regular basis to inform them of the VAD option. Priority focus should be given to creating VADs that include prime soil bottomland in corridors most threatened by

development pressures. These include farmland along the Valley River Valley near the airport and farmland in the Peachtree Community along or near the Hiwassee River.

Prospective VAD members will be offered tangible benefits to joining. These include developing a signage program to publicly recognize participating farms along major roads, acknowledgement through local media and press releases, and concerted efforts to steer economic opportunity towards those producers willing to enter VADs. These may include county endorsement of mini-grants from the NC AgOptions grant program, and prioritizing development of community agricultural infrastructure that benefits farms enrolled in VADs.

As a first step to enrolling as many farms as possible, farmers serving on the Board will develop VADs for part or all of their own productive farmland. A pioneer vanguard of willing farmers will spur broader participation in VADs.

- b) **Develop an outreach program for local food and agricultural producers and others interested in land use issues.** The Polk County agricultural economic developer hosts a monthly 7 a.m. breakfast meeting for local farmers with programs discussing new market opportunities, land ownership succession, farmland protection policies, and other topics of interest to the agricultural community. Cherokee County is encouraged to replicate this type of consistent, ongoing outreach. It serves to educate land owners on important issues and also fosters a true community of like-minded citizens with common interests. Developing a constituency of landowners who can meet and formulate proactive ideas of mutual benefit can be a powerful catalyst for positive change in the agricultural economy of the county.
 - c) **Work with the Little Tennessee Land Trust to promote easements in targeted areas of the county.** The Board should pro-actively approach significant landowners, including absentee landowners, to participate, contribute to the transaction cost fund, or offer matching grants for buying easements.
 - d) **Join economic development and planning efforts in the county.** Through either overlapping membership on boards and commissions or routine liaison arrangements, the Agricultural Advisory Board will become an active participant in decision-making in the county, and agriculture will be recognized as an important element in economic development.
 - e) **Develop and adopt a formula to identify and prioritize land in need of protection.** The Agricultural Development and Farmland Preservation Trust Fund website offers guidelines for weighing both the agricultural importance of the land and the threat of transformation.
- 3. Enhance efforts of the Cooperative Extension Service and other farm resource agencies to support innovative economic development strategies and help with farm transition issues.**

Production agriculture, especially raising of feeder cattle and related inputs like grain and hay, remain highly deserving of education and training in best management practices and

introduction of superior production methodologies. At the same time, the County should increase efforts to create and expand new markets for new products within the County and in the greater Southern Appalachian Region. Action may include:

- **Promote direct sales and local networks of producers to ensure maximum return to the farm.** The survey of permanent County residents indicates a very high interest in support for local farm produce and meats. The Board and its supporting agencies can promote and celebrate private businesses using local foods, including restaurants, grocers, and specialty shops such as the butcher shop in Murphy. Some options for increasing direct sale of local produce and meats include:
 - a) Establishing a roadside produce stand in a high traffic area that sells only locally grown foods.
 - b) Actively assist and advertise the farmers' market and pursue grants and other support to establish a permanent community farmers' market facility that is licensed to participate in Federal and state food assistance programs.
 - c) Support increased production and marketing of locally finished beef and pork, working with slaughterhouses in Georgia.
 - d) Investigate efforts to support upgrading of the sole abattoir in the county which is not currently a USDA inspected facility. A community effort can be launched to facilitate production, killing, aging, and packaging meat for local sale.
 - e) Work with schools, the health center, Tri-County Community College, and local restaurants to arrange for buying local produce and meat.
 - f) Explore development of a county-endorsed Community Supported Agriculture (CSA) program that sells subscriptions for weekly delivery of local foods;
- **Conduct educational outreach to non-farm and absentee landowners.** With over 40% of private land owned by non-residents, agricultural service providers should make a special effort to identify landowners who might wish to lease out farm ground or hay ground and connect them with people who need pasture, hay, or a place to put in a crop. Many absentee landowners who have limited local contacts and little experience in agriculture would welcome an arrangement advised by a professional at the extension office.
- **Promote estate planning for farm families facing imminent transition to a new generation.** This could take many forms - seminars, flyers, newsletter articles. A staff person up to speed on the general subject and a list of well-vetted legal and financial consultants to refer people to would help greatly. Finding "experts" who deeply understand the special issues facing farmers is difficult and the consequences of bad advice can be serious.

- **Become equipped to refer landowners to planners and designers who understand conservation development.** The Community Foundation of Western North Carolina demonstrated the implications of this in an experimental planning session at the Wood Farm at Marble. The results are online at:
http://www.mountainlandscapesnc.org/info/cty_cherokee.html

4. **Strengthen multi-agency and multi-jurisdictional collaboration to preserve farmland.**

The counties of the western region of the state are united by a common heritage, topography, and traditional agricultural production systems. They share common interests and similar threats, and all are limited in both human and financial capital. There exists a strong impetus to create regional strategies that will preserve farming for the future. An existing economic development position in the North Carolina Department of Agriculture can play a leading role in:

- Farmer outreach and education on farm transition issues.
- Planning services for landowners interested in developing some land as a way to capitalize farm operations on the rest.
- Securing transaction costs and other funds to facilitate agricultural conservation easements.

5. **Investigate policies that will provide incentives for preserving prime farmland while meeting the natural growth needs of the County.**

In any community, agriculture and farmland cannot be separated from the larger issues of unplanned growth and unchecked real estate development. In Cherokee County, where prime soils corridors, watersheds, population densities, and transportation routes all overlap, this is especially true.

Their challenge is to strike a proper balance between competing demands for land use among developers, farmers, absentee landowners, everyday citizens and part-time residents. Key actions might include:

- **Collaboration with the North Carolina Department of Commerce's Division of Community Assistance (DCA).** DCA has professional staff experienced in developing appropriate land use strategies. The office also provides regional and customized training for planning boards and boards of adjustment.
- **Draft development of a subdivision ordinance pertaining to large scale residential developments.** Commissioners will study the experience of neighboring counties which have passed ordinances with the goal of restricting undesirable development while maintaining a high degree of autonomy for responsible developers and landowners.

Unlike traditional zoning ordinances, these might apply only to parcels of farmland above a certain size that a buyer wishes to subdivide and could set guidelines for steep slopes, roads, water and sewer, fire and emergency access, etc. It might also limit overall density and create strong incentives to preserve open space, agricultural soils and farming activity.

6. Other actions

To preserve farmland and secure a future for farming in the County the Agricultural Advisory Board, County Commission, and other vested stakeholders will also:

- **Explore additional incentives for signing an EVAD agreement.** These may include reducing the tax burden by *leasing* development rights for a 10 year term.
- **Consider creating a fund for agricultural conservation easement transaction costs.** The County can create new revenue streams to support this fund and enhance it with matching funds from foundations and state and federal government programs.
- **Seek ways to offer education and training to youth and young adults.** Such might include adding direct marketing, pasture management, and organic growing into the vocational agriculture program at Murphy High School. Short courses at Tri-County Community College could help livestock producers acquire expertise in low input, planned grazing management in the spirit of Bass Hyatt (see profile in Part 1).