

2020 Guilford County Farmland Protection Plan

Appendices

Appendix A
Guilford County Agriculture Economic Report

Guilford County Agricultural Economic Report

Agriculture and Agribusiness — defined as food, natural fiber and forestry — account for more than one-fifth of North Carolina's income and employees. The industry also contributes jobs and income in Guilford County. In 2008, Mike Walden, an economics professor at NCSU reported that total income for Agriculture and Agribusiness related industries totaled, \$2,644,862,542, 10.3% of the share of Guilford county value added income¹. Total Agricultural/Agribusiness Employment was 42,585, was 11.8% share of Guilford county employment in 2008.

Agriculture Challenges

Absence of a Cash Crop: Certainly you cannot discuss Agricultural Economics in the Piedmont of North Carolina without first talking about the challenges farmers have faced over the last decade as they adjusted away from the cash crop of tobacco and the federal allotment system¹. To sit down and discuss economics with Guilford County Farmers and Guilford County Agriculture Businesses, Tobacco always emerges as the first topic of discussion. According to the Guilford County Farm Service Agent, “At its peak Guilford County had 5500 acres of tobacco grossing close to \$20.6 million when the entire farm economy in Guilford County was approximately \$60 million. Even now tobacco is still the top crop, dollar wise. In 2010 Guilford has about 2100 acres for approximately \$8.75 million annually. That's a significant drop. The only other high value crops are perishable or in the nursery industry, both are high risk with a limited time to market and few bulk buyers” Nationally tobacco acreage per farm averaged around 5 acres per farm throughout the 1980s and reached a national high of 9 acres per farm in 2002². Guilford County had averages closer to the North Carolina average of approximately 20 acres per farm. The income from Tobacco was a significant source of income for many Guilford County farm families. Tobacco averaged around \$9,000³ per acre⁴ in 1980 (adjusted for inflation).

High Land Values: Four different farmers commented during interviews, “It seems like the only way to make money off our land these days is to plant houses”. According to the Guilford County Agricultural agencies the most common crops grown are corn, soybeans, and wheat. These commodities typically bring in \$200-450 per acre⁵. Without a replacement cash crop that bring farms a similar rate of return on acreage that is higher than the value of the land, farmers will continue to look at the land's value as their only remaining source of income. These high land values make it exceptionally challenging for new farmers to buy into the business of farming if they do not inherit land.

Lack of Profitability: Simply put an area agribusiness man stated, “Farmers have got to make a profit to stay on their land.” Factors that affect farm profitability are declining revenues from farm commodities, rising input costs such as fuel, feed, fertilizer, and equipment, and

¹ <http://www.ces.ncsu.edu/depts/agecon/counties/guilford.pdf> 2008 value-added, which is the production value using inputs from Guilford County

² *Trends in U.S. Tobacco Farming* Economic Research Service/USDA

³ See appendix ___ for economic graphs noting Tobacco per acre adjusted for inflation

⁴ Note: farms were limited on production acres based on tobacco allotments. See Endnotes.

⁵ See appendix ___ for economic graphs noting Corn, Soybean, and Wheat prices per acre in 2009

business operating expenses such as labor, maintenance, and taxes⁶. Most Guilford County Farmers already own their land, but land values should be a backdrop as commodity prices are analyzed. Making a profit on the land is a considerable challenge for the Guilford County agricultural sector as farm revenues have been in a state of decline over the last decade.

According to numerous business managers interviewed in the loan industry, “Farmers are having to manage their expenses, and there doesn’t seem to be enough consistency in the marketplace to adequately budget and meet debt obligations. We’ve seen profitability in all agricultural sectors decline. It is becoming very difficult to make a living farming according to what we are seeing on their record books. Those without a secondary source of income (off the farm) are really struggling.”

Charting historic trends in farm commodities and adjusting for inflation paints a bleak economic picture for the business of making profits off of the land. The average land price per acre for rural farmland sold for farmland in 2007 \$5,300 per acre⁷. Many farmers interviewed will tell you they expect to pay about \$6,000 - 8,000 an acre if they want to expand their operations⁸ while expressing an intention to get \$8,000-\$10,000 an acre off of the land that they currently own.

Corn brought in an average of \$460 per acre in 2009, soybeans \$330 per acre, and wheat \$220 per acre⁹. “It costs about \$350-\$400 an acre of input costs for corn by the time you buy the seed and spread the fertilizer and maintain the crop through the growing season. A good crop of corn brings in about 100 bushels per acre and sells for \$4.00 a bushel. That makes the math easy. Farmers are just breaking even.” stated a milling company owner. The equipment and labor costs associated with planting, maintaining, and harvesting were challenging to fully quantify as they varied for each farm¹⁰. Farm net income is tracked as part of the Census of Agriculture. Net Income has gone from an average of \$60,000 in 1999 to \$442.00 in 2008¹¹. Many farmers validated this trend by stating they had sought other forms of income off the farm. One mechanic stated, “I do this so I can support my farming habit.”

Livestock has also been challenged by declining revenue. One farmer stated that, “It used to be that cows were your bank account. When you needed money you sold cows. Now everybody needs money and cows aren’t worth much.” In 1973 and again in 1979 a 500 pound cow was worth over \$1700 (adjusted for inflation for 2010 dollar comparison). In 2009 a 500 pound cow sold for \$700. Cattle glutted the market when the recession hit, coupled by a

⁶ The heaviest burden of tax on the Guilford County farmer mentioned during interviews was the estate tax.

⁷ See appendix ___ for Study of Farmland Prices. Considerable variance exists in land values dependent upon a variety of factors such as proximity to services, roads, water bodies, land use, whether it was sold at auction, etc

⁸ Interviews took place in from Nov 2009-May 2010.

⁹ See appendix ___ for economic graphs noting Corn, Soybean, and Wheat prices per acre in 2009

¹⁰ Farmers interviewed had considerable differences in equipment, age of equipment, type of equipment, etc. Farmers also use different methods for land prep and land maintenance (fertilizer costs are increasingly high, some elect to not fertilize, while others fertilize less with high prices). Gas prices were also highly variable and few farmers were able to quantify their fuel costs from year to year, but all stated they were high. Combines used for harvesting can cost \$300,000 new.

¹¹ See appendix ___ for economic graphs noting “Net income for Farming including Corporate Farms in Guilford County”

significant drought in 2007 which forced many farmers to sell when they suffered hay and forage shortages. Cattle revenues have been in decline since 2004.

There is currently only one hog operator in Guilford County, who is down from 10,000 hogs to 4,000. This operator is a contract grower with Murphy. Like poultry, Murphy owns production and packing and drives the price of large weight hogs along with Smithfield. The independents were driven out of business years ago, because competition was too fierce and North Carolina no longer has an independent slaughter facility. The only place to market independent hogs for commercial growers is Tennessee. Environmental laws make it challenging to put in new houses, so the hog industry in Guilford is not expected to grow.

Dairies in Decline: In 1985 there were ___ dairies. In 2010 there are six. “Dairy farmers are really struggling” was a common sentiment stated by farmers, agribusiness retailers, and county agricultural personnel. Bulk milk prices have been on the decline since 1985 when adjusting for inflation, with the exception of 2007 when milk prices spiked to historic highs then rapidly fell in 2008 and again in 2009 to their lowest (adjusted for inflation) amounts in 25 years. Milk prices don’t tell the entire story. Variances in fuel, feed, processing technologies, labor, cow prices, waste, etc all factor into profitability, and the lack there of. Dairy farmers complain about a variety of factors leading to their industry’s decline. Some considerable policy challenges exist on the national stage as farmers complain nationwide that there are too few choices as to where to sell their milk as two multinational conglomerates control the bulk of the milk market¹². One agribusiness manager put it this way, “Some of it is poor commodity prices, some of it was just plain bad management, and some of it is inflated real estate market. You get all three of those at once, and the dairy’s don’t stand a chance”

Urban/Residential Encroachment: In many cases, farmers could make sufficient income off of a few acres of tobacco, but grain, corn, and soybeans require more land to turn a profit. Farmers in Guilford County may not have sufficient land mass to maximize their economy of scale. And it can be inefficient to run a tractor down the road to farm another 20 acres. Residential neighbors pose liabilities. Roadways are more dangerous as traffic increases. Complaints about odors from chemical or waste application pose a considerable challenge to neighbor relations. Farm ponds become liabilities for trespassing youth.

Farm infrastructure is less local. The infrastructure associated with the business of farming is dwindling. Local markets to sell commodities have closed, forcing farmers to haul their goods to other parts of North Carolina and Virginia. The only independent hog slaughter is now in Tennessee, more than a 5 hour drive for a Guilford County independent swine producer. Livestock producers must travel to Siler City or Mount Airy to sell their cattle. Grain can be sold in the county, but there is limited demand and storage, most farmers take their corn, soybeans, and small grains to Raleigh. As transportation costs increase, long distance travel to market commodities could make farming even less profitable.

Access to large animal veterinarians, parts and repair services for equipment, and farm supply retail have been identified as infrastructure to watch, but most farmers interviewed did not consider this as much of a challenge. Neighboring counties have identified large animal

¹² <http://online.wsj.com/article/SB125314377665317635.html> Most recent article on anti-trust coverage from Wall Street Journal on Dean Foods and Dairy Farmers of America.

veterinarians or the lack there of as a limitation. Guilford County has a strong equine industry allowing a more consistent demand for veterinarians who can service both horses and cattle.

Farm Management: “The good old days of taking your product to market are gone. Farmers have to look at input costs, spend time analyzing federal programs, their eligibility, requirements for reporting, disaster programs, insurance, etc. It’s an expensive mix.” Farmers stated paying more attention to futures markets. Access to the internet and global marketplace sheds new light on what is coming. But with any generation, it is tough to calculate in all of the variables associated with farming, especially with respect to weather (rain, drought, frost, etc) and pests. “Few farmers like to sit down with a pen and paper and determine how to use their capital properly” stated one loan officer. “You can be broke before you know it, unless you’re willing to manage smarter. Today’s market is forcing farmers to manage their books more than ever. Profit margins are smaller, there is less tolerance for error”

Global Economy: Fertilizer retailers expressed concerns over international demand for potash, phosphate, and some chemicals. China is increasing demand on a supply that may find itself limited, which will only lead to higher fertilizer costs. High fuel costs also drive fertilizer costs higher. In recent years, fertilizer has doubled. This will continue to put increasing pressure on profit margins as the commodity pricing can be slow to show higher input costs. Larger farms have more control over input costs. Farms in excess of 600 acres are few and far between in Guilford County as opposed to Eastern North Carolina counties. “This area is so chopped up from Tobacco farming, where a man could make it off of 70 acres with 20 acres of Tobacco. That used to be enough for a family of four” stated one agribusiness retailer. “Higher volume farms have more control over input costs and can spread their input costs around.” Smaller farms may need to consolidate further, however, due to the lack of connectivity and distance between many available farms, this may not be a viable choice for many Guilford County farmers. Farmers must contend with international pricing for commodities. “Commodity prices are set and the international market doesn’t look at whether you have 50 acres or 5,000 acres, the prices are the same. 200-300 acres is a big farm around here”.

Trends in Guilford County Agriculture

Guilford County Agribusiness retailers consistently stated a common observation; they have fewer customers, and the ones that remain have grown their businesses into larger farms. One retailer stated, “Farmers are better operators and better businessmen. They have to be. Margins are slim. You could be a below average tobacco farmer, but not anymore. The companies will cut you off if your product isn’t good.” Agricultural Retail has adjusted in some parts of the county to changes in land use, increasing market share in lawn/garden sector and away from commercial agriculture. “I get a better margin off a bag, than I do off of bulk” stated one store manager of an agribusiness retailer. Retailers state they sell to fewer farmers, but more have more mini-farms whose owners are more residential in nature looking for a “rural lifestyle”. These mini-farms are typically 10-20 acres.

Agribusinesses are doing more chemical application. Three retailers stated that this is due to the technicalities of spraying, the new advanced technologies that are cheaper to rent than buy, and many farmers don’t want to get involved in the legalities and liabilities of chemical

application. Many have too many houses nearby and see spraying as a liability they would prefer to outsource. The fertilizer technology hasn't changed much, but "farmers are getting smarter about what their soil needs for inputs" stated one applicator familiar with new GPS technology.

Agribusinesses stated they are seeing more farmers go organic. Tobacco growers can make more money growing organic tobacco. It is still less than 2% of business, but the farmers that have tried it have stated that more consumers are demanding an organic product. Two of the grainaries that supply the horse industry stated that they are seeing a trend in natural feed products. This is offering them some diversification and is meeting a niche market demand.

Strawberries are a growing market. One retailer stated they had a 15% increase in acres over the last five years.

Vegetables are also a growing market. A seed retailer stated that they sold twice as many vegetable seeds in 2009 than they did in 2008. Many customers are buying their own chickens as well. The retailers attributed this to the mini-farms and rural residential customers buying into what they term as the "rural lifestyle" purchasing trends. A market the retailers are capitalizing upon. "We used to throw out potatoes, now we order them two or three times just to keep them in stock". Another retailer stated, "We're running out of canning supplies. I'm seeing sales for canning supplies like we saw in the 1960s. Probably because of the food safety concerns. More people want to know where their food comes from, plus the recession has tightened people's pocketbooks. They'd rather grow and store their own food."

Equipment mechanics state that they consistently see old equipment. "Most farmers can't afford new equipment, so we repair tractors they purchased in the 1970s when profits allowed them to upgrade. A new piece of equipment is ten years old."

Agribusiness retailers spent a lot of time talking about the trends in technology, especially with respect to seed technology changes and the yield advances that have occurred over the past decade. "Seed technology is changing constantly. There are high oil corns, low oil corns, diabetic seeds, drought tolerant seeds, and high tech soybeans are just around the corner. We are selling less fertilizer and more high tech seeds" stated one store manager. The bulk of the seed sold in Guilford County is treated according to salesmen interviewed. Specialized equipment runs the seed through a coating mechanization that applies fungicide and insecticide directly to the seed. These protect and safeguard early seed development. Genetically modified seeds are also sold that have proprietary rights from the companies that produce them. The genetic changes in the seeds change the way the chemicals are needed to reduce pests and weeds. One seed retailer said 90% of their seed sales are genetically modified seeds. The only time they sell conventional seed is when a farmer has gotten into trouble with the seed manufacturer. One salesman said, "I used to see 80-90 bushels (corn) per acre in the 1980s, now they are getting 120".

Agribusiness retailers stated that planting trends have changed since the tobacco buyout. "I thought we were sunk after the tobacco buyout. We lost about 60% of our tobacco business that first year, but I was really surprised by how many people went into beans (soybeans). After the tobacco buyout customers went from planting 40 acres of tobacco to 300 acres of beans. We sell a lot of fertilizer for those beans". They also stated seeing wheat crops increase after the

tobacco buyout. Retailers adjusted to the changing trends. Many diversified into lawn and garden to also meet growing demands from the mini-farms or “rural lifestyle”. In Summerfield, one retailer stated, “Tobacco declined, but lawn and garden filled in the gaps”.

More farmers are developing more savvy marketing skills especially with respect to their specialty crops. A Guilford County Agricultural Agent stated that they have seen an increasing demand for marketing assistance and marketing related questions. “Specialty Crops like vineyards, cheese, fruits, and local produce must now become an expert on marketing in addition to producing. Our farmers are wearing a lot of hats to make it in today’s economy”

Opportunities for Agricultural Economic Growth

Nearly all participants in agribusiness industry who were interviewed felt that the local food economy offered the most potential for future economic growth. However, few new how all farmers could respond into the various niche vegetable markets.

All interviews spent time discussing the need for farmers to diversify, but few were able to give specific examples of diversification on a large scale. There are farms that are experimenting with an ornamental landscape market, berries (blackberries, strawberries, roadside stands). Some interview participants stated having farmers ask more questions about cotton and fisheries. Cotton used to be grown in Guilford County. Chemical retailers have seen an increase in wineries. Supply retailers have seen a slight increase in vegetable demand, but more at the garden and mini-farm level than large scale changes in agriculture.

Horses were discussed frequently as an emerging market, but graineries who have sold to the horse industry for years said that the last few years have seen a considerable drop in people who have money to spend on keeping a horse fed. Some of the horse rescues have been overwhelmed. And the best horses are not selling for what they used to. Small mammals such as goats have increased and free range chickens and eggs sales are up as a secondary income for some farms. A more consistent market for vegetables and farm fresh products is needed to offer growth in the local food market place.

Technology was seen as a future opportunity for economic growth. Many agricultural technologies in seeds and chemicals are increasing yields. This is necessary as input costs increase and commodity prices stay stagnant, yield increases are the only remaining opportunity to support economic growth. However, technology often has a price in that the better seeds and chemicals are priced higher due to their higher productivity.

ⁱ The Tobacco allotment program limited the quantity of tobacco grown in the United States by assigning marketing quotas to holders of tobacco allotments. Supply was managed by setting annual quotas in line with expected demand for leaf. Quotas were apportioned to allotment holders based on historical production patterns that existed in the 1930’s at the program’s inception. A tobacco quota was defined as the right to grow and market tobacco. After the 1960’s, tobacco quota owners were allowed to rent or lease quota to others. Because tobacco returns were so lucrative, a tobacco quota was a valuable capital asset. A quota for a pound of tobacco was worth the difference between the price and the economic cost of producing it. Many owners of quota did not grow tobacco. About half of the tobacco quota was used

by the people who owned it. The other half was rented to farmers for either cash payments or shares. Without the supply limits mandated by the program, producers would have grown considerably more tobacco, pushing down market prices and returns. This quota system existed between 1938 and 2004 when it was abolished as part of a national tobacco policy change and farmers received buyouts to compensate for the loss of their asset.

Appendix B
Study of Guilford County Rural Property Values

Study of Guilford County Rural Property Values
And Property Tax Rates
1950 to 2010

Prepared for:

The 2010 Guilford County Farmland Protection Plan

Prepared by:

Piedmont Conservation Council, Inc.

Through a Contract with William B. Peete, Natural Resources Consultant

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The Piedmont Conservation Council, Inc. (PCC) acquired a grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund in 2008 to conduct a Guilford County Farmland Preservation Plan. PCC, and its partner agencies, Guilford County Soil and Water, NC Cooperative Extension, Guilford County Farm Bureau, Piedmont Land Conservancy, and the Guilford County League of Women's Voters, collaborated to execute the plan. It was determined that a study of the evolution of agricultural land prices in Guilford County compared to the evolution of the Property Tax Rate in the county would be helpful to analyze possible stress on farming practices in the county. This report acts to survey that evolution of property values and property tax rates to provide a basis to analyze any changes in agriculture in Guilford County since 1950.

Rural Land Value Component

The survey commenced by identifying sources from which to extract the data necessary to complete the analysis. Prior to this report, no database existed that lists an average value of property in Guilford County over the past six decades. Further, no list exists with Guilford County property tax rates extending back earlier than 2004. Utilization of personal interviews, property deeds, county annual budgets, microfiche records, internet sources and government pamphlets supplied the information contained within this report. Analysis of these various sources led to the conclusions regarding Guilford County property values found at the end of the document.

The first order of business was to compile a list of property values of rural tracts in Guilford County throughout the past six decades with which to calculate an average price per acre of rural land approximately every five years since 1950 with which to graph a trend in that price. From 1950 until 1959 and again from 1978 until 2007, data from the United States Census of Agriculture was used in the graph. Prior to 1992 the United States Census Bureau and after 1992 the United States Department of Agriculture's National Agricultural Statistics Service (NASS) conducted the Census. The Census is conducted by sending surveys to the nation's private landowners approximately every five years to determine the state of agriculture in our nation. The surveys are also supplemented by visits to many of our nation's farms by USDA staff. Among many things, the survey asks the landowners to reveal the appraised value of their property and buildings. Since 1950, first the Census Bureau and later NASS, have received over 85% of the surveys in each of the census years, therefore the data collected in these surveys is statistically significant due to the high return. The data is broken down by State and by County in the Report which is compiled by government agencies uninfluenced by any incentives to inflate or deflate land values, making it one of the best sources of Guilford County agricultural land prices available. The Census of Agriculture was conducted in 1950, 1954, 1959, 1964, 1969, 1974, 1978, 1982, 1987, 1992, 1997, 2002, and 2007, however, it was not possible to

obtain copies of the North Carolina and Guilford County data from the 1964, 1969, and 1974 Censuses.

In order to fill the gaps created by the lack of Census data available from 1960 to 1978, property deeds in the Guilford County Register of Deeds and microfiche records from the Guilford County Tax Department were examined to calculate average land prices. All properties in Guilford County are appraised by the Tax Department at least every eight years to determine property values. The county property tax rate is applied to the current appraised value of each property in order to collect revenue to run the County Government. The Tax Department kept rather thorough, yet incomplete, microfiche records of those property valuations in 1964 and 1972 in order to document the value of all property and assist in the subsequent valuation. Guilford County is broken into 16 townships which all differ in their property value base depending on how far each is located from the urban centers. Fourteen of the townships were considered rural in the 1964 and 1972 valuations. However, Deep River Township's records from 1964 and Washington's, Rock Creek's and Sumner's records from 1972 have gone missing and could not be used in the data collection. While these records are incomplete, and were generated by a perhaps biased government agency that is charged with the task of optimizing the tax revenue generated within the county, these appraisals do portray a consistent form of valuation throughout the county in a given year. Also, these tax valuations are the most complete record of property values of the entire county which still exist; therefore, these records are the best option as a basis of property value during that decade time period.

To calculate an average rural land price in 1964 and 1972, all properties over 40 acres in size were grouped by township as well as year. Then, three property cards from each of the available townships in these two sets of years were randomly selected, following which the appraised value of each tract and the acreage of that tract were recorded in a table. Next, a 1964 average price per acre in each township was calculated using the three properties within each township, and the same was completed using the 1972 data. Two outliers were identified following the calculations of each township's average price: Friendship Township in 1964 and Jamestown Township in 1972, likely a result of the random selection and incidentally drawing three properties with inflated values due to ideal development potential. Particularly, Jamestown Township in 1972 was a rural/urban interface, and therefore it is questionable whether it should have been considered a rural township. Finally, after excluding the outliers, an average rural land price per acre in 1964 as well as 1972 was calculated using the available township average prices.

Ideally, to obtain a more statistically significant average, more than three properties in each township in both valuation years should have been utilized to calculate the average prices. Hundreds and perhaps thousands of 40 acre plus tracts existed in each township during these two years, indicating that three properties is a very small sample size; however, three properties from each township had to suffice due to the availability of resources. At the time of this study, only one microfiche reader was available in Guilford County's government complex and the

competition for its use limits any one person's use of the machine. Further, these microfiche records were available from the vault for only a limited time thanks to the enormous generosity of the Tax Department and the extraction of such data from microfiche is quite burdensome and time consuming. As for other complications, efforts were made to pull the same three properties in each township in 1964 as would be pulled in 1972 to keep the subject properties consistent, but it was impossible. Since properties frequently changed ownership or fragmented, and even in some cases properties expanded, it was too difficult to find three tracts in each township that remained the same from 1964 to 1972. Such resulting error is most likely evident in that price calculated in 1964 when compared to the price provided in the 1959 Census of Agriculture. There is no indication by U.S. Treasury records that inflation or recession caused an obvious decrease in property value from 1959 to 1964, but our calculation indicates that happened. Still we confirm our use of the microfiche records since it is the best record at our disposal and does not significantly skew the trend in prices from 1950 to 2010.

Various property deeds were also pulled from the Register of Deeds database search in the years from 1950 through 1980 to supplement the Tax Department data, but these records are organized by the last name of the property owner and not by the property size and location. Thus, this was an ineffective method to find properties to use in the calculations. Also, many of the deeds lacked information on the exact sale price of the property during the year that it changed hands. Only a few of the properties which were pulled included a record of the excise tax stamp paid when recording the property transfer. When there was record of the tax stamp paid, it could be used to determine the value of the land in the year it was sold, assuming the property was sold at fair market value. In such a case, the excise tax was \$1.10 per \$1000 of the sale of the property from 1950 to 1969, \$1 per \$1000 from 1969 to 1991 and \$2 per \$1000 from 1991 to at least 2010. Since this method was quickly determined to be an inaccurate calculation of property value, it was only used so much as to offer some assurance that the other methods were accurate in their calculations. The deeds which were pulled are included in the appendix simply for reference. Purely just for the purpose of mention, one such deed indicates that a 155+ acre property in the Rock Creek area was merely worth twelve dollars and eighty-seven cents per acre in 1949.

Interviews with various Guilford County Tax Department employees also supplemented the calculations of land prices in the late 1960s, 1970s, and early 1980s, but only for accuracy assurance. Alan Myrick, the current Assistant Assessor of Real Estate was truly helpful in sharing all possible resources available to him which indicated land base rates during this period to the present, as well as to glance at the calculations and share his professional opinion. Also, Al Welmon, the former Director of the Appraisal Division of the Tax Department for much of the 1970s and 1980s, generally confirmed those property calculations relating to his era during a telephone interview.

From 1988 on, the Guilford County Tax Department either began to calculate, or at least still has record, base land rates in each township during each of the property reevaluation years.

Since 1988, the Tax Department still considers seven of the 16 townships to be primarily rural in nature, and has provided the average price per acre within those seven townships for the years 1988, 1996, and 2004 for this study. Then, an average price per acre for the county was calculated using these seven base rates.

Using the average price per acre in each of the years that the Census for Agriculture is available, the two years of averages calculated using microfiche data, as well as the years which base rates were available, a table was generated comparing the year and average rural land price per acre in that year. Then, the data in this table was graphed on a scatter plot to display the following trend in land prices from 1950 to 2007 indicated by Chart 1. Next, the prices were adjusted for inflation using multipliers, provided by the United State Department of Treasury database, so that all of the prices in the table would reflect the purchase power of the 2010 dollar. This purchase power indicates a more direct comparison in land prices from 1950-2007 shown by Chart 2 which includes a linear trend-line that highlights the correlation.

Chart 1: Average Rural Land Price per Acre in Guilford County 1950-2007

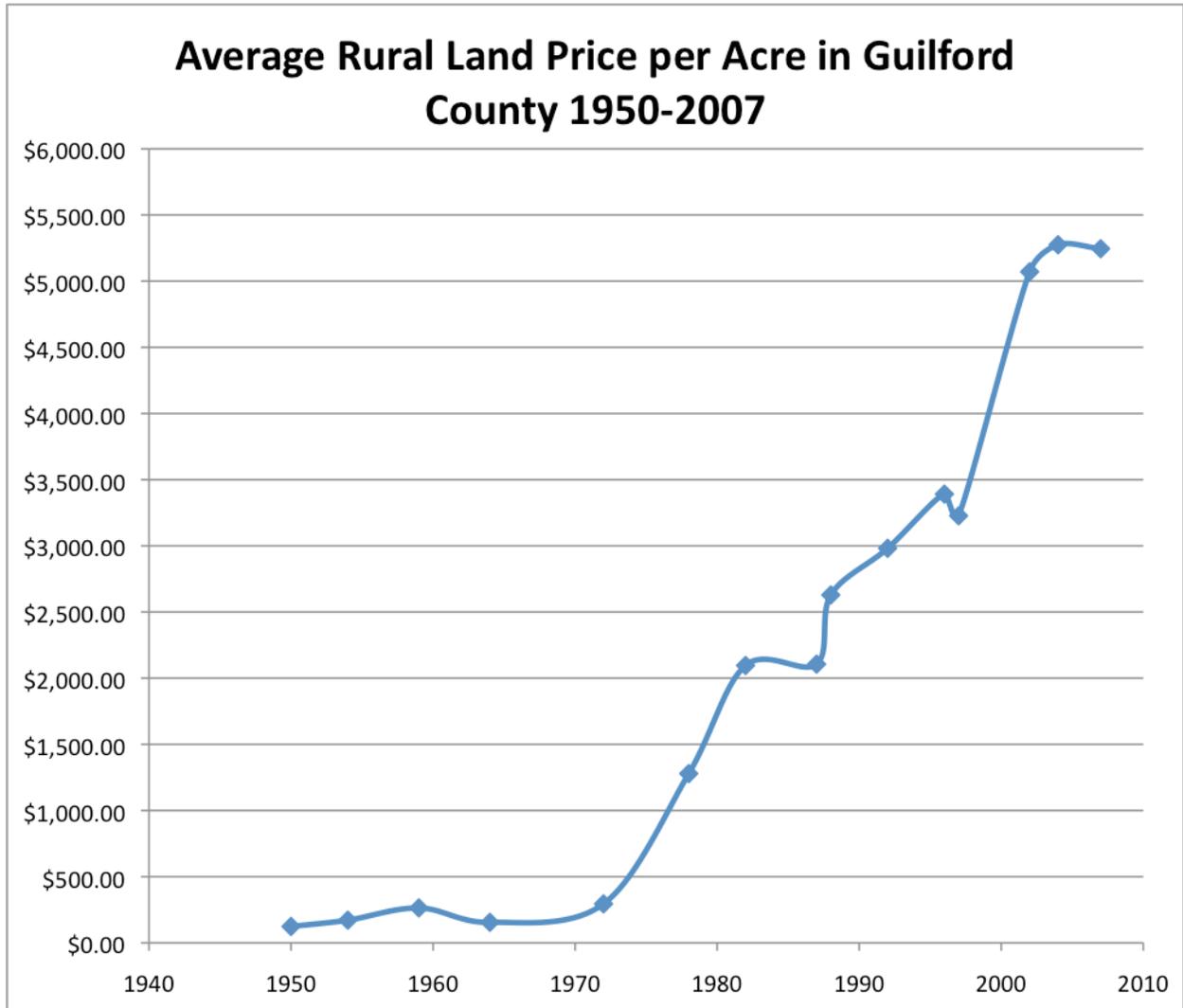
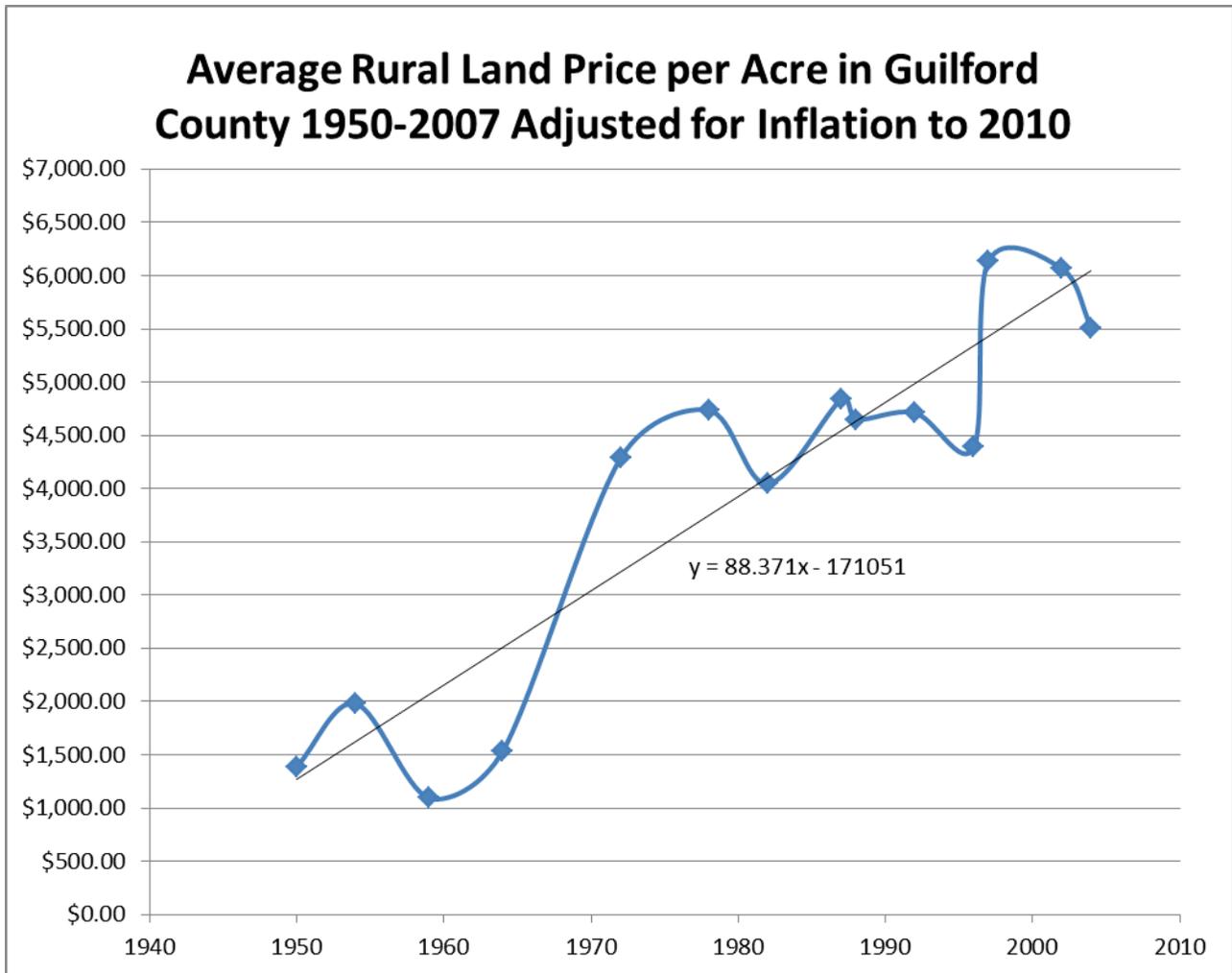


Chart 2: Average Rural Land Price per Acre in Guilford County 1950-2007 Adjusted for Inflation to Compare Purchase Power of 2010 U.S. Dollar.



Property Tax Component

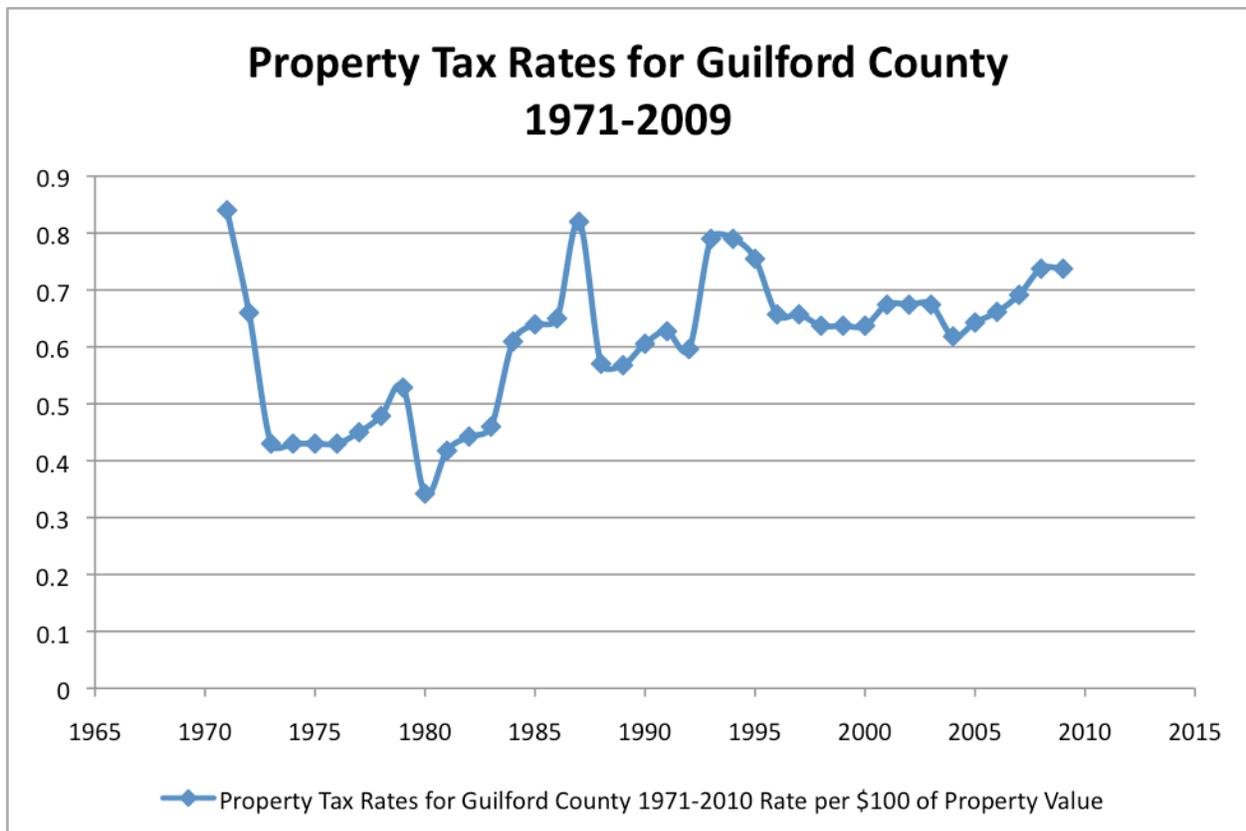
This study also sought to compare property tax rates in Guilford County from 1950-2010 to the average rural land prices per acre during this time. Further we sought the possibility of finding a correlation between rural land prices and the rising cost to the local governments when providing services to newly annexed rural land. Following the release of the conclusions found in the Cost of Community Services Study completed as part of the Guilford County Farmland Protection Plan, PCC and its partners noted that the ability to place a value on annexation per acre could enhance the argument for sustaining the agricultural sector in the County. Ultimately, these efforts were found inconclusive, since several variables were discovered which have

affected the flux in tax rates, which will require further study to isolate and individually analyze. Additionally, it was not possible at the present time to find accurate records of the countywide property tax rates between 1950 and 1970. While current resources prohibited the ability to calculate a direct correlation between tax rate and rate of annexation, this study did not disprove a correlation either. Still, based solely on a visual comparison of tax rates and rate of annexation, as well as a objective application of the findings in the Cost of Community Services Study, one can speculate that there is a correlation in the rise in the countywide property tax vs. the general increase in annexation in the past four decades.

Chart 3 below displays a scatter plot of the Guilford County countywide tax rate from 1971 until 2010. Neither the Guilford County Budget Office, Guilford County Commissioners Staff, Greensboro or Guilford Public Libraries, Guilford County Tax Office nor NC State Archives admitted to holding copies of Guilford County property tax rate records or copies of Guilford County annual budgets prior to the year 1970. Countless internet searches and library catalogue searches as well as library database searches came up empty as well.

Chart 3:

Guilford County Property Tax Rates per \$100 of Property Value by Fiscal Year 1971- 2010



As evident by the graph in Chart 3, the tax rates have been all over the board in the past four decades. The many variables that likely conjointly influence the flux in that rate include, but are not necessarily limited to: the eight year cycles of property appraisal reevaluation by the county tax department, inflation/deflation, increases/decreases in population, changes in additional special property taxes (i.e. for special school districts, fire districts, municipal property taxes), consolidation of county programs, creation of new county programs, authorization of new taxes which offset what would otherwise cause an increase to the property tax.

The most notable modification to the Guilford County Government in the past forty years which caused a significant change in the property tax was the merger of the Greensboro Public Schools and the Guilford County Schools in 1993. Prior to the merger, the county levied a countywide base property tax as well as levied special school district property taxes on certain parts of the county which utilized the Guilford County Schools. Following the merger, the county levied an equal school property tax on everyone since every county citizen now used the County Schools. The portion of property tax which now supported schools was added to the countywide base property tax. Thus, that school portion of the tax increased at first, but has decreased in time since the population which shares the burden to fund the schools, has significantly increased.

Further, the property tax has historically shown a significant flux during those years immediately around the tax department's reevaluations because it typically takes a few years to reappraise each property and determine what tax rate will need to be levied to the new basis of total county property value in order to fund that year's budget. According to the 1972 County Budget, the property rate approved by the Commission did not need to be fully levied because the reevaluation increased the tax base enough so that a fraction of the approved rate sufficed to run the government the following year.

These variables all likely contribute to the effect on the property tax rate, so it is improbable to identify one variable with the most direct effect. Similarly, the costs of annexation are difficult to calculate as each municipality levies additional property tax on top of the countywide rate which helps to offset the costs of extending services to newly annexed property. Ultimately, it is the municipalities' responsibility, not the county's, to extend many services to new residents, so annexation does not likely have a direct effect on the county's budget. It is not uncommon for the City of Greensboro's supplemental property tax to decrease in the same year as Jamestown's supplemental property tax increases, while High Point's remains the same as the previous year, or any combination of that thereof, so it is obvious many variables are at play. Also these municipalities are privy to additional revenue streams authorized by the State government such as ABC tax and highway trust fund money which offsets some of the costs that would otherwise be compensated by a property tax increase¹. Therefore, unless given the time to analyze each of the dozen or more municipalities' annexation

¹ North Carolina General Statutes. <http://ncleg.net>

rates, each annual supplemental property tax, and each of their additional revenue streams, then a proper calculation of cost of annexation is not obtainable.

Conclusions

First, it is obvious that rural land prices in Guilford County have seen a dramatic rise in the past six decades. Not only have prices increased approximately \$1500 per acre per decade since 1970, but even when adjusted for inflation, price still increase in slope by a multiplier of \$88 per year. As shown in other sections of the Guilford Farmland Protection Plan, revenues for agricultural product sales are on the decline while costs of production are on the rise, all contributing to a decrease in the profit margins for our county's farmers.

Second, while a correlation between the decrease in farmland and the flux in property tax rates could not be identified, many variables which act to influence the change in property tax have been identified and a plan needs to be devised to isolate those variables. It should be noted that while the countywide tax rate has shown no regular trend over the course of the last four decades, there has been a gradual increase over the last two decades even after the merger of the Guilford County schools and two appraisal reevaluations. Further study should be initiated.

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Appendix C
Ranking System Maps & Summaries

GUILFORD COUNTY FARM PRESERVATION MAP – Summary

Map #1: Farm Preservation / Land Conservation Priority Map

This priority ranking is a cumulative assessment based on all of the factors of the following maps. It takes into account proximity, adjacency and distance to open space, protected lands and existing voluntary agriculture districts. The size of the agricultural lands on a tract, the tracts land cover, amount of prime soils, and ecological resources (such as amount of stream buffers and State Natural Heritage areas and ranking and occurrence of rare and protected species) are also taken into account for this ranking.

Parcels included in this ranking study are those parcels that have agriculture lands as defined and delineated by the FSA, also known as *Common Land Units*. These lands are defined and described in Map #2. Also, we take into account tracts that have two or more acres, per parcel, of agricultural land (land cover classified as pasture lands or fallow fields) based on the most recent NC GAP Land Cover Data. Including GAP land cover in this assessment includes more *potential* farm areas than were classified in the active farm production captured in the Common Land Units data in 2006/7. This casts a wider net and assesses more parcels in hopes of finding more potential farmland in the future.

Parcels were ranked on a number of different factors including:

- > Size of farm in production
- > Amount of stream buffer on each tract
- > Amount of Prime Soils on each tract
- > Proximity to Voluntary Agricultural Districts
- > Proximity to Open Space and Protected Land
- > Occurrence of rare or protected plant and animal species
- > Ranking of State Natural Heritage Area

Each attribute above was ranked on a scale of 1-5 based on the significance, then all rankings were added up for each parcel to create a 'ranking score'. The range of score was broken into 3 categories, lower, moderate and highest priority ranking as shown on the map.

Conclusion: Parcels that rank the highest in this assessment are located in the north central (adjacent to Haw River State Park), just east of Greensboro near the NC A&T farm, and in the northeast and southeast quadrants of the County. The highest ranking tracts are those of larger acreage as they possess more ecological assets, more stream buffer acreage, etc. Also, those parcels adjacent to open spaces and protected lands, parcels which possess habitat for protected or threatened species, and parcels near or in Voluntary Agricultural Districts rank highest. Larger tracts are typically located further from urban areas.

Map#2: Existing Agriculture Land Units

The most recent, publically available base layer used to analyze agricultural land is the *Common Land Units* layer produced by the Farm Service Agency in 2006. This layer consists of all farm fields in North Carolina as delineated by the Farm Service Agency (FSA). It was created by reviewing NAIP aerial photos and manually tracing farm fields from digital ortho photos. Farm fields of 10 acres or greater east of Interstate 77 (in Guilford County) were delineated in their assessment. This layer is shown in green on the map.

Map #3: Conservation Planning Tool (NCDENR) Viable Agriculture Land - Statewide Ranking

The most recent, publically available base layer used to analyze agricultural land is the *Common Land Units (2006)* layer produced by the Farm Service Agency. This layer was also used in the NCDENR "Conservation Planning Tool - Farmland Assessment". Farm fields of 10 acres or greater east of Interstate 77 were used by NCDENR to assess Agricultural Viability.

NCDENR's Conservation Planning Tool's Viable Agriculture Lands Assessment included the following categories of data layers to rank each farm field based on the proximity to:

Agricultural Infrastructure - Agribusiness

Proximity to: feed mills, tractor supply stores, fertilizer dealers and pesticide dealers

Agricultural Infrastructure - Value-adding and Processing Facilities

Proximity to: farmer's markets, slaughter facilities, grain inspection facilities and livestock markets

Productivity and Community Compatibility

Volunteer Agricultural Districts

Proximity to Military Bases

Proximity to Conservation Lands

Proximity to Preserved Farmland

County Cash Receipts (assesses largest agricultural economies)

Farm Operation Encroachment and Compatibility

Proximity to dairy, cattle, poultry, swine operations

Conclusion:

This map illustrates lands that are important for continuing a strong agricultural economy and which currently have the necessary agricultural infrastructure to support those farms. In Guilford County, FSA agricultural lands are ranked by the Conservation Planning tool (ranked on a statewide basis) from medium high to low viability.

The ranking of 'Low Viability' means that the tracts are less viable for farming. In this case, the tracts highlighted in red or brown, are less viable farmland. It is difficult to determine which specific factor (listed above) ranked each parcel, it can be inferred that collectively 1.) the further from 'agricultural Infrastructure' a farm is, it ranked lower 2.) the further away from other dairy, cattle, poultry or swine operation a farm ranked lower, and 3.) the further away from protected lands or agricultural districts, it ranked lower.

Therefore, the closer to urban areas (central and western portion of the county) farms ranked lower, farms closer to protected lands in the north part of the County ranked higher, or farms closer to existing animal operation farms or protected VAD farms, in the 'corners' of the county, ranked more viable.

No tracts in Guilford County, when compared to other Counties in the state, rank in the High Viability category. This may or may not affect NC ADFP ranking of farm preservation funding.

Map #4: Conservation Planning Tool (NCDENR) Threatened Agriculture Land - Statewide Ranking

Again, the most recent, publically available base layer used to analyze agricultural land is the *Common Land Units (2006)* layer produced by the Farm Service Agency. This layer was also used in the NCDENR "Conservation Planning Tool - Farmland Assessment". Farm fields of 10 acres or greater east of Interstate 77 were used by NCDENR to assess the level of Threatened Agricultural Land.

NCDENR's Conservation Planning Tool's Threatened Agriculture Lands Assessment included the following data layers to rank each farm field based on the proximity to:

- Proximity to sewer lines and water lines
- Farm fields within .25 miles of urban areas with growth rates over 15%.

Conclusion:

Farmland resources are often threatened by public works infrastructure and suburban growth. Agricultural Lands in their study are ranked from 'medium', to 'low', and 'no-threat' by the Conservation Planning Tool**

The Conservation Planning Tool rates the area southwest of the airport, just south of Interstate 40, as the most threatened area for agriculture lands in Guilford County. Areas in the northwest corner of the County near Stokes dale and Oak Ridge, and the eastern margin of Greensboro are also threatened. It is likely that the 'medium threat' areas experienced high recent growth rates and those that have a 'low threat' are those areas that are served by water and sewer service.

No tracts in Guilford County, when compared to other Counties in the state, rank in the High Threat category. This may or may not affect NC ADFP ranking of farm preservation funding.

***The Conservation Planning Tool's Agricultural Viability and Threatened Agricultural Lands assessment uses a set of parameters in which to measure the threats to farmland and viability of farmland were developed and agreed upon by N.C. ADFP Trust Fund staff and the ADFP Advisory Committee. The ranking, Low to High was made on a statewide basis.*

A more detailed explanation of the ranking criteria for Viable Agriculture Lands and Threatened Agriculture Land can be found in the "Conservation Planning Tool," chapter 7.

http://www.onencnaturally.org/PDFs/CHAPTER_7_FARMLAND.pdf

The following assessments also use the FSA Agricultural Lands (aka Common Land Units) as they are the most detailed delineation of agricultural lands available at the time of this study. For the following maps, the amount of stream buffer, FSA agricultural lands, agricultural land cover, prime soils, etc was calculated for each parcel over 5 acres in size. This resulted in an acreage overlap or percentage of the total parcel. This calculation, along with proximity to open space, protected lands, voluntary agricultural districts, overlap of State Natural Heritage areas and ranking, and other factors listed below allowed this mapping exercise to rank and prioritized parcels for farm preservation. Additional data, such as current zoning, open space, parcels, City/Town/ETJ limits, and infrastructure was provided by the County.

Map #5: Prime Agricultural Soils

This map overlays soils types as classified by NRCS SURGO soil type survey and classified as Prime Agricultural Soils. Shown on this map are those FSA agriculture lands which have prime soils (green), very few agricultural lands do not have prime soils (shown in brown), and other areas of the County which are prime soils and not agricultural lands (red hatch).

Conclusion: Almost all farm units (agricultural lands) are classified as Prime Soils.

Map #6: Conservation Assets

This map illustrates the Conservation Assets of Guilford County. State and Federal lands, County parks and conservation easements create nodes of protected lands that agricultural protection can build upon. State Natural Areas, regions which are ecologically significant, are mostly unprotected, but are areas of focus for protection by multiple entities.

Conclusion: A majority of the Conservation Assets for Guilford County are in the northern third of the County. Almost all of the State Natural Heritage are located north of or are downstream of Lake Brandt and Lake Townshend. The Haw River has significant wetland resources along its entire length and Reedy Fork, below Lake Townshend is almost entirely a State Natural Heritage area itself. Much of the protected land, Federal, State and County open spaces, are in large land tracts around Lake Brandt, Lake Townshend or are County Parks such as Northeast Park. These open space 'Nodes', especially in the northeast quadrant, are great stepping stones to increase the amount of protected lands around these tracts with future farmland preservation.

Assets are illustrated as follows:

- Yellow – FSA delineated agricultural lands, 10 acre or more
- Red – State Natural Heritage Areas as defined by NC SNHA assessment
- Teal – Wetlands
- Green - Parks, Conservation Land and Open Space
- Purple – State of Federal Land
- Light Blue – Public water supply watersheds

Map #7: Water Quality Priority Ranking (CWMTF Criteria)

Guilford County has significant hydrologic resources as much of the water flows downstream into public water supplies. Those watersheds which flow into public water supplies are highlighted in light blue. Some streams and lakes/reservoirs have poor water quality and are listed as 'impaired stream' and/or listed on the '303d' list of impaired waters. CWMTF and other conservation funding efforts look improve waters that are impaired.

This assessment determines the acreage of stream buffer for each parcel and the amount of stream buffer compared to the total tract size. Impaired waters (303d listed streams and shorelines) are shown in magenta. Watershed supply areas are shown in light blue. **Only tracts ranked in this study have over 50% of the total acreage in stream buffer.**

The tracts are then ranked from highest priority to lower priority:

Tracts which rank the highest are those tracts which lie within public water supply watersheds and are adjacent to impaired streams are the highest priority (dark red).

Tracts that are adjacent to impaired waters but outside water supply watersheds are ranked a moderate priority (orange)

Tracts which have over 50% of the tract acreage as stream buffer are a lower priority.

Conclusion: With this assessment, there are a significant number of tracts in the County that have a majority of their acreage as stream buffer. Many of these tracts are adjacent to 303d listed impaired waters, adjacent to SNHA (like Moores Creek, Reedy Fork) on the northern half of the county and are within public water supply watershed. Areas directly near Lake Brandt and Lake Townshend should also be of specific focus. Although outside of the water supply areas, the northeast quadrant of the County and near Haw River State parks, offer opportunities for protection. Areas around Lake Macintosh are ranked lower because the water quality of the lake and streams are not impaired. All streams within the public water supply watershed should be protected as best as possible.

Map #8: State/Federal Farm Preservation Funding Priority

Parcels included in this ranking assessment, at a minimum, have the qualifier of **having at least 50% of the total tract classified as prime soils and 50% open agricultural lands**. The ranking criteria (below) is cumulative, meaning the highest ranking parcels have all three traits and may rank higher than others in during the application process.

Some tracts not ranked in this study are within the VAD and are shown hatched in brown. These tracts may be part of a larger farm ownership or not in active farm production at the time FSA delineated farm lands. The date of the most recent update of the County's VAD data was November 2010.

Ranking Criteria:

- > Parcels that are within 1 mile of State or Federal lands and/or parcels that are over 50 acres, rank highest.
- > Parcels that are within a of a Voluntary Agricultural District (VAD), are moderate priority
- > Parcels that are within 1 mile of a Voluntary Agricultural District (VAD), are lower priority.

Each attribute above was ranked on a scale of 1-5 based on the significance, then all rankings were added up for each parcel to create a 'ranking score'. The range of score was broken into 3 categories as shown on the map.

Conclusion: Given the criteria of the State ADFP ranking criteria that was used in the assessment, large acreage tracts near Haw River State Park have the highest possibility for State Funding. Other large acreage tracts of active agricultural production near or within existing VAD's rank high and should have particular focus. It should be noted that there are other complex criteria that ranks parcels for ADFP funding that were not captured in this mapping assessment and application standards change on a yearly basis. Typically, State funding criteria and acceptance in the program will also fair well in Federal farm preservation funding.

Map #9: Threat of Farm Conversion

This map illustrates the threat of farm conversion based on proximity of existing development and possible areas for future development. This assessment ranks areas within the City limits of Greensboro and High Point as fully developed. Areas of the County that are within other City Limits or ETJ and/or have water and sewer services have the higher probability for farm conversion. In rural areas, farms which are outside of city limits, tracts that do not have water or sewer services and are within a ½ mile of a thoroughfare have a moderate potential for conversion.

Conclusion: All agricultural lands have the possibility of conversion to non-farm uses. Those tracts that are within City Limits and have water and sewer service are likely targeted for infill development. Rural areas without services that are near major roads and thoroughfares, especially those already zoned for residential development, are likely to be developed. The Heart of the Triad area, while areas are both within City limits and are zoned rural, is a focused development area.

Map #10, 11, 12 - Farm Infrastructure

A Farm and Farm Infrastructure database was created by the County and utilized a number of online, local and state sources to locate and categorize the services, products and resources available at each location. By no means is this a complete database of all farmers as some farms are unlisted. It is encouraged that this database be updated regularly and the public encouraged to become included in this database.

The final three maps illustrate the Farm and Farm Infrastructure locations and are divided into three categories: 1.) farms, producers and enterprises, 2.) consumer-based and purchasing and 3.) farmer resources.

Tables referencing locations, services, products and resources are included.

Guilford County Farm Preservation/ Land Conservation Priority Map

Legend

-  Federal and State Land
-  County Parks, Conservation Land and Open Space

Priority Ranking

-  Lower Priority
-  Moderate Priority
-  Highest Priority

Parcels* were ranked on a number of different factors. Those tracts with the highest number of acres, proximity or significance of ecological features, ranked the highest.

- Ranking attributes included:
- > Size of farm in production
 - > Amount of stream buffer on each tract
 - > Amount of Prime Soils on each tract
 - > Proximity to Voluntary Ag Districts
 - > Proximity to Open Space/Protected Land
 - > Occurrence/ranking of rare species
 - > Ranking of State Natural Heritage Area

* Parcels must have at least two or more acres of FSA agricultural land units or NC GAP Land Cover Data classified as pasture lands or fallow fields to be included in this ranking study.



0 0.5 1 2
Miles

Unique Places
Conservation Oriented Land Center



Guilford County Farm Preservation Existing Agriculture Land Units

 FSA Common Land Units
(Agricultural Lands)

Common Land Units layer produced by the Farm Service Agency in 2006. This layer consists of all farm fields in North Carolina as delineated by the FSA and was created from tracing farm fields from digital ortho photos.

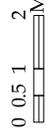
All fields over 10 acres were documented



 Farm Service Agency
 Common Land Units - 2006
 2008 Aerial - NAIP



 Unique Places
Conservation Oriented State



 0 0.5 1 2 Miles



Guilford County Farm Preservation

Conservation Planning Tool (NCDENR):
Viable Agriculture Land -
Statewide Ranking

Legend

- Med-High Viability
- Medium Viability
- Med-Low Viability
- Low Viability

See Appendix and/or One NC Naturally "Conservation Planning Tool" (chapter 7) for detailed description of categories.

-  Freeway
-  Proposed Freeway
-  Major Thoroughfare
-  Minor Thoroughfare



0 0.5 1 2
Mil

Agricultural Lands Assessment
NCDENR - 2006
2008 Aerial - NAIP

Unique Places
Conservation Oriented Land Use



Guilford County Farm Preservation

*Conservation Planning
Tool (NCDENR):
Threatened Agriculture
Land - Statewide Ranking*

Legend

- Medium Threat
- Low Threat
- No Threat

See One NC Naturally Conservation Planning Tool (chapter 7) for detailed description of categories.

-  Freeway
-  Proposed Freeway
-  Major Thoroughfare
-  Minor Thoroughfare

Agricultural Lands Assessment
NCDENR - 2006
2008 Aerial - NAIP



0 0.5 1 2
Mil

**Unique
Places**
Conservation Through Smart Growth



Guilford County Farm Preservation

Prime Agricultural Soils

Legend

- USDA Agriculture Lands with Prime Soils
- USDA Agriculture Lands without Prime Soils
- Prime Soils but not USDA Agricultural Lands
- USDA Agricultural Lands
- Freeway
- Proposed Freeway
- Major Thoroughfare
- Minor Thoroughfare



SOURCE:
USDA Agricultural Land Units,
E and NRCS SURGO Soils, 2007



0 0.5 1 2 Miles



Guilford County Farm Preservation

Conservation Assets

-  FSA Agriculture Lands (Conservation Planning Tool)
-  Wetlands
-  State Nat'l Herit. Area
-  Parks, Open Space, & Conservation Easements
-  State and Federal Lands



0 0.5 1 2
Mi

Unique Places
Conservation Driven Real Estate

Guilford County Farm Preservation

Water Quality Priority Ranking (CWMTF Criteria) Critical Watershed

303d listed stream (impaired water quality)

Water Supply Watershed

Water Quality Priority Ranking

- Lower Priority
- Medium Priority
- Higher Priority

Protected Lands; State, Federal Lands

- Federal and State Land
- County Parks, Conservation Land and Open Space

High Priority

- > Parcels with over 50% stream buffer
- > Adjacent to 303d impaired waters
- > Located within a water supply area

Medium Priority

- > Parcels with over 50% stream buffer
- > Adjacent to 303d listed streams

Lower Priority

- > Parcels with over 50% stream buffer

The above criteria was used when assessing parcels for possible funding through the Clean Water Management Trust Fund. Protection of areas that are highest ranked may be more likely to be awarded funding and help improve impaired water quality.



0 0.5 1 2 Mil



Guilford County Farm Preservation Federal/State Farm Preservation Funding Priority Map

Legend

-  Federal and State Land
-  County Parks, Conservation Land and Open Space

Farm Preservation Funding Ranking

-  Highest Priority
-  Medium Priority
-  Lower Priority

 Voluntary Ag. District (Nov 2010)

The ranking criteria depicts:

- Lower Priority**
- > Tracts less than 50 acres, and
 - > Tracts w/in 1 mi. of an existing VAD, and
 - > 50%+ ag lands & prime soils
- Medium Priority**
- > Tracts less than 50 acres, and
 - > Tracts within an existing VAD, and
 - > 50%+ ag lands & prime soils, and
- Highest Priority:**
- > Tracts <1 mi of State of Federal Land, or
 - > Tracts over 50 acres, and
 - > Tracts w/in a Voluntary Ag Dist. (VAD), &
 - > 50%+ ag lands & prime soils

**** Note:** To be ranked, parcels have to have at least the lower priority ranking criteria. Even if a parcel is within a VAD, it does not necessary qualify for funding as it may not have 50% or more prime soils or agricultural lands.

Criteria of ranking parcels is derived from applications for State and Federal Farm Preservation Funding.



0 0.5 1 2 Miles


Unique Places
Commission on Rural Life



Guilford County Farm Preservation

Threat of Farm Conversion Ranking Map

Legend

-  Federal and State Land
-  County Parks, Conservation Land and Open Space
-  Commercial Nodes

Farm Conversion Ranking

-  Fully Developed
-  Higher Conversion Potential
-  Moderate Conversion Potential

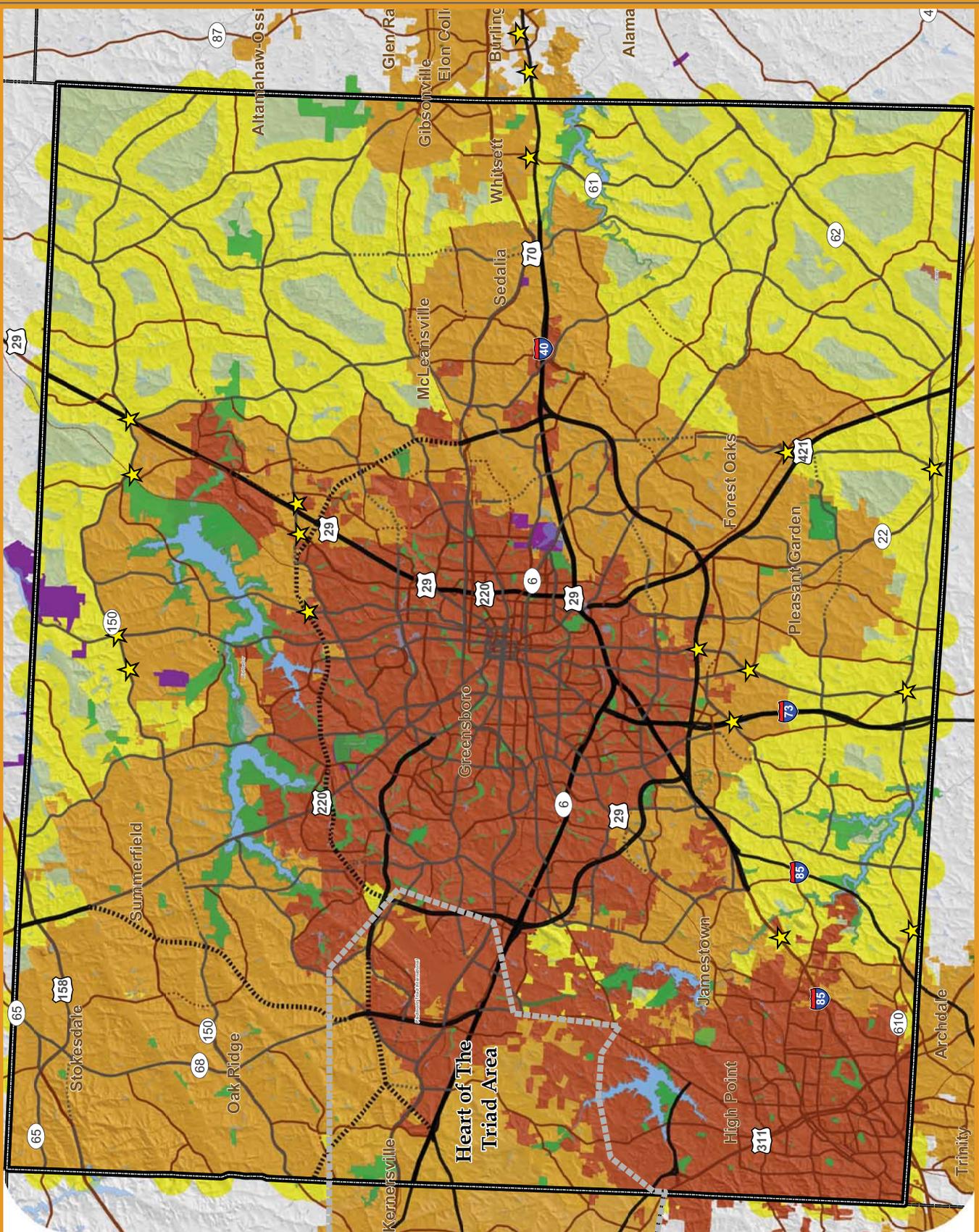
The ranking criteria for farmland conversion is based on areas of existing and future potential development and is based on the following:

- Highly Developed:**
 - > Greensboro and High Point city limits
- Higher Conversion Potential**
 - > Within City or ETJ limits
 - > Heart of the Triad area
 - > Areas with water and sewer services
- Moderate Conversion Potential**
 - > Areas outside of city limits, zoned for development but with out water and sewer, and
 - > Areas within 1/2 mile of a major road or thoroughfare.

Criteria of ranking was developed by the Piedmont Conservation Council team.



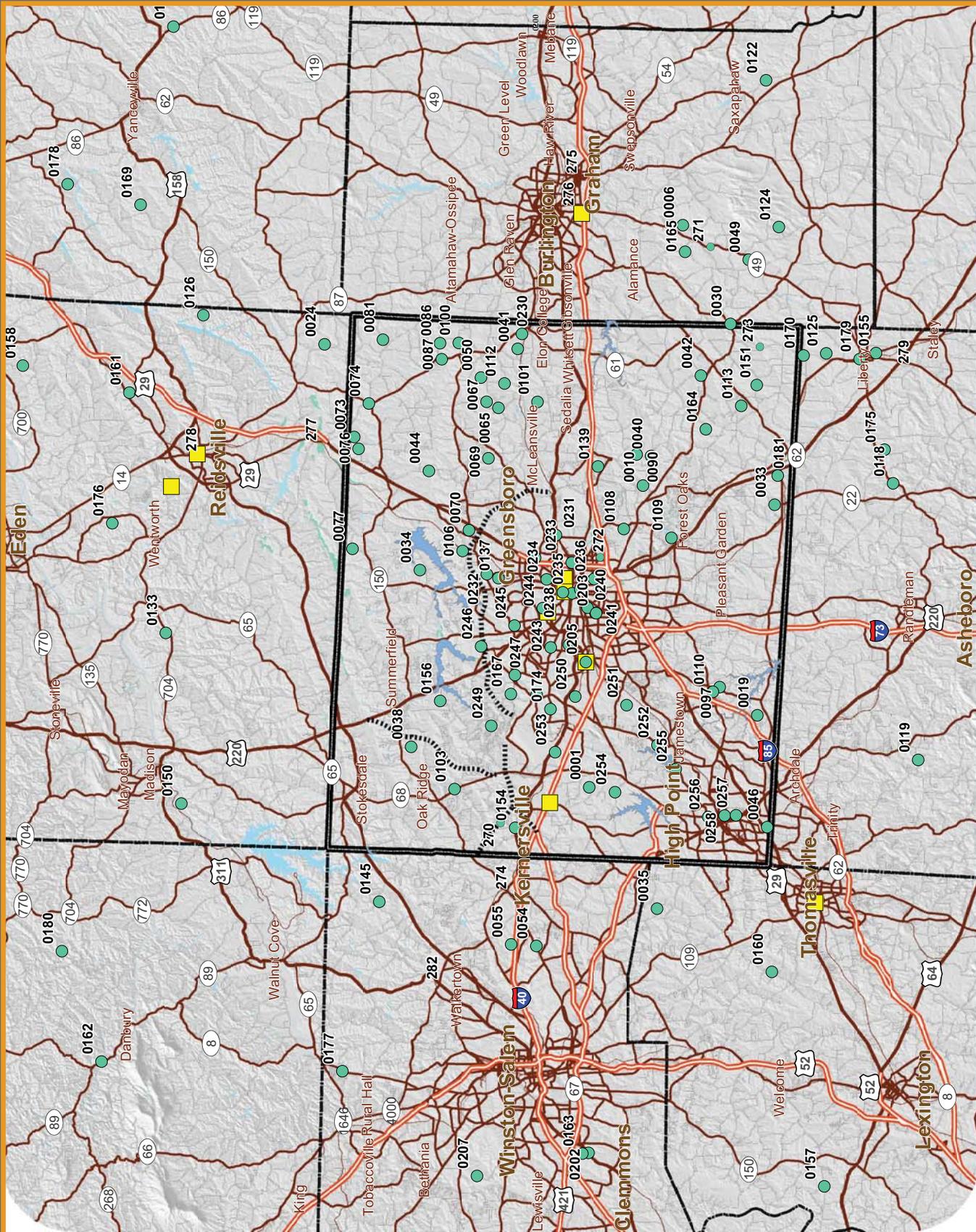
0 0.5 1 2 Mil



Guilford County Farm Preservation Regional Farm Infrastructure Map: Farms, Producers, Enterprises

Legend

- Farm, Producer, Enterprise
- Regional Markets



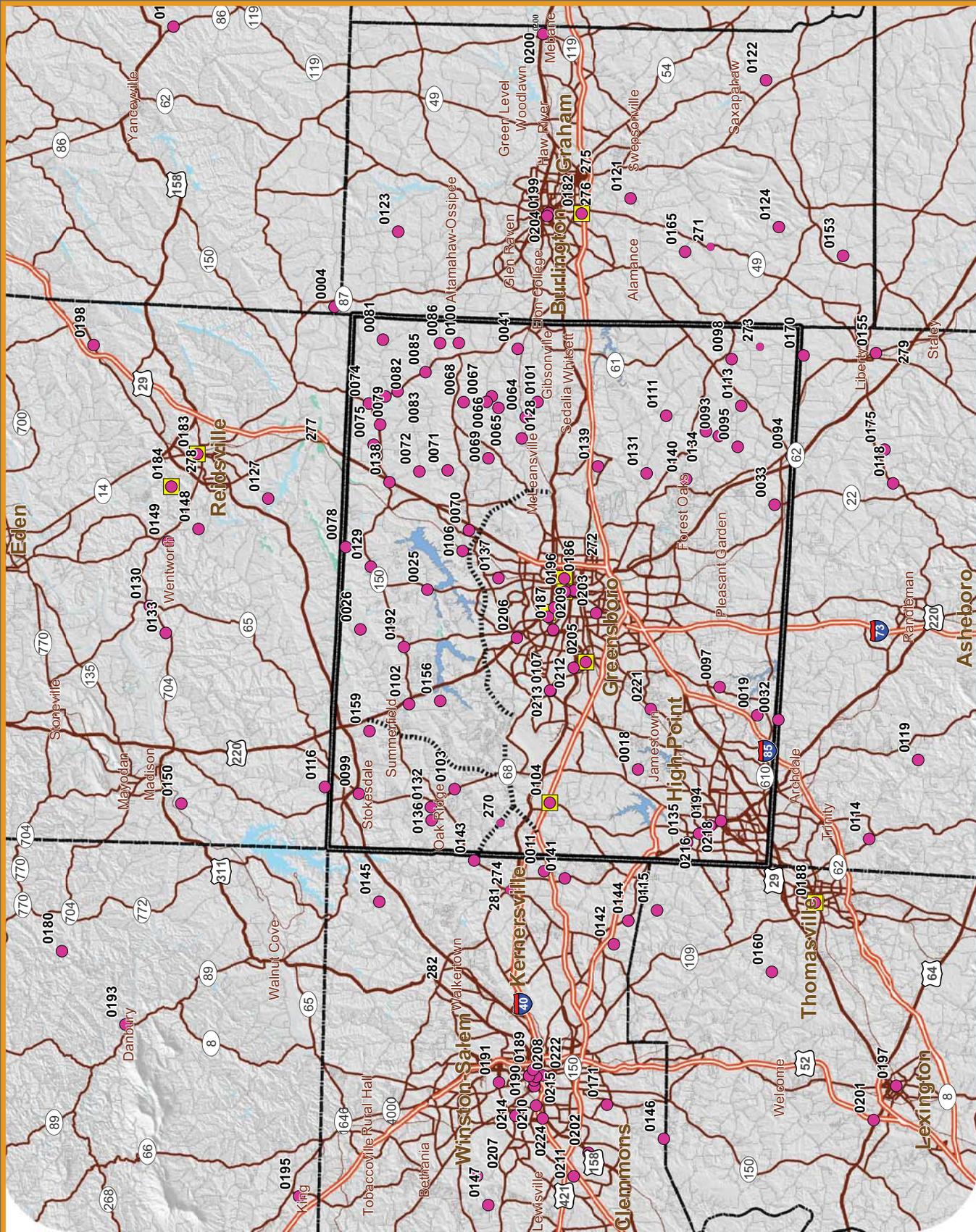
0 1 2 4
Miles



Guilford County Farm Preservation Regional Farm Infrastructure Map: Consumer-Based Infrastructure and Purchasing

Legend

- Consumer and Purchasing
- Regional Markets



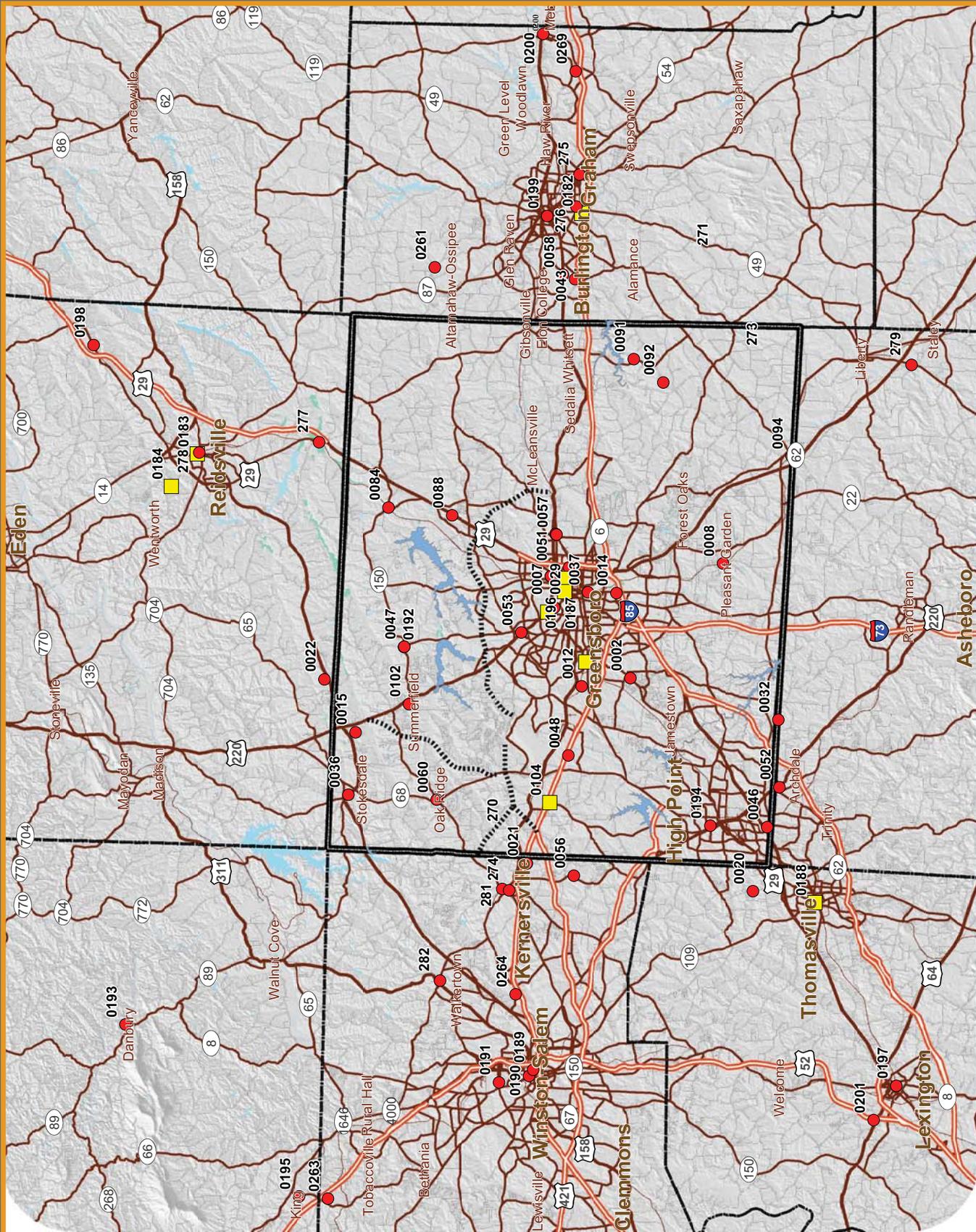
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Miles



Guilford County Farm Preservation Regional Farm Infrastructure Map: Farmer Resources

Legend

- Regional Markets
- Farmer Resources



0 1 2 4 Miles

Unique
Places
Conservation Through Rural Estates

Appendix D
The Cost of Community Services in Guilford County

**THE COST OF COMMUNITY SERVICES
IN GUILFORD COUNTY**

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January 2010

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THE COST OF COMMUNITY SERVICES IN GUILFORD COUNTY

Introduction

In counties in and around near rapidly-growing urban areas, there is considerable debate over the desirable mix of land uses and the role that local government can and should play in affecting the rate at which new land uses supplant traditional ones. Guilford County is typical of such counties. The county's economic growth, as well as that of the adjoining counties of the Piedmont Triad, have created unprecedented demands for residential and commercial development, particularly in the county's rural areas.

On the one hand, this situation has been welcomed by many because it has created significant economic development opportunities for the county's citizens and a significant increase in the county's revenue base. On the other hand, there is concern that the cost of community services needed to accommodate accelerated residential and commercial development may exceed the contribution of that development to the county's revenue base.

One important element of public debate over appropriate land use policies is whether or not increased county government expenditures on community services needed to accommodate residential and commercial development exceed the contribution of that development to the county's revenue stream. This report presents the findings of a research project aimed at addressing this specific issue. The research quantifies the contribution to local government revenues of various types of land uses (residential, commercial/industrial,¹ and agricultural), and the demands on local government financial resources of those same land uses. This "snapshot" of current revenues and expenditures allows an assessment of the costs and benefits of different land uses from the perspective of local government finance.

The analysis presented here employs a methodology established by the American Farmland Trust, one that has been used in numerous Cost of Community Services (COCS) studies throughout the U.S. Like those studies, the current research was motivated by two questions: (1) Do the property taxes and other revenues generated by residential land uses exceed the amount of publicly-provided services supplied to them? (2) Does the fact that farm and forest lands are taxed on the basis of their Present Use Value – instead of their potential

¹ For simplicity, the term "commercial" will denote both commercial and industrial land uses for the remainder of this report. Likewise, "agricultural" will refer to farm and forest land uses.

value in residential or commercial uses – mean that they are contributing less in tax revenues than the value of publicly provided services they receive?

As has been found in other COCS studies, the answer to each of these questions is “no” for Guilford County. The residential sector contributes only 74¢ to the county’s coffers for each dollar’s worth of services that it receives. Commercial and industrial land uses are the largest net contributors to the public purse, contributing \$3.44 in revenues for each dollar of publicly provided services that they receive. Despite being taxed on the basis of current land uses, property in agricultural land uses is found to be a net contributor to the local budget, generating \$1.62 in revenues for every dollar of public services that it receives.

At the outset, it is important to recognize two important limitations of analyses such as the one presented here. First, COCS studies highlight the relative demands of various land uses on local fiscal resources *given the current pattern of development*. As such, one should be cautious in extrapolating from the results of studies such as this in order to gauge the impact of future patterns of development on local public finance. Nonetheless, the results of studies such as this are useful in informing debates over such issues as whether or not alternative types of land uses are likely to contribute more in tax dollars than they demand in the way of services.

Second, the current study in no way deals with the *social* value of each of these forms of development – i.e., their contribution (positive or negative) to the well-being of the county’s citizens. Rather it focuses on the more narrow issue of whether or not these land uses “pay their own way” with regard to county revenues and expenditures. It is important to bear in mind that there is nothing sacred about an exact balance between revenues and expenditures associated with a particular land use, even when balancing the local budget is an overriding priority. Indeed, one of the primary functions of a local government is to redistribute local financial resources such that services desired by citizens are supplied, even when those services cannot pay for themselves. Determining the optimal distribution of those resources is a public policy issue to be resolved in the political arena. A study such as this fits into the process wherein such issues are resolved by shedding light on the relative costs and benefits of the specific distribution of financial resources given the existing pattern of development.

Methodology

The basic approach used in this research was quite simple. Working from the most recent available county financial data, revenues and expenditures were allocated among three specific land use categories: (a) residential; (b) commercial; and (c) agricultural. This process was carried out in conjunction with a series of telephone interviews and email exchanges with a variety of local officials knowledgeable about the workings of specific departments.

Once revenues and expenditures were allocated to specific land use categories, the ratio of revenues to expenditures was computed for each. A revenue-expenditure ratio greater than 1.00 indicates that that sector's contribution to the public purse exceeds its use of public funds. Conversely, a revenue-expenditure ratio less than 1.00 indicates that the sector's use of publicly financed services exceeds its contribution to the local budget.

The basis for the current analysis is the actual expenditures recorded for the 2007-2008 fiscal year reported in the Guilford County Adopted Budget for 2009-2010. As noted above, the allocation of these data to specific sectors was done in consultation with a variety of local officials (listed in the Acknowledgements). These individuals were best equipped to assess the extent to which the various land uses partake of the services provided by their departments. Where feasible, expenditures were allocated to land use categories using available data on staff salaries and/or activities records.

Often, existing records were not amenable to being broken out into various land use categories. In many of these cases, we relied on a local official's best guess of how their department's efforts were allocated. Where the relevant officials were unable to make such a guess, one of two allocation schemes was used. For services that exclusively benefit households (as opposed to commercial establishments)² – for example, public schools and library services – 100% of expenditures were allocated to the residential sector.³ For departments whose activities benefited both residences and businesses (including agricultural businesses), expenditures were

² Note that the quality of “residential” services such as public schools may well have a positive influence on business formation, particularly the attractiveness of the county to firms considering relocation. These spillover effects are ignored here, however, because the information needs for quantifying them lie well beyond the scope of this research.

³ Guilford County separates the farm business from the farm residence, assessing the property value of farm residences in the same manner as any other residences. For this reason, farm residences were included in the residential land use category throughout the analysis.

allocated based on the proportion of total property value accounted for by each land use category. This “default” breakdown of assessed property valuation for 2007 was 62.7% residential, 37.1% commercial, and 0.2% agricultural. The expenditures of most of the county’s general administration departments were allocated in this manner.

Revenues were handled in a manner similar to expenditures. Property tax revenues were allocated to specific land use categories based on the 2008 property assessments. Taxes and other revenue sources that are linked directly to commercial activities – for example, Article 39 sales taxes⁴ and beer and wine excise taxes – were allocated exclusively to the commercial sector. Revenues from sources associated exclusively with households (such as animal control revenues) were allocated to the residential sector. Revenues raised by specific county government departments from fees charged for services or from inter-governmental transfers were allocated in direct proportion to the allocation of expenditures by those departments, unless respondents indicated otherwise (e.g., revenues collected by the Inspections department were allocated somewhat differently than that department’s expenditure). Any remaining revenues that could not be directly allocated in these ways were allocated according to the proportion of total property value accounted for by each land use category.

Results

A detailed breakdown of revenues sources is found in Appendix Table 1. Total county general fund revenues for 2007-2008 were \$542.5 million. About 54.9% of this money came from ad valorem property taxes, while another 15.8% came from sales taxes.

Table 1 summarizes the overall breakdown of county expenditures for the 2006-2007 fiscal year. More detailed information is found in Appendix Table 2. Education and human services⁵ departments – accounted for nearly three-quarters of the total budget. Because all school expenditures, and nearly all of the activities of the human services departments are

⁴ The state distributes Article 39 sales tax revenues back to counties on a point-of-sale basis. Article 40 and 42 sales taxes are distributed back to counties based on county population; revenues from these sources were allocated to residential land uses. Article 44 sales taxes are distributed to counties in part on the basis of point of sale and in part on the basis of county population; accordingly, these were allocated to residential and commercial land uses on a 50-50 basis.

⁵ Human services include both the public health and social services departments.

exclusive to the residential sector, the large “footprint” of these two departments in county government has a dominant impact on the results of this study.

Table 2 summarizes revenues and expenditures by land use category. Expenditures exceeded revenues for the residential land use category, while revenues exceeded expenditures for the commercial and agricultural land use categories. The computed revenue/expenditure ratios quantify the extent to which each of the three land use categories is either a net contributor or a net drain on Guilford County’s financial resources. For comparative purposes, the bottom of the table provides the results from some 103 other Cost of Community Services studies that have been conducted throughout the U.S., as well as five studies that were conducted in Chatham, Wake, Alamance, Orange, Gaston, Henderson, and Franklin Counties over the course of the past decade.

The revenue/expenditure ratio for the residential land use category is 0.74; this implies that for each dollar in property tax and other revenues generated by residential land uses, the county spends \$1.35 to provide services supporting those land uses. In other words, the residential sector is on balance a net user of local public finances. On the other hand, the other two land use categories are net contributors to local fiscal resources. The revenue/expenditure ratio of 1.62 for agriculture implies that revenues substantially exceed expenditures for this land use category. The commercial land use category stands out as having the highest revenue/expenditure ratio (3.44). This result indicates that the county spends only 29¢ on services benefiting commercial and industrial establishments for every public dollar generated by those establishments.

Finally, Table 3 presents an analysis which computes the residential property value needed to generate an exact balance between average revenues contributed by the 140,000-150,000 current housing units in the county and the average value of public services consumed by households. This “breakeven” house price was computed assuming that any new household would consume the average amount of services reflected in the 2007-2008 budget – i.e., that they would possess the average number of school kids, consume an average amount of public health and social services, etc. The computation further assumes that any new household would contribute the average amount of non-property tax revenues generated by existing residential properties, and takes as a benchmark the 2008/2009 property tax rate of 73.74¢ per \$100. Based

on these assumptions, the breakeven property value is computed to be somewhere between \$279,000 and \$299,000.

Discussion

The results presented above provide answers to the two questions posed at the beginning of this report. As regards the public services provided by Guilford County, commercial and industrial land uses emerge as being the largest net contributor to local financial resources. In contrast, the value of public services provided to residential land uses exceed the property taxes and other revenues that they contribute to the county budget. This finding contrasts with claims that are sometimes made that residential development is a boon to county finances due to its expansion of the property tax base. It would appear that the very large footprint of the education and human services expenditures in the overall county budget plays a dominant role in explaining this phenomenon. Finally, agricultural lands more than pay their own way. This is true despite these properties being taxed on the basis of their current use (as opposed to their potential use were they to be transformed into commercial or residential uses).

Qualitatively, these findings for Guilford County are consistent with the findings of nearly every Cost of Community Services study that has been carried out in other communities throughout the U.S. The degree of cross-subsidization of the residential sector – in particular, the extent to which the Guilford County’s commercial sector pays for services provided to its residential sector – is somewhat greater than the median in other studies that have been conducted nationally. Closer to home, the relative balance of revenues and expenditures for the residential and commercial land use categories is qualitatively similar to that which was found in comparable studies conducted in other North Carolina counties.

As was stressed at the outset, some degree of subsidization of certain land uses by other land uses is to be expected in virtually every community. The distribution of revenues and expenditures among various land uses in Guilford County that has been computed here is based on current land use patterns in the county. Determining whether or not this distribution is appropriate – either now or in the future – is an issue that can only be resolved in the local political arena.

Table 1. Guilford County Expenditures for 2007-2008

Item	Expenditure	%
Education (including school debt)	226,834,437	42.1%
Human Services ^a	172,861,739	32.1%
Public Safety	80,919,267	15.0%
General Government	21,400,998	4.0%
Support Services	14,889,794	2.8%
Non-school debt service	12,519,167	2.3%
Community Services	9,236,108	1.7%

a. Human services include both the Social Services and Public Health departments.

Source: *Guilford County Annual Operating Budget 2009-2010*

Table 2. Revenues vs. Expenditures in Guilford County

	Residential	Commercial	Agricultural
Revenues	\$360,550,408 (66.93%)	\$177,442,355 (32.94%)	\$668,747 (0.13%)
Expenditures	\$486,634,851 (90.34%)	\$51,614,331 (9.58%)	\$412,328 (0.08%)
Revenues/Expenditures ratio^a	0.74	3.44	1.62
Revenue/Expenditure ratios from national studies^b			
Minimum	0.47	0.96	1.01
Median	0.87	3.57	2.78
Maximum	0.99	20.00	50.00
Revenue/Expenditure ratios from local studies			
Chatham County (1998)	0.90	2.13	1.09
Wake County (2001)	0.65	5.63	2.12
Alamance County (2006)	0.68	4.29	1.69
Orange County (2006)	0.76	4.21	1.38
Chatham County (2007)	0.87	3.01	1.72
Gaston County (2008)	0.81	2.41	1.13
Henderson County (2008)	0.86	2.52	1.03
Franklin County (2009)	0.89	1.90	1.32

a. This ratio measures the amount of county revenue contributed by a given land use sector for each dollar in public services used by that sector.

b. These figures are derived from 103 Cost of Community Services summarized on the American Farmland Trust website (http://farmlandinfo.org/documents/27757/FS_COCS_8-04.pdf).

Table 3. Breakeven Analysis for Residential Property Value in Guilford County

(1) Property tax rate (\$ per \$100)	0.7374
(2) Residential Non-Property Tax Revenue Contribution in 2007/2008	\$177,611,781
(3) Total residential expenditures in 2007/2008	\$486,634,851
(4) Total Expenditures needing to be paid for by property taxes [(3) - (2)]	\$309,023,070
(5) Number of residential properties in the county ^a	140,000-150,000
(6) Per household expenditures needing to be paid for by property taxes [(4) ÷ (5)]	\$1,188
Breakeven property value [(6) ÷ (1)]	\$279,381-\$299,337

a. The number of residential properties in the county is an estimate provided by the Guilford County tax department. The smaller breakeven property value corresponds to the larger estimate (and vice-versa).

Appendix Table 1. Guilford County Revenues by Land Use Category for 2007-2008

	Total	Residential	Commercial	Agricultural	Breakdown^a
TAXES					
Ad Valorem Taxes	295,837,946	185,490,392	109,755,878	591,676	62.7-37.1-0.2
Local Option Sales Tax	85,270,606	38,508,093	46,762,513	0	
Article 39	38,992,876	0	38,992,876	0	0-100-0
Article 40	15,455,652	15,455,652	0	0	100-0-0
Article 42	15,282,804	15,282,804	0	0	100-0-0
Article 44	15,539,275	7,769,637	7,769,637	0	50-50-0
Other Taxes	2,991,744	1,814,302	1,176,459	983	
Refund of Sales and Use Tax Paid	1,092,147	493,651	598,497	0	45.2-54.8-0
Refund of Mecklenburg Public Transp. Tax	27	27	0	0	100-0-0
Refund of Motor Fuels Tax Paid	3,710	0	3,710	0	0-100-0
Beer & Wine Excise Tax	391,922	0	391,922	0	0-100-0
Scrap Tire Disposal Tax	491,458	308,144	182,331	983	Default
White Goods Disposal Tax	178,226	178,226	0	0	100-0-0
Video Programming Distribution	834,254	834,254	0	0	100-0-0
DEPARTMENTAL REVENUES					
Community Services Total	128,153	100,842	3,096	24,214	
Cooperative Extension Service	5,000	4,360	135	505	87.2-2.7-10.1
Culture-Recreation	6,300	6,300	0	0	100-0-0
Planning And Development	94,173	86,168	7,911	94	91.5-8.4-0.1
Soil & Water Conservation	29,519	5,313	590	23,615	18-2-80
Solid Waste	(6,839)	(1,299)	(5,540)	0	19-81-0

Appendix Table 1. Guilford County Revenues by Land Use Category for 2007-2008 (continued)

	Total	Residential	Commercial	Agricultural	Breakdown^a
General Government	9,122,651	5,719,902	3,384,504	18,245	
County Administration	21,906	13,735	8,127	44	Default
County Attorney	1	1	0	0	Default
Elections	396,601	248,669	147,139	793	Default
Finance	88,138	55,263	32,699	176	Default
Human Resources	368	231	137	1	Default
Internal Audit	7,000	4,389	2,597	14	Default
Purchasing	18	11	7	0	Default
Register of Deeds	7,262,400	4,553,525	2,694,350	14,525	Default
Tax	1,346,219	844,079	499,447	2,692	Default
Public Safety Total	23,134,195	17,502,265	5,623,867	8,063	
Animal Services	1,239,994	1,239,994	0	0	100-0-0
Court Alternatives	1,973,125	1,973,125	0	0	100-0-0
Emergency Services	10,687,868	7,220,724	3,460,732	6,413	67.5-32.4-0.1
Inspections	1,397,736	1,034,325	363,411	0	74-26-0
Law Enforcement	7,467,916	5,695,780	1,770,643	1,494	76.2-23.7-0.1
Other Protection	289,171	289,171	0	0	100-0-0
Security	78,385	49,147	29,081	157	Default
Education	6,000,000	6,000,000	0	0	
Guilford County Schools	6,000,000	6,000,000	0	0	100-0-0

Appendix Table 1. Guilford County Revenues by Land Use Category for 2007-2008 (continued)

	Total	Residential	Commercial	Agricultural	Breakdown^a
Support Services Total	2,359,465	1,479,385	875,362	4,719	
Facilities	832,790	522,159	308,965	1,666	default
Information Services	(9,396)	(5,891)	(3,486)	(19)	default
Parking/Fleet Operations	309,913	194,315	114,978	620	default
Property Management & Courts	1,226,158	768,801	454,905	2,452	default
Human Services Total	104,839,373	98,467,845	6,371,528	0	100%
Child Support Enforcement	5,802,288	5,802,288	0	0	100-0-0
Coordinated Services	1,056,237	1,056,237	0	0	100-0-0
Medical Assistance	2,225,794	2,225,794	0	0	100-0-0
Mental Health	28,606,421	28,606,421	0	0	100-0-0
Public Health	19,114,585	12,743,057	6,371,528	0	67-33-0
Social Services	46,848,871	46,848,871	0	0	100-0-0
Transportation-Human Services	1,183,177	1,183,177	0	0	100-0-0
Veteran Services	2,000	2,000	0	0	100-0-0
Investment Earnings	12,789,708	8,019,147	4,744,982	25,579	default
Fund Balance	(3,812,331)	(2,551,765)	(1,255,833)	(4,733)	default
TOTAL REVENUES	538,661,510	360,550,408	177,442,355	668,747	
		(66.93%)	(32.94%)	(0.12%)	

a. Percentage breakdown by land use category (residential-commercial-agricultural). Default percentages were based on 2008 assessed property valuation (residential - 62.7%; commercial - 37.1%; agricultural - 0.2%).

Appendix Table 2. Guilford County Expenditures by Land Use Category for 2007-2008

	Total	Residential	Commercial	Agricultural	Breakdown^a
General Government	21,400,998	13,418,426	7,939,770	42,802	
Budget And Management	452,812	283,913	167,993	906	default
Clerk to Board	183,304	114,932	68,006	367	default
County Administration	968,440	607,212	359,291	1,937	default
County Attorney	635,215	398,280	235,665	1,270	default
County Commissioners	428,583	268,722	159,004	857	default
Elections	2,256,127	1,414,592	837,023	4,512	default
Finance	2,534,991	1,589,439	940,482	5,070	default
Human Resources	4,433,576	2,779,852	1,644,857	8,867	default
Internal Audit	385,556	241,744	143,041	771	default
Purchasing	462,192	289,794	171,473	924	default
Register of Deeds	2,652,696	1,663,240	984,150	5,305	default
Tax	6,007,506	3,766,706	2,228,785	12,015	default
Public Safety	80,919,267	61,308,536	19,584,817	25,914	
Animal Services	2,365,676	2,365,676	0	0	100-0-0
Court Alternatives	2,959,731	2,959,731	0	0	100-0-0
Emergency Services	20,623,982	13,933,562	6,678,045	12,374	67.5-32.4-0.1
Inspections	2,777,457	2,277,515	499,942	0	82-18-0
Law Enforcement	49,476,234	37,735,524	11,730,815	9,895	76.27-23.71-02
Other Protection	894,045	894,045	0	0	100-0-0
Security	1,822,142	1,142,483	676,015	3,644	default

Appendix Table 2. Guilford County Expenditures by Land Use Category for 2007-2008 (continued)

	Total	Residential	Commercial	Agricultural	Breakdown^a
Human Services	172,861,739	160,820,396	12,041,343	0	
Child Support Enforcement	5,669,704	5,669,704	0	0	100-0-0
Coordinated Services	1,349,984	1,349,984	0	0	100-0-0
Medical Assistance	19,024,749	19,024,749	0	0	100-0-0
Mental Health	36,472,660	36,472,660	0	0	100-0-0
Public Health	36,124,028	24,082,685	12,041,343	0	67-33-0
Social Services	68,025,039	68,025,039	0	0	100-0-0
Special Assistance To Adults	3,380,040	3,380,040	0	0	100-0-0
Temp Asst Needy Families	11,959	11,959	0	0	100-0-0
Transportation-Human Services	2,704,652	2,704,652	0	0	100-0-0
Veteran Services	98,924	98,924	0	0	100-0-0
Support Services	14,889,794	9,335,901	5,524,114	29,780	
Facilities	4,374,577	2,742,860	1,622,968	8,749	default
Information Services	8,336,372	5,226,905	3,092,794	16,673	default
Parking/Fleet Operations	696,048	436,422	258,234	1,392	default
Property Management & Courts	1,482,797	929,714	550,118	2,966	default
Community Services	9,236,108	7,067,638	1,879,676	288,794	
Cooperative Extension Service	524,780	457,608	14,169	53,003	87.2-2.7-10.1
Culture-Recreation	5,154,091	5,154,091	0	0	100-0-0
Economic Devel. & Assistance	1,034,865	0	1,034,865	0	0-100-0
Planning And Development	1,351,198	1,236,346	113,501	1,351	91.5-8.4-0.1
Soil & Water Conservation	293,050	52,749	5,861	234,440	18-2-80
Solid Waste	878,124	166,844	711,280	0	19-81-0

Appendix Table 2. Guilford County Expenditures by Land Use Category for 2007-2008 (continued)

	Total	Residential	Commercial	Agricultural	Breakdown^a
Education	188,441,857	188,441,857	0	0	
Guilford County Schools (excl. debt)	172,165,521	172,165,521	0	0	100-0-0
Guilford Tech Community College	16,276,336	16,276,336	0	0	100-0-0
DEBT SERVICE	50,911,747	46,242,098	4,644,611	25,038	
Non-School	12,519,167	7,849,518	4,644,611	25,038	default
Guilford County Schools	38,392,580	38,392,580	0	0	100-0-0
TOTAL EXPENDITURES	538,661,510	486,634,851	51,614,331	412,328	
		(90.34%)	(9.58%)	(0.08%)	

a. Percentage breakdown by land use category (residential-commercial-agricultural). Default percentages were based on 2008 assessed property valuation (residential - 62.7%; commercial - 37.1%; agricultural - 0.2%).

Appendix E
Guilford County FPP Report II: Farmers' Perspective



Guilford County Farmland Preservation Report II

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Executive Summary

- **Agricultural lands sold for development** – Farmers are able to make more profit from their land by selling it to developers. Many farmers feel that it is their only chance for a comfortable retirement, since their agricultural efforts have, in many cases, stopped generating profits. As one farmer pointed out, “you can’t tie people’s hands or their children’s”, however, the loss of too much agricultural land to development jeopardizes the possibility of a local food-shed. The message resonating from many farmers is that they do not wish to sell their farmland-but are under financial pressure to do so. If farming were more profitable for people who continue to work the land, they would potentially be less likely to sell.
- **Lack of wholesale opportunities; need more competition for grains and beef** – There is one grain elevator reported, in Whitsett, but when it fills, farmers must go much farther to sell their grain. Getting grain to a buyer does not guarantee a profit for grain farmers, as receiving a fair price for their wares is as much of an issue as not having local buyers. Beef producers, similarly, are driving to Mt. Airy or Siler City to have their livestock processed and could benefit from a local, mobile processor.
- **Difficult for farmers to profit from wholesale** – Most of the farmers in Guilford County are producing grains, beef and/or tobacco. Grain farmers from this sample reported having difficulty making a profit. Farmers who are diversified with seasonal vegetables or are exploring specialty crop production are more satisfied with their ability to make a living wage from retail sales, both on farm and at local farmers’ markets. Similarly, the only dairy farm that reported continual growth and a profitable business is directly marketing from local venues.
- **Local produce markets-need more and more access to them** – A few Guilford County vegetable and specialty crop farmers report selling at local farmers’ markets around the county, but some expressed the desire for more opportunities to sell locally. Several farmers are moving toward vegetable production to diversify their production strategy, but worry that current local farmers’ markets will not support them. Programs supporting produce distribution in Guilford County would help farmers diversify, and support the local food shed.
- **Outreach and education for public-food education** – Farmers and landowners suggested more outreach and education programs to help consumers reconnect with their food to better understand where it comes from and appreciate the work that goes into it. Farmers are observing a culture of consumers with aversions to the dirt and labor that makes fresh food possible. Some of the farms included in this sample are hosting farm tours for schoolchildren, but it isn’t enough. According to a fifth generation farmer, and century farm operator, “young folks need to know where their food comes from and how it is produced. Not just that it comes from the grocery store.”
- **Education for Farmers on possibilities of Land Use** – Many farmers in the county are interested in land preservation, and are scaling their operations back in the coming years. Some expressed an interest in keeping it in production, but just don’t know how to go about protecting it. Others expressed an interest in leasing their land to young farmers, who are just getting started.

Agriculture in North Carolina

The history of North Carolina is inseparable from its agricultural roots. A mild climate, adequate precipitation and rich soils provide all the necessary elements for successful crop production, and traditionally, many North Carolina residents have taken advantage. The farms of North Carolina are agriculturally diverse, boasting statewide production of grains, vegetables, livestock, poultry, and of course, tobacco.

Flue-cured tobacco production was the economic foundation for early colonization of the state, and the tobacco industry as we know it today, began here in the 19th century. North Carolina reigned as the leading flue-cured tobacco producing state for much of the 20th Century, during which subsidies were available to even small growers. In 2004, though, the subsidy program ended and many tobacco farmers could no longer afford to grow it.

In 1997, in Guilford County, 5,450 acres were devoted to tobacco production (USDA 1997). By 2007, the acreage had decreased to 2,072 acres (62%) (USDA 2007). In the same decade, acreage devoted to soybean production increased from 4, 078 to 9,031 (120%) (USDA 1997, 2007), suggesting that former tobacco farmers might have been shifting commodities.

Guilford County Concerns

In Guilford County, the total area under cultivation has decreased from 111,882 to 34,986 acres (69%) over the span of one decade (USDA 1997, 2007). The average age for farmers in Guilford County has risen to 60 years in the same time period (USDA 2007). Thus, as farmers are aging out, they or their offspring are often selling the land to developers. As is very often the case, farmers find that their children do not share their enthusiasm or passion for farm work. Many farmers actually encourage their children to find other means of income, having experienced the difficulty of profiting from their labor in recent years. Farmland loss of this magnitude is creating a sense of urgency, in the county, to protect what open spaces remain, and in turn preserve the future of the local food-shed and the potential for local food production. In addition to farmland losses, the age of farmers has been steadily increasing for years, suggesting that fewer new or young people are entering the field.

North Carolina Cooperative Extension Service, Guilford County (GC), Piedmont Conservation Council, Piedmont Land Conservancy and Project Green Leaf (PGL) are involved in a partnership, whose task is to develop a farmland preservation plan for Guilford County. The project is taking a two-pronged approach, with the primary emphasis on protecting existing farmlands and farmland communities. Secondary emphasis is on identifying ways in which younger people may become involved in farming. Overall, this project looks to identify ways in which farming families may preserve their farmland-through younger generations-rather than sell to developers who, more often than not, transform the land into residential or commercial use.

Methods for Data Collection and Analysis

The data obtained for this portion of the study emphasize farming families and the challenges they face, in addition to their suggestions for the future of farmland and occupational farming. Basic information provided by informants, includes farm sizes, locations, production strategies, and marketing techniques. By knowing what Guilford County farms are producing, how-and if-they are profiting, and what strategies are working for them overall, helps to identify what steps may be taken to increase the profitability of farming in this region.

In an effort to gather data directly from farmers, that are both descriptive and quantitative PGL and partners designed a survey that solicits information on farm size and production strategy as well as thoughts and opinions regarding the present interaction between political, legal and economic conditions in the county and among local farmers. The survey also asks questions designed to elucidate ideas farmers may have for the future of local markets, and the potential for attracting and assisting young or new farmers in the area.

Members of each organization affiliated with this study conducted interviews in various venues. In all, seven interviewers are responsible for fifty interviews, and in a few cases the farmers themselves completed a questionnaire without supervision. The interviews took place in a variety of contexts, including County Extension meetings, farmer gatherings and in the farmers' homes.

Sampling Techniques, Size and Location

Project Green Leaf reached the sample group (n=50) through a combination of purposive and snowball sampling techniques (Bernard 2006). Relying on the purposive sampling technique, PGL intentionally sought out informants who have the most relevance to this study. PGL and GC Extension Service contacted informants based on their established Guilford County residence and their status as farmers or large-scale landowners. Snowball sampling involves using informants' recommendations for future informants to contact, and was useful in determining what additional parties might have been qualified and willing to participate.

As part of the purposive sampling technique, interviewers spoke to many of the participants during agriculture-oriented meetings where farmers and landowners would be present. This approach allowed the research team expedient access to a population that would typically be dispersed throughout the county, and potentially difficult to reach. Direct contact with potential participants for on-farm interviews was facilitated by partnership with Guilford County Extension, who provided a master list of local farmers and large-scale landowners. Large-scale landowners' contact information was available through GC Extension Service, for cases in which the person was a former farmer or leased land to a local farmer. For the purposes of this study, purposefully seeking landowners who have experience with farming issues was preferable to a random sample of large-scale rural landowners.

Data Collection Methods

Between February and April of 2010, PGL staff made cold calls to Guilford County farmers and landowners, scheduled and conducted face-to face interviews. Choosing face-to face interviews, aided by a questionnaire tool, allowed for more time with respondents, a greater opportunity to probe for relevant information, and therefore more descriptive qualitative data. On-farm

interviews took place in all regions of the county, and on varied types of farms, lasting in duration from 30 minutes to a few hours. PGL employee, Donna Smith, personally performed all on-farm interviews. Remaining interviews took place at GC Extension Service during agricultural meetings.

The questionnaire tool, designed by PGL, PLC and PCC staff, includes: demographic information, such as sex and ages of either landowners or farming household members, location, occupation, and amount of land owned or being leased; information on what each respondent is growing/raising and how they are selling; what challenges they face; what ideas or suggestions they have for the future of farming and land preservation and; information regarding their heirs' and their intentions for their own land.

Errors in Data Collection and Missing Data

Errors in this research have been introduced because multiple parties conducted the face-to face interviews. Additional error may have been introduced by the amount of missing information on the questionnaires. Many participants, some of whom filled out the survey themselves, opted out of answering relevant questions and their data have therefore been omitted. As a result of missing, relevant information the 'n' value varies for many of the data variables.

The low number of landowning participants also contributes to data bias and missing data. Four respondents are non-farming landowners, and the rest are farmers. There are not enough data from landowners to give them a collective voice, but their input has been included where it is appropriate.

Data Entry Methods

Qualitative and quantitative data were taken directly from the surveys and entered into an Excel spreadsheet. Qualitative data were then coded, and both were entered into another Excel spreadsheet that contains only numeric values for nominal and ordinal variables. Coded, numeric data were then entered into SPSS (Statistical Package for the Social Sciences), where 129 variables were defined for descriptive analysis.

Data Results

The Participants: Demographic Information

All participants in the study are residents of Guilford County, who are either farmers or large-scale landowners. Of the 50 participants, four are solely large-scale landowners who own between 50 and 440 acres. The other 46 are farmers. Landowners were asked to give their own ages, while farming participants were asked to report the ages of *all working farmers* within their operations. Among the four landowners, there are two females aged 66 and 67, and two males aged 80 and 90. Included in the 46 farming participants' operations, are 85 males and 29 females. Two minors were reported as vital to one operation, but neither was included in this data set, as interview participation was limited to legal adults. Table 1 illustrates the age ranges of the 114 farming participants.

Table 1. Age distribution of farming participants

Age Range	Male farmers	Female farmers	Totals
18-29	6	0	6
30-39	13	1	14
40-49	12	6	18
50-59	23	10	33
60 and older	31	12	43
Totals	85	29	114

Of the *total* participants (n=50), 58% are full-time farmers, 28% are employed in a profession or trade, and 14% are retired or semi-retired. In this sample, semi-retired denotes an individual who has retired from a profession or trade but still works on the farm and retired denotes an individual who has retired from a profession, trade, or farming, and includes non-farming landowners.

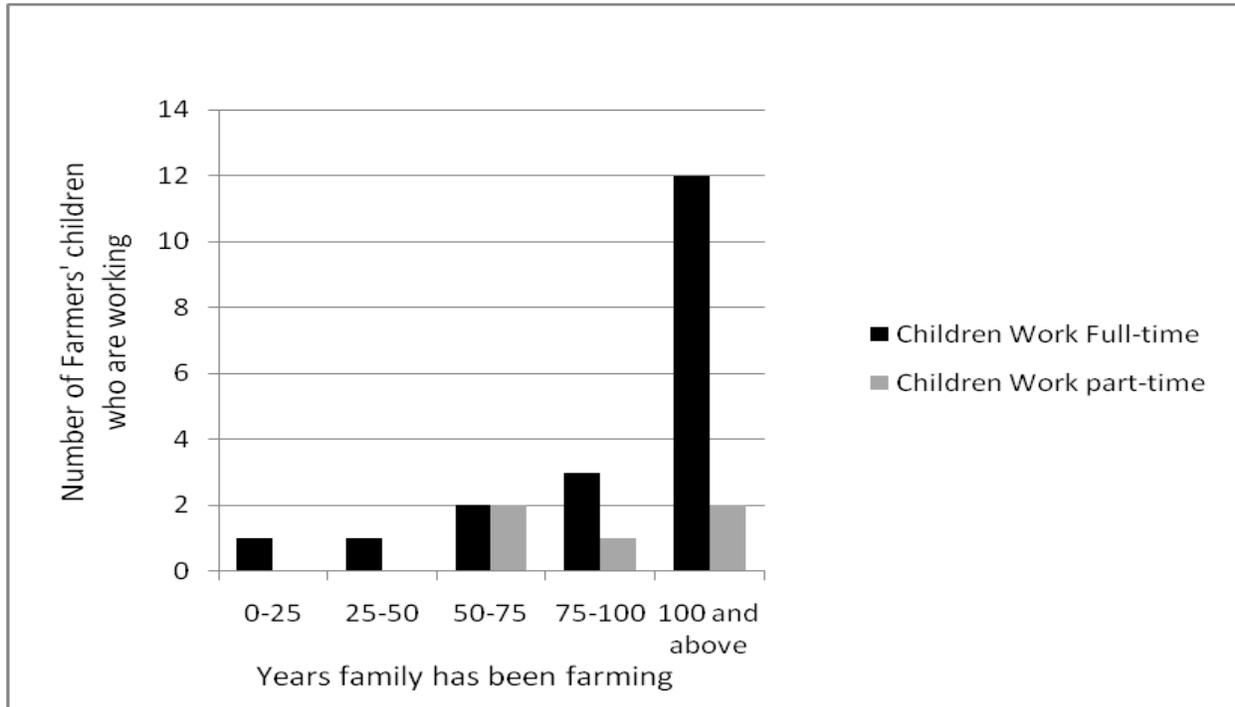
The farming participants typically come from families who have been farming for generations (See Table 2). Three of the four landowners also reported longstanding familial ties to farming. This sample reflects the agricultural heritage of this region, as many of the farmers and landowners could trace their roots-often on the same land-for several generations.

Table 2. Farming families' years farming

Years Family has been Farming	Frequency (n=46)
0-25	5
25-50	4
50-75	8
75-100	4
100 and above	25

Many of the farming participants reported having children who work on the farm. Forty percent have children who work on the farm in a full-time capacity, and 10% have children who work on the farm part-time or occasionally. Interestingly, farming families who reported long-standing agricultural histories show much higher instances of children who have stayed on the farm to work full-time (See Figure 1).

Figure 1. Family farming longevity and children working on farm



Five farming participants do not have any children. Thirty-two percent of farming participants have children who do not ever work on the farm. Many expressed their explicit wishes for their children to look elsewhere for work, often citing the declining profitability of farming as an occupation. This sentiment is reiterated by the 30% of farming participants who, when asked to give advice to young and aspiring farmers, recommended another line of work.

Farming Participants: Commodity Production

Many of the farmers who participated in this study utilize multiple production strategies. Five of the 29 full-time farmers report being dependent on sales from a single commodity, and the others are diversified. Many farming participants report that producing multiple commodities is the only way to remain profitable.

The farming participants reported 10 commodities: grain, tobacco, seasonal produce, beef, hay, timber, pasture, turf-grass, specialty products (berries, wine, etc.), dairy and hogs. Grain is the most commonly produced commodity and, in this study, includes wheat, soy, barley and corn. See Table 3 for a complete list of production frequencies.

Table 3. Commodity production

Commodity	Number of Farming Participants growing/raising
Grain (wheat, corn, soy, barley)	28
Beef	19
Seasonal Produce	13
Tobacco	12
Hay	11
Pasture	10
Specialty products (berries, wine...)	8
Dairy	5
Timber	5
Hogs	1

These 10 commodities are grown or raised on 46 farms, in a variety of combinations. Pasture, while not a direct commodity, is included because some of the farmers included it as something that they grow for their livestock, which contributes to their livelihood. Interestingly, all grain producers are diversified in some way, and *all* tobacco producers are diversified with grains. Many of the respondents reported having abandoned tobacco in the recent past, and several present producers reported their intentions of moving away from tobacco.

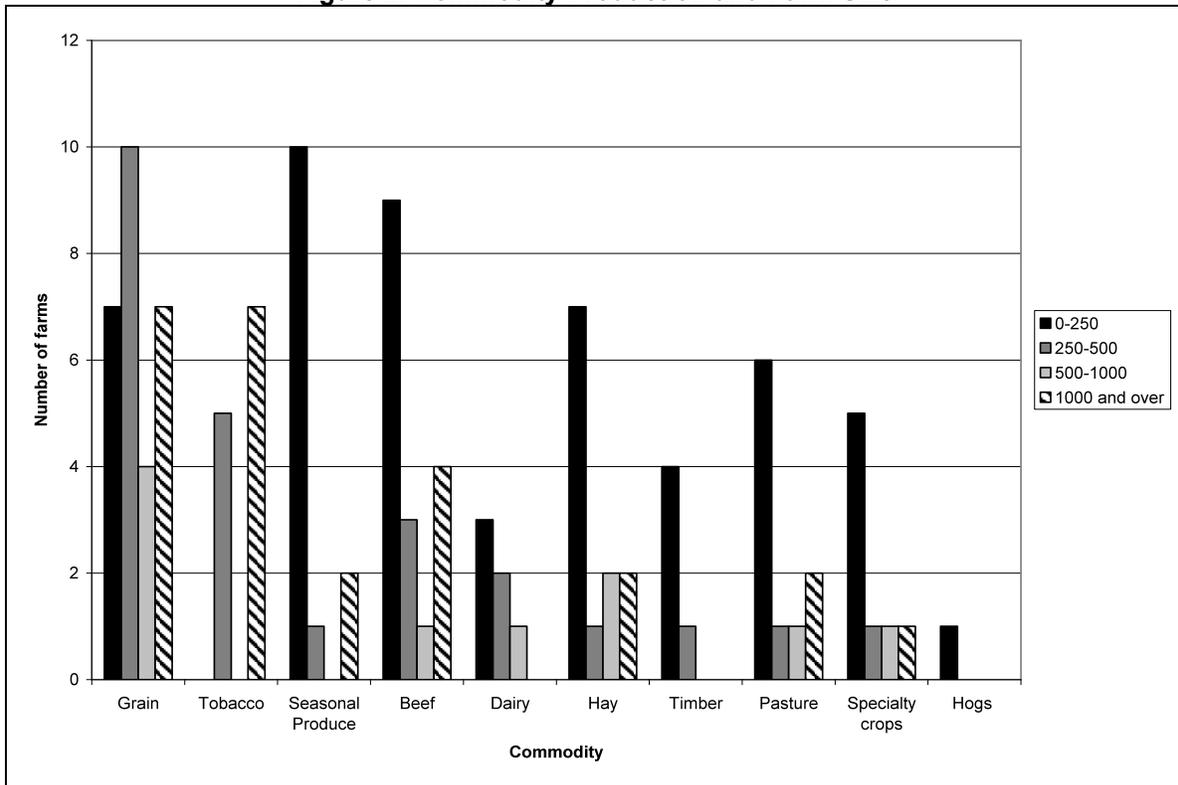
Table 4 illustrates the different production strategies as they appear in conjunction with one another. For example, grain is being grown in conjunction with tobacco on 12 farms, and with seasonal produce on four farms.

Table 4. Commodity Strategies

Commodities	Grain	Tobacco	Seasonal Produce	Beef	Dairy	Hay	Timber	Pasture	Niche products	Hogs
Grain (wheat, corn, soy, barley)										
Tobacco	12									
Seasonal Produce	4	2								
Beef	10	5	4							
Dairy	5	0	2	1						
Hay	6	2	0	6	2					
Timber	2	0	4	2	1	0				
Pasture	6	2	4	5	2	2	3			
Niche products (berries, wine...)	3	0	4	2	0	1	1	1		
Hogs	1	0	0	1	0	0	0	0	0	

Also of interest, are the commodities grown on different sized farms. Farms of more than 500 acres are typically devoted to grain and tobacco production. Many of the farming participants who operate these large farms spoke of their attempts and struggles to maintain profit by expanding acreage. Figure 2 illustrates the relationship between the commodities and the size of the farms on which they are produced.

Figure 2. Commodity Production and Farm Size



Farming Participants: Sales

Sales strategies differ from commodity to commodity. The most common source of income for grain and tobacco producers is wholesale distribution, while seasonal produce growers and niche farmers are geared more toward retail sales. Table 5 illustrates the distribution of sales strategies by commodity.

Table 5. Sales Strategies

	Grain	Tobacco	Seasonal Produce	Beef	Dairy	Hay	Timber	Specialty products	Turf-grass
Wholesale	13	7	1	10	1	1	1	0	0
Retail	1	1	8	1	3	1	0	6	1
Both	2	0	1	0	1	0	0	0	0
Don't sell	8	0	2	0	0	3	1	1	0

Wholesale grain, beef and tobacco producers reported an array of locations to which they regularly haul their goods for sale. Grain, in most cases, is taken to an elevator until it can be picked up for processing, but some farmers store theirs on the farm until they feel that they can

get an optimal price or until storage is full. Most soy farmers sell to Cargill in Raleigh, and most grain farmers sell to more than one location (see Table 6).

Table 6. Wholesale Grain Distribution

Wholesale venue/location	Frequency (n=15)
Raleigh-Cargill	8
On-farm storage	4
Whitsett-Clapp Fertilizer	3
Statesville	3
Bonlee	1
Goldsboro	1
Fayetteville	1
Eastern Carolina Organics	1
Grain Brokerage	1

Many of the farming participants, especially beef producers who haul their cattle to Siler City or Mt. Airy (see Table 7), reported their desire for more nearby facilities. Beef producers who sell directly to consumers from their farms did not give any information about how they butcher their cattle.

Table 7. Wholesale Beef Distribution

Venue/location	Frequency (n=11)
Mt. Airy Stockyard	3
Siler City	5
On-farm/consumer direct	3

Tobacco farmers in the area typically sell to Phillip Morris or RJR, in Winston-Salem, and the tobacco farmers in this sample are slightly more varied. Two actually sell organic tobacco, one from the farm and one to an organic distribution company. The Kernersville location may be a warehouse for RJR or Phillip Morris, but that is not conclusive.

Table 8. Wholesale Tobacco Distribution

Venue/location	Frequency (n=7)
Winston-Salem (RJR or PM)	2
Eastern Carolina Organics	1
Kernersville	3
On-farm/consumer direct	1

Seasonal produce diversification allows growers to benefit from retail sales instead of relying on contracts or wholesale buyers to come through, and direct marketing strategies are becoming more popular throughout the state. Between 1997 and 2007 seasonal vegetable producers (by farm) have increased from 2,160 to 3,745 (73%) (USDA 1997, 2007). Of the farmers interviewed, 14 are working with seasonal produce. Nine reported that they are selling retail, one of whom does so in conjunction with wholesale. Two report that they do not sell their produce and may grow it exclusively for consumption or community exchange; but that data is unavailable.

Retail sales for produce are most often taking place in more than one venue. Table 9 illustrates the different sales locations reported by ten produce farmers, but not the relationships between markets and farms. For example, one farmer who specializes in seasonal produce and specialty crops sells exclusively to bakeries and restaurants, but another farmer, who also grows produce and specialty crops, sells at four different farmers' markets. There are various combinations represented in this sample of 10 reporting local retailers. We have incomplete responses for the frequencies at which farmers went to different venues and on which days; therefore, we cannot comment extensively on the specific nature of these farmers' sales strategies.

Table 9. Sales Venue Distributions for Seasonal Produce

Venue	Frequency (n=10)
On-farm/Consumer Direct	4
Greensboro Curb Market	4
Local Bakeries and/or Restaurants	3
Piedmont Triad Farmers' Market	2
Eastern Carolina Organics	1
Kernersville Farmers' Market	1
Asheboro Farmers' Market	1
High Point Medical Center Market	1
Winston-Salem Farmers' Market	1

Specialty crop production and marketing is a strategy on the rise in North Carolina. The eight specialty crop farmers included in this sample are producing commodities ranging from turf grass to strawberries, goat cheese and blackberry wine. Specialty markets are sought after for profitability, as is reflected in a lack of wholesale activity within this group. Value-added and rare commodities are an interesting way for farmers to generate more retail profit from raw products, like goats' milk or berries. Retail sales take place in various farmers' markets in the area (Greensboro Curb Market, Summerfield, Burlington, Winston-Salem, Piedmont Triad FM, and High Point Medical Center), bakeries and restaurants, and from on-farm stands.

Due to a lack of profitability, dairy farmers are reportedly a group in decline in Guilford County. Census data for the State of North Carolina confirms that in the decade between 1997 and 2007, the number of farms with milk herds decreased from 1,092 to 463, a drop of 58% (USDA 1997, 2007). Guilford County data shows a similar decline in that decade (See Table 10). Of the six

dairy farmers interviewed, two are operating farms that function as a single entity. Three report selling to local bakeries and restaurants, while the remainder sells to a MD/VA co-op, Piedmont Dairy Sales, the farmers’ market in Reston VA, the Greensboro Curb Market and the Davidson Market.

Table 10. Guilford County Dairy Farms

Year	Number of Farms*
1987	57
1992	28
1997	21
2002	27
2007	9

Source: USDA Agricultural Census 1987-2007

Challenges to Guilford County Farmers

Participants, in the interest of farmland preservation, were asked to describe any challenges that were of importance to them, in terms of politics, laws/regulations, economics, environment, consumer trends and culture. These qualitative data, derived from open-ended questions, provide us with candid thoughts and opinions from local farmers and landowners.

Political Challenges

Half of the farming participants and one landowner voiced their thoughts regarding political issues that affect their livelihoods in particular, or farmland preservation in general. Eleven respondents cited a lack of support from political officials as a hindrance to farm success. The landowner who responded to this prompt, a woman who used to own a farm and presently leases her land to farmers, suggested that the elected political officials who represent her do not understand the importance of farming in her area. She claimed that when citizens petitioned for the Voluntary Agricultural District program, their representative voted against it.

Farmers’ political concerns range from nationwide political corruption, to a lack of local understanding of farming issues. One farmer in particular described himself as “being politically put out of farming”, as the lands around his farm-once protected by easements-are developed into residential neighborhoods. He claims that the GC Commissioners overturned the easements in order to help a developer get the zoning to build houses there. Others described political turmoil with respect to the effects it has on local farmers’ markets. Free trade was described by nine farming participants, eight of whom grow grain, as a barrier to their ability to compete in the market. One soy farmer, in particular, specifically described the problem of competition with crops from Brazil and Argentina. Seven respondents, some of whom expressed their dissatisfaction with development and urban sprawl, addressed problems with rezoning and eminent domain.

Other issues touched on by a few farmers are a perceived lack of control in political affairs, licensing issues and a lack of subsidies.

Laws and Regulatory Challenges

Challenges to farmers regarding laws and regulation were widely varied, ranging from labor laws to the illegality of raw milk. Of the 50 in the sample, 35 farmers and two landowners reported on their own challenges with laws and regulations. Twelve farmers reported EPA compliance as their main hassle. Sentiments on environmental compliance were mainly of aggravation, with an occasional understanding of necessity. A few, however, feel that the environmental regulations are being taken too far, and that the endless task of keeping up with them is a heavy burden. As one farmer put it, “Everything we do is regulated. We’re regulated to death.” On-farm regulatory pressures described include pesticide and fertilizer usage, manure lagoon maintenance, stream maintenance, slaughter requirements and waste application. Six farmers and one landowner specifically referenced the amount of paperwork necessary to keep up with these regulations as a fundamental challenge.

Six of the 35 reporting farmers cited labor laws as a challenge to their success. Four of these farmers grow tobacco and grains, and two grow only grains. They describe needing the additional help, but not being able to afford it under present H2A labor laws. Two farmers specify that they use, or have used, migrant labor, which has presented legal challenges. One farmer stated, “Raising (farm-worker) wages becomes unaffordable for the farmer”.

Paying taxes presents a challenge for seven farmers and one landowner in this sample, although two respondents described the benefits of farm-use taxes. One farmer, who operates a local dairy, described his experience with farm-use taxes as “difficult”. He described having trouble with securing farm-use status on his land, because it is in several tracts.

Thirty-six farmers and one landowner expressed frustrations over agricultural law changes, in general. Two farmers specifically referred to conservation laws being overridden, in some instances, to allow development on tracts of land near their farms or to increase tax value.

Eight tobacco farmers described smoking laws, and anti-smoking sentiment, as a partial deterrent to their success.

Environmental Challenges

Farmers’ responses to the environmental challenges prompt were relatively unsurprising. Of the 36 farmers and one landowner who replied, 28 farmers described weather as their greatest environmental challenge. Twenty-five farmers specifically cited the extremes in precipitation levels that North Carolina farmers have been experiencing in recent years. Other environmental issues addressed include pollutants, water quality, wildlife and pests, fungi/molds and poor soil.

Economic Challenges

Of the 37 participants who spoke up on economic challenges, 29 portrayed input costs as the most daunting. More specifically, eight of those people cited fuel costs as their main financial burden while three reported labor costs. Fifteen reported having trouble with erratic price swings and low commodity prices.

Essentially, the greatest economic difficulty for this sample of Guilford County farmers is the struggle for profit. In addition to paying too much for resources and materials, many farmers are experiencing difficulty with selling their products. The location or quality of local markets lends problems to six farming participants, who are frustrated with the farmers' markets in this region, and the lack of nearby markets for grains.

Consumer Trends

Consumer trends provide farmers with challenges that have both constructive and destructive outcomes. Twenty farmers and one landowner reported on consumer trends. Nine farmers and one landowner described the recent demand for local and organic foods as a challenge-though not the kind of challenge that is causing farmers to lose profit. It is the kind of challenge that has moved this segment of the sample to produce with fewer inputs, and expand their operations to include more locally marketable foods.

While some of the farmers in this group have had great success because organic and local demand, others describe customers as "picky", and report that people are so disconnected from farming, that they reject food over the smallest imperfections. Seven farmers and one landowner expressed that a lack of understanding of where food comes from, coupled with the ease of visiting a grocery store, is presenting an overall challenge to the continuity of family farms.

Cultural challenges: Human Ecology of Farming

When prompted to describe the cultural challenges they face, respondents were given examples such as farming practices, community support (or lack thereof), cooperation and crop selection. In other words, cultural challenges envelope the human ecology of farming, or the relationship that farmers experience with the land, and with their social, political and economic environments.

Of the 27 who reported, 10 are facing issues related to the urban sprawl coming out of Central Guilford County. While this is a political issue, it is also a human ecological issue for the farmers who are continuing their way of life amidst complaints from newcomers to rural areas, about the smells and noises associated with operational farms. Two farmers who operate pick-your-own strawberry farms described having difficulties with customers who damage crops or harass farm animals. Many of the farmers interviewed expressed some dissatisfaction with the public's lack of knowledge of farming. They directly associate the lack of understanding of food production, with a lack of community support for local farmers.

Five farming participants described community support as a challenging, but positive force in their lives and operations. In general, respondents described pleasant and helpful relationships with their neighbors and fellow farmers.

Other cultural challenges reported include environmental pressures/compliance with demands (including switching to non-tillage), niche marketing and an overall loss of farmers.

Stressful Aspects of Farming: Farmers' Perceptions

Farmers were asked to list and describe up to three of their most frustrating challenges. This information is valuable in observing how farmers perceive the pressures that pervade their livelihoods. Thirty-nine farmers responded, and most listed the top three stressors that they face. Table 11 reflects a tabulation of each time a stressor was mentioned by a farmer. Weather overwhelmingly causes the most difficulty for farmers, followed by factors that contribute to profit.

Table 11. Factors that cause the most stress for farmers

Stressor	Farmers citing stressor (n=39)
weather	27
expenses	19
market prices	17
labor	11
politics/regulations	10
lack of time	7
customers are uneducated	3
equipment	3
pests/wildlife	3
development	2
chemical applications	1
lack of independence	1

Respondents' Advice, Opinions and Ideas

At the end of each interview, respondents were asked to share their thoughts on the future of local markets, farming and farmland preservation. The results offer a rich, open-ended description of what Guilford County farmers envision for the future.

Improving Local Markets

Twenty-nine farmers and one landowner offered advice on improving local markets in Guilford County. Eighteen of these respondents advocate greater support of existing markets, along with a movement toward more local markets and wholesale opportunities for farmers. A few farmers suggested farmer co-operatives in Guilford County. Five farmers asked specifically for more advertising for locally produced goods, by way of advertising for local farmers' markets.

Farmers and landowners were specifically asked to think about what they could do personally and professionally to improve local markets. Eight farmers acknowledge that maintaining high quality in their products positively impacts the local markets in which they might be sold, and assert that their greatest contribution is quality.

A few of the farmers recommended that farmers diversify to improve the local markets. Two others – both large-scale (more than 1000 acres) tobacco and grain farmers – stated that local

markets are not enough to sustain their livelihoods. Also, they want more widespread brokerage for Guilford County products. Some specifically want an export market. As one farmer put it, “[We need] more foreign trade for our product. We need more of the world to buy our stuff.”

Attracting Young People to Farming

Much of the feedback for attracting young people to farming, as an occupation, was positive and constructive. However, a surprising amount of respondents felt that the idea of attracting young people to farming is hopeless. Of the 37 farmers and two landowners who offered ideas, 14 suggested that it will be very difficult, or impossible, to attract young people to farming. A farmer even referred to it as a “lost cause”. Others pointed out that the lack of profitability that presently plagues farmers would make it too costly for young people to buy land and equipment. Some farmers described *running* their own children away from the farm, in an effort to spare them the frustrations of trying to make a living there. Sentiments follow a continuum from hopelessness to optimism, with answers ranging from “no way” to a more hopeful “invite participation with young people”.

Other more hopeful and optimistic suggestions include mentoring, leasing plots, education programs for young people, financial aid for young farmers, tax incentives and improving local markets to increase the profits for farmers and keep them farming.

Advice for Young Farmers

When asked to offer advice to young farmers many respondents (15 farmers) suggested that they “find a new job”, “not get started” or “have another job in mind” rather than farm. Farmers who offered this kind of advice expressed concerns with their own lack of profitability and time. Additional guidance, however, was more positive. Several farmers suggested that newcomers get an education in business, while several others recommended starting very small and gradually expanding over many years. A few advised new farmers to diversify and consider niche production, and some simply advised young people to be prepared for hard work and sacrifice. Another farmer described their profession as “rewarding”, and another offered advice for young farmers to make the work a family activity.

Respondents’ Advice for Land Preservation

Thirty farmers and two landowners offered their own ideas for Guilford County farmland preservation. Ten of these respondents feel that conservation practices, such as stopping rampant deforestation and development, are the best way to preserve land. Seven people backed the idea that incentives for present farmers would keep land in production, make farming more profitable, and eventually make it more advantageous for heirs to continue farming the land. Some landowners and farmers recommended mentor programs for young farmers.

One landowner, from Pleasant Garden, suggested that housing development lots be required to contain two acres instead of one, thus discouraging developers from the area. She described the RS80 program, used in Pleasant Garden, as an effective tool for keeping housing development out of certain areas.

Another landowner from Browns Summit demonstrated frustration with the very idea of farmland preservation. He said, “You can’t tie people’s hands or their children’s. People don’t

understand; a farmer's land is his 401K. When he's done farming, that's all he's got!" Similarly, three respondents suggested that preservation is unlikely in the face of available profits from sales to developers.

Data Analysis and Interpretation

The data presented by Guilford County farmers and landowners tell us different stories about the present state of local agriculture, and about the potential future of farmland use. With a relatively small sample, it is difficult to find definitive patterns in the data that might create an overall description of land-use and farming. A more effective approach for analyzing this sample is to examine groups who share commonalities, and create profiles based on their collective voice and what it has to say.

Aging Farmers

Farming participants were asked to report the ages of all farming individuals within their operation. Of 46 farms, 28 are operated by at least one farmer who is over the age of 60 and 14 are operated by farmers in their fifties. Since the average age for a farmer in Guilford County is 60, this portion of our sample has a special significance for representing the growing number of retirement-age farmers. Plaguing many people, is the question of what will become of their farms over the next generation.

Ten farms are operated exclusively by people over the age of 60. Four of those farms are being run by husband and wife teams, two of which are professionals elsewhere-and do not have children. The other two couples, a grain farmer and a beef producer do not have any heirs who are interested in farming. The couple raising beef cattle has a son who is already considering developing his inherited farmland. Single men between the ages of 58 and 78 operate the remaining six farms-only one of whom has an heir who has expressed any interest in farming.

The remaining 18 farmers over the age of 60 are working with multiple generations. All 18 of these farms represent a familial operation, where sons, daughters, nieces or nephews are co-operators. On two of these farms, both of which are exclusively grain and tobacco operations, heirs have expressed uncertainty about continuing the business. The remaining heirs, almost all of whom work with livestock (beef, dairy or both), claim that they are going to keep farming after their elders have retired. The two heirs who plan to keep farming and are not working with livestock are diversified with seasonal vegetable production. Only one is exclusively a grain farmer.

Only three of the 28 farms with principle operators over the age of 60 have co-operators under the age of 30. In other words, it appears that the heirs who are farming – many in their forties and fifties – do not have children of their own who work on the farm. When their parents are done farming, and they take over, who will take their places as heirs to the farmland?

Fourteen farms with principle operators in their fifties, and eight of those farmers are 58 or 59. This group exhibits more diversity with seasonal vegetable and specialty crop production, and is selling in more varied arenas than farmers in the older age group. Respondents in the 50-60 range are producing wine, berries, eggs, greenhouse and seasonal vegetables, dairy (milk, butter

and ice cream), free-range hogs, mushrooms, goats' milk and cheese, and timber for local consumption—in addition to the more traditional grains and beef. Only four of these 14 farmers have children who work on the farm and plan to continue to do so for a living. The remaining farmers either do not have children or they have children who are not interested in farming. Three of the farms are partially operated by farmers under the age of 30, possibly reflecting that some farmers in their 50's have children in this age group.

The remaining four farms in this sample have principle operators who are under the age of 50. All four are full-time farming operations, and include one farming family—a couple and their children, two couples, and one single man. Three of the four, the youngest in this sample of farmers, are grain and tobacco farmers, who have no children or very young children. The farming family, whose principle operators are reaching 50, is producing vegetables, berries, goat meat and value-added goods. Their children are working and being educated on the farm, but are too young to know if they will farm for a living.

Altogether, out of 46 farms in Guilford County, only six farms have operators under the age of 30. So many of the farmers made a point to comment on how difficult it is to bring young people into farming, and clearly, it has not been easy-or favorable-for them to bring their young heirs into the farming business, regardless of their level of financial success. There is no pattern in this data that unites respondents in their optimism or pessimism toward the possibility of a new generation of farmers. Fourteen farmers expressed the belief that attracting young people to farming is an *impossible* endeavor. Exactly half of the total farmers interviewed, either had no ideas for attracting more young people to the farm or explicitly feel that it is a hopeless cause.

The other half of farming participants offered optimistic advice for attracting and helping young farmers. The overall emphasis among these farmers is for mentoring, teaching and leasing programs that will bring interested young people out to the farm and help them get started. Further recommendations from these farmers include tax incentives for young farmers and financial aid for overhead costs. Their advice suggests that young people could be attracted to the farm with the right knowledge and assistance.

The farmers in this sample are approaching or are beyond legal retirement age, which is representative of the greater whole in Guilford County. They equate successful farmland preservation with successful farms and prosperous farmers, and are disappointed with the lack of profitability that presently characterizes their operations. While it is important to bring in new, young farmers-and help them get started, it is equally important to improve the quality of the markets that support farmers presently so that they may potentially support newcomers.

Grain Farmers

As stated, 28 of the farmers in this sample are growing grains – corn, soy, barley, wheat or some combination thereof. Twenty-one are farming between 300 and 2000 acres. The only grain farmers who are farming less than 300 acres are either growing grain exclusively for their cattle operation or farming part-time for supplemental retirement income.

All but two of the full-time grain producers are leasing additional lands to enhance their operations. Four grain producers are expanding their acreage to benefit their dairy operations.

The two farmers who are not presently leasing, have plans to expand their acreage in the coming years through either a lease or purchase of additional land. In other words, all the farmers who are growing grains for profit have expanded or are about to expand the amount of land that they farm, in an effort to increase their income. This trend illustrates the “get big or get out” movement that continues to plague farmers who get caught in the debt cycle while attempting to make a living wage from the land.

The major challenges reported by grain farmers are free trade, strict labor laws, high taxes on land, high input costs, high fuel costs, low commodity prices and urban sprawl. Grain farmers in Guilford County are struggling most with profit, spending more year after year on inputs, and failing to recoup their investment at harvest. Most are farming on hundreds of acres that they don't own, but lease, in an effort to produce enough to make up for the high inputs. As one soybean and wheat farmer put it, “[There are] only a few grain buyers in the US. No competition anymore”.

Twenty-eight grain farmers from Guilford County are selling to six different elevators scattered throughout the state. One is located in the County, but only three farmers report using it. Four farmers have figured out how to sell their grain from on the farm, mainly to dairy farmers or beef producers; the rest are dealing with the uncertainty of wholesale pricing and long hauls. All are dealing with the high cost of fertilizer, fuel and other inputs. Many of these grain farmers are hoping for more competition for grain in Guilford County and express frustration with the present unprofitability of their work. According to a Browns Summit farmer, “When grain prices went up, they got us on fertilizer. Rates on fertilizer went way up, because of gas, [from] \$300 per ton to \$850 per ton, in one year. [It's] one thing after another.”

Tobacco Farmers

Twelve of the farmers in this sample are growing tobacco and, interestingly, all of them are also grain producers. All of these growers are leasing and farming large tracts of land, some of which are between one- and two-thousand acres.

Ten of the 12 tobacco growers come from long-time farming families, who have a history with the crop, and we can assume that they have diversified their production strategies with grain (and not the other way around).

Some farmers found other ways to continue profiting with tobacco. One farming family is selling tobacco from their farm exclusively, and another is growing specialty organic tobacco.

Tobacco farmers within this study are moving away from it as a cash crop. Only two of the farmers who grow it for whole-selling even mentioned it as a source of income. Those who mentioned it otherwise, did so to describe its waning value to their operation. Some farmers, who have since moved into niche or vegetable production, described having moved away from tobacco farming years ago, when profits began to decline.

Seasonal Vegetable Producers

Acreage devoted to vegetable production in North Carolina has steadily increased alongside the decline of tobacco production. In the decade between 1997 and 2007, the number of acres in

North Carolina devoted to vegetable production jumped from 50, 286 to 117, 032 (133%) (USDA 1997, 2007). With the emphasis on local food during that decade, came a revitalization of the demand for local produce, resulting in an increase in the number of small farms. Between 1997 and 2007, the number of farms sized 10 to 49 acres increased from 16,010 to 20, 772 (29%), and the number of farms sized 50 to 99 acres increased from 4,390 to 10, 896 (148%). The demand for local produce also led to diversification toward vegetables by some grain and tobacco farmers.

Ten of the 46 farms produce seasonal vegetables for profit. Two are diversified grain and tobacco farmers, three are vegetable and beef producers, and three are specialty crop and vegetable producers. Two are exclusively growing vegetables. The three specialty crop and vegetable producers expressed confidence in their financial security while the other farmers did not.

Vegetable producers are varying their marketing strategies by selling at small, local markets, reaching out to independent restaurants and offering fresh produce sold directly from their farm. Vegetable farmers in this group are interested in having more opportunities to sell their products locally, retail and wholesale. Some commented on the exclusivity of the Greensboro Farmers' Curb Market, and the turmoil there, which prevents them from wanting to participate.

Overall, farmers who are growing produce for local sale, and farmers who are planning to grow vegetables in the future, are looking for a wider range of access to their consumers. Partnerships between producers, restaurants and cafeterias could provide markets for existing farmers, and potentially widen the market to make room for new farmers.

Specialty Crop Production

Specialty crop producers in this sample are generating income with a wide variety of commodities. Eight farmers have been categorized as specialty producers. Among them are strawberry, blackberry (for picking and wine-making), greenhouse vegetable farmers, egg sellers and a mushroom grower. Other specialty products represented in this sample are goats' milk and meat, firewood, fishing worms, muscadine grapes and turf-grass. All specialty crop sales are retail, and the sellers in this group are not reporting problems with attaining profits.

A couple of specialty crop farmers pointed out that the overhead on specialty products can be high, but encourage new farmers to pursue special production for its strength as a viable farming strategy. The creativity of specialty production generates income and brings diversity to the local food shed, benefitting consumers and farmers.

Beef Producers

There are 19 beef producers in this sample. Most beef producers are diversified with grains, dairy or specialty crops. Four, however, specialize in raising beef cattle. Three of the four report having trouble with profits over the past few years. One plans to diversify with seasonal vegetables in the coming year.

Many of the cattlemen cited a lack of local beef processing as a real encumbrance on their operations. While a few are selling beef from the farm, most are driving their cattle to Mt. Airy

or Siler City for slaughter. Those who are selling from the farm, retail or wholesale do not specify where they are taking their head for slaughter, or if a mobile slaughter facility is coming to them.

The most prevalent issues brought forth by beef cattlemen in this sample are high inputs coupled with low beef prices, especially in the last couple of years, and a perceived lack of support from political figures.

Beef has long been a large part of Guilford County agriculture, and nine of the cattle operations in this sample are multi-generational. However, there are no cattlemen under the age of 30 in this sample.

Dairy Farmers

As stated earlier, the numbers of dairy farms are in decline in Guilford County, as well as in the state. There were five dairy farmers contacted for this study, but two are working on the same farm. Of the four representative dairy farms, only one predominantly whole-sells and the others rely mostly on retail sales, either directly to customers, bakeries, restaurants or distribution centers. All four dairy farms are producing their own grain for feed.

Three of the dairy farms are selling to out-of-town processors, and all report problems with profits. Two of them wish to sell more locally. One local dairy farm is thriving and expanding every year. They are selling from 67 different locations throughout the Piedmont Triad and report no problems making a profit.

Conclusions

From the interview process we learned some new things as well as confirmed what we already knew. For example, present-day farmers must be profitable in order to keep their land in production. With no viable livelihood to sustain them, farmers are forced to consider selling their land. In addition, farmers who are not profiting or who are struggling to stay on their farms are less likely to encourage their children to farm the land in their stead. Farmers have provided suggestions for increasing the profitability of farms in Guilford County.

Diversity in the field, as well as where they market their products/commodities, has helped sustain many of these farmers. Farmers that have diversified their production *and* marketing strategies report more satisfaction with their profits.

Grain farmers want more local elevators and competition; beef producers want more local processing and demand for their product. Vegetable farmers want additional venues to sell their fresh local produce. While establishing additional grain elevators may not be an option for grain farmers, it may be possible to strengthen the local market system by forming strong partnerships between the consumers and producers. Advertising for local farmers' markets, developing programs that link restaurants to farmers, and spreading awareness of locally produced commodities are viable ways to assist local farmers become more profitable.

Another outcome we learned is the need to have more young people interested and willing to farm and keep the land in production. Perhaps part of the solution for farmland preservation is looking beyond the children of farmers and putting more emphasis on connecting young “back-to-landers” with aging farmers. Through leasing, mentoring or teaching programs, potential future farmers could be provided with land and knowledge while keeping the land in production. PGL is continuing with a study that will look at levels of interest, among young people, for participating in such programs.

In addition to a loss of interest in farming, is the consumer’s loss of connection to where their food comes from. Many farmers feel that local markets, and the future of farming, would benefit from early education programs that help people appreciate the importance of agricultural processes from an early age. According to one fifth-generation Guilford County farmer, “Young folks need to know where their food comes from and how it is produced. Not just that it comes from the grocery store.” Community outreach has the potential to generate interest in local markets, but also in farming as an occupation.

Finally, some farmers are interested in preserving their farmland and are planning to scale their operations back in the coming years. Some have expressed an interest in attempting to keep their land in production, or just away from development, but do not know how to go about protecting it. Others expressed an interest in leasing land to young farmers as a way for the land to be kept in farming. A possible course of action for preserving farmland in the short-term is to make sure interested farmers know what their options are for protecting their farmland.

Maintaining farmland, keeping it in production and attracting new farmers is a work of interconnectedness between the economic, social, cultural and political factors that affect the success of existing farms. A successful plan formulated to protect farmland must incorporate the community-wide approach mentioned by farmers and landowners in this study, and take into account the complexities of a food shed.

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Appendix F
Farmland Preservation: Partners & Tools

III. Farmland Preservation: Partners and Tools

A. Conservation Partnerships

Protection of Guilford's natural resources occurs through partnerships between public agencies and private organizations providing technical information and a broad range of incentives and options for landowners. These collaborations leverage local and private funding to access state and federal land conservation funding sources that require such a match. These partners complete short-term and permanent land transactions with willing private landowners by purchasing land or easements using these funds, by way of landowner donation of money or interest in their land, or a combination. Potential transactions are selected by one or more citizen Boards which serve those partners involved in a particular transaction. Each Board is appointed by varying forms of public influence and guided in their project selections by similar criteria driven by public land conservation case studies and resulting government statutes. Further details regarding the differences of each partner's missions, Board appointments, project selection criterion and/or other contributing roles in conservation are described below.

The **Guilford Soil and Water Conservation District (SWCD)** provides technical assistance to landowners and uses county, state and federal resources to implement local conservation priorities. The Guilford SWCD consists of several partners in itself. First it is served by a Board consisting of three elected officials and two persons appointed by North Carolina Soil and Water Conservation Commission which set those local conservation priorities. The United States Department of Agriculture's Natural Resources Conservation Service (NRCS) also employs a District Conservationist to advise the Board regarding federal programs and connect interested landowners to available federal funding not only for direct farmland protection but a variety of short-term conservation programs available through the federal Farm Bill. A staff hired by the county also advises the Board and helps to educate landowners and implement local, state, and federal programs. All of these partners hold an office at the Guilford Agricultural Center at 3309 Burlington Road. Their website is: http://www.co.guilford.nc.us/planning_cms/soils.html

The **North Carolina Cooperative Extension Service** shares university research results and provides educational programming on a wide range of production and land management issues, including farmland preservation tools and generational transition questions. These services are provided through the Federal Land Grant College Acts in order to serve agricultural and other technical needs of the State. A Cooperative Extension agent is assigned to Guilford County and holds an office at the Guilford Agricultural Center at 3309 Burlington Road. Their website is: <http://www.guilford.ces.ncsu.edu>

The **North Carolina Division of Forest Resources** helps private landowners manage their forest lands to achieve individual goals of timber production, wildlife habitat, and recreational enjoyment, while protecting soil and water quality for all of the county's citizens. The local office is located at 304 Old Hargrave Road, Lexington, NC 27295. Their website is: <http://www.dfr.state.nc.us/Contacts/d10.htm>

The **Agricultural Districts Advisory Board (ADAB)** has the primary responsibility of administering the Voluntary Agricultural District (VAD) program. State and County staff

serving the SWCD and Cooperative Extension also provide facilitative support. The ADAB shares information on local, state, and federal issues impacting agriculture, and provides feedback to the County Commission on ways to strengthen Guilford's farming sector. Currently, the VAD program enrolls farmers in a voluntary program that offers working farms a small level of protection by notifying its neighboring landowners of agricultural practices taking place on that farm and placing that farm under a temporary non-binding agricultural easement. The Board is served by volunteers appointed by the County Commission. The ADAB and VAD are described in greater detail later in this document. The ADAB meets in various places throughout the county on a monthly basis. The staff advising the Board, most directly advised by Guilford County Cooperative Extension staff, has an office at the Guilford Agricultural Center at 3309 Burlington Road. Their website is: <http://www.agdistrict.com>

The **Guilford Open Space Program** has been the primary government entity that the County has tasked to protect land from development. Established by the County Commission in 2000, it grew out of a citizens' advocacy group which desired the protection of open space. The Program is part of the County Parks and Open Space Division of the Property Management Department and directed by the 9 member Open Space Committee, a volunteer Board appointed by the Commission. Their primary tool is the purchase of private land from willing owners, to be converted to public green space with money from a ten million dollar bond passed in 2004. They work with the Planning Department, Tax Department, and other public and private partners to fulfill their mission: *"To identify suitable lands for acquisition and preservation, develop plans for their protection and provide public education about land conservation."* Further, the Committee and its staff provides feedback to the Commission and public on benefits of protecting land for parks, green space, recreational trails, and agriculture. Currently, the County staff serving the Open Space Committee has an office in the Old Guilford County Courthouse at 301 West Market Street in downtown Greensboro. Their website is: <http://www.gcms0004.co.guilford.nc.us/webapps/parks/default.asp>

The **Piedmont Conservation Council (PCC)** is part of the USDA's network of regional Resource Conservation and Development non-profit organizations, whose mission is *"leveraging resources and people for innovative community and conservation projects throughout the Piedmont Region,"* which includes Guilford County. PCC submitted the application for the primary grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund (NC ADFPTF) which funded this plan and subsequently facilitated the execution of preparing this plan through research conducted by various consultants using public comments and case studies. PCC is served by a volunteer Board appointed by current Board and staff from a variety of backgrounds and who reside in a cross section of the eight counties in PCC's service area. The staff of PCC holds an office located in the USDA building at 847 Curry Drive in Asheboro, Randolph County, NC. 27205.

The **Piedmont Land Conservancy (PLC)** is a non-profit, grassroots land trust serving Guilford County with a mission to *"permanently protect important lands to conserve our region's rivers and streams, natural and scenic areas, wildlife habitat, and farm land that make the Piedmont a healthy and vibrant place to live, work, and visit for present and future generations."* PLC operates on donations from private individuals and grants from charitable foundations which allow it to reach out to landowners and to partner with various other conservation-minded

organizations with similar goals. The organization primarily protects working farms and other open space through conservation easements either donated by a landowner or purchased with public and/or private funding. PLC also purchases land in fee simple for permanent protection, often doing so as an intermediary for a government conservancy agency who will ultimately own and manage those properties long term. PLC has completed 30 projects in Guilford County since 1990 including conservation easements on over 500 acres of farm land, facilitated the government protection of 150 acres and 20 acres still under PLC ownership. PLC is served by a volunteer Board appointed by current Board and staff from a variety of backgrounds and who reside in a cross section of the nine counties in PLC's service area. The Board selects projects that fulfill PLC's mission and fit criteria established by those government agency funding sources of which it utilizes often utilizes, which were initiated to prioritize the use of tax dollars to protect important open space for public benefit. Currently, PLC staff work from an office located at 1515 Cornwallis Drive in Greensboro. Their website is <http://www.piedmontland.org>

Greensboro Beautiful is a non-profit which works in partnership with the City of Greensboro to bring private businesses, citizens and community organizations together to conserve and enhance the beauty and ecology of the community. They are not focused on agricultural lands but they provide funding assistance and volunteer support to initiate community improvement and enhancement projects and programs, which the Greensboro Parks & Recreation Department provides staff to coordinate, implement and administer. Currently, the city staff serving this non-profit has an office located at the Old Amory at 501 Yanceyville Street in Greensboro. Their website is <http://www.greensborobeautiful.org>

North Carolina Farm Bureau is a grassroots non-profit organization that acts as a unified voice for promoting the agricultural industry and farmers needs in the U.S. Congress, the NC Legislature, and in local matters. The Guilford County chapter is active in their efforts to educate the Guilford County Commission on the current state of local agricultural production, the benefits of continuing support of this county's agricultural sector with a particular highlight on preserving farmland within the county. The Guilford County chapter is lead by a Board of Directors of which candidates are selected by a Committee of local chapter members and voted in during the annual meeting each October. Board members must be members of the local chapter and involved in the local agricultural sector. The staff is directed by the Board and staff members work from the local office at 3311 Burlington Road, Suite A in Greensboro. Their website is: <http://www.ncfb.org/counties/countyProfile.cfm?countyID=041>

The **North Carolina Farm Transition Network** is a non-profit organization that provides education and resources to farmers with the goal to keep land in farm and forest production as it passes through generations or changes ownership. They provide estate planning services for existing farms as well as workshops to new and old farmers on the challenges to passing along land or accepting land and starting a farm for the first time. The Network is led by a Board of Directors from various agricultural service backgrounds and often includes a few active farmers. The Board is selected by the Executive Director and previous serving Board. The Executive Director currently works at 122 S. Churton Street, Hillsborough, NC 27278 and their website is <http://www.ncftn.org>

B. Toolbox

There is no silver bullet for protecting farmland. A wide variety of farms are owned by an even wider variety of families, full of individuals with differing needs and goals. An effective farmland protection strategy must offer a broad spectrum of tools that can be used to keep land in agriculture.

North Carolina and Guilford County offer a range of voluntary programs for landowners to ensure that their land will not be converted to non-farm uses. These programs require energetic public- and private-sector partners to help landowners achieve their goals, and they can also help the county meet public goals of managing growth wisely, protecting natural resources and supporting local economic development through agricultural businesses. Seeing where these programs are most heavily utilized also gives local government a good sense of where their stable agricultural communities are located, helping them craft policies to guiding appropriate services towards those areas, as well as steering development elsewhere.

The section below introduces various farmland protection tools available to Guilford County landowners. These programs vary by eligibility requirements and length of commitment, and many of them can be combined and overlapped on an individual property. What is certain is that there's something for everyone here that can strengthen and stabilize rural communities, and participation in these programs leads to a stronger network of partners and education across the agricultural world.

Tax Policy

Property Tax Incentives

Present Use Value (PUV) tax assessment allows for agricultural and forested land to be taxed at its use value for farming, rather than its market value for development. Minimum acreage to participate is 5 acres of horticultural land, 10 acres of agricultural land, and 20 acres of forested land. There are also specific state-mandated requirements on the ownership, income and management requirements to participate in this program. Owners of agricultural land need to apply to the county tax assessor to receive this special assessment. The Guilford County Tax Department has produced a user-friendly brochure explaining the program requirements to landowners: http://www.co.guilford.nc.us/departments/tax/docs/present-use%20_value_brochure.pdf.

8452 farms, covering 121,642.18 acres, were enrolled in the PUV program in Guilford County in 2009. 61,659.41 of these acres were classified as agriculture, 132.75 as horticulture, and 59,850.02 as forestry. *Note: The county tax office typically revises their figures on the program in November of each year. These are the figures from November of 2009. Please see PUV map of Guilford County Enrollment as of August 2010 in the Appendix.*

When land being taxed at present use value is no longer in agricultural production, the owner is subject to a rollback penalty of the deferred taxes for the year of disqualification and the three preceding years, with interest. This penalty can be avoided if buyers of land enrolled in present use value apply for continuation of that status within 60 days of property purchase, as long as the land continues to meet the requirements of the program.

Staff from the county tax office feels that the PUV program is operating well in Guilford County. As properties change hands (whether through sale or inheritance), it is important for new owners to be familiar with specific requirements to keep land in the program, as specified by state statute. This is particularly true with forest land, which is increasingly purchased as investment property by Limited Liability Corporations, and which requires compliance with a current forest management plan. The Guilford County Tax Office takes the unusual step of contacting new landowners to be sure they understand how the program works and how they can take over PUV status from previous owners without paying deferred tax penalties and go through a three-year qualification period. They also send out flyers on the program twice per year, with summer tax bills and the winter listing period.

Some farmers expressed concern that the county was too eager to remove landowners from the program who didn't understand the rules, but others thought the program acted fairly and that it was important to enforce income and management requirements to keep farmland in active productive use. Nonetheless, the tax office is constrained by state law that dictates eligibility and requirements for continued enrollment. Minor changes are made to the state Present Use Value statute in most years, and local organizations can work with their state legislators to suggest improvements, if there is consensus that the program isn't fulfilling its intended purpose in Guilford County.

One item of concern with the program that is currently being discussed with State Legislators is that non-profit organizations that own land are ineligible for PUV taxation. In the case of PCC, PLC and other conservation non-profits, there is momentum building behind the idea of such groups to purchase land from farmers planning to sell, that would otherwise sell to development, so that these lands could be offered to beginning farmers to lease at a reduced rate, who would otherwise be unable to afford to get started in agriculture; but currently the property tax that would currently be incurred by those non-profits has prevented efforts of this type to surface in Guilford County. Therefore, this idea has thus far only become feasible in counties where development opportunity has not driven land prices much above farm land values.

Farmers are also entitled to a state income tax credit equal to the amount of property tax paid on farm machinery each year.

Sales Tax Incentives

Commercial farms can receive an exemption from sales tax on certain items used in their farming operations. Farm machinery, containers, tobacco-drying equipment, grain-storage facilities, fuel, potting soil, feed, seed and fertilizer are completely exempt from state and local sales taxes. To utilize the exemption, farmers must obtain an exemption number from the NC Department of Revenue.¹

¹ www.dor.state.nc.us/taxes/sales/notice_exemption.html

Income Tax Incentives

Farmers report agricultural income on IRS Schedule F. An experienced agricultural tax provider can provide enormous savings by understanding deductions, depreciation, and other tools to keep taxes in check.

Donated agricultural conservation easements offer tremendous state and federal income tax benefits. See the section on easements below.

The federal tax code offers federal income tax credits of 20% of the cost for the rehabilitation of historic farm buildings. The building must be part of a historic district or listed on the National Register of Historic Places.²

Information and application on the rehabilitation credit program can be obtained from the NC Historic Preservation Office³.

Authorized Programs and Concepts

Voluntary Agricultural Districts

Local VAD programs allow farmers to form areas where commercial agriculture is encouraged and protected. Authorized by the North Carolina General Assembly in the 1985 Farmland Preservation Enabling Act (N.C.[G.S. 106: 735-744](#)) and implemented at the county level, VADs facilitate partnerships between farmers, county commissioners and land use planners. As of July 2009, eight municipalities and 76 of North Carolina's 100 counties had passed farmland preservation ordinances establishing VAD programs.

Guilford County first passed a Voluntary Agricultural District Ordinance in 2000 (Guilford County Code Ch. 15 Art. III). The County Commissioners appointed a 7-member advisory board representing the geographic, demographic, and economic diversity of the agricultural sector to guide the program's direction. 5 of the members are to be active farmers, 1 should be a non-farmer, and 1 appointee is a member of the County Commission. The board reviews applications for enrollment in the VAD program, educates the public on concerns of the farming community, and advises county commissioners and staff on projects and issues affecting local agriculture.

As of August 2010, 272 farms are enrolled, a total of 13,700 acres in the Guilford Voluntary Agricultural District Program⁴. *Please see map of current Guilford County VAD enrollment as of August 2010 in the Appendix.*

Guilford County's VAD ordinance offers a set of benefits authorized in the state Farmland Preservation Enabling Act for landowners participating in the VAD. The benefits are in exchange for a voluntary commitment to restrict development on their land for a 10-year period. Landowners maintain the right to withdraw from the program at any time without penalty.

1. Notification to buyers of neighboring property that they're moving into an agricultural area.

² Guilford County sites listed on the Register can be found at: <http://www.hpo.ncdcr.gov/nrlist.htm>

³ <http://www.hpo.ncdcr.gov/nrlist.htm>

⁴ Guilford County GIS <http://gcgis.co.guilford.nc.us>

2. Abeyance of water and sewer assessments, as long as the farm remains in the program and doesn't connect to the public utility.
3. A stronger protection from nuisance suits through computerized record notice to alert a person researching the title of a particular tract that such tract is located within one-half mile of a VAD.
4. Representation by the Farmland Board regarding concerns or threats to the agricultural sector.

In creating the 2000 ordinance, Guilford County chose to exclude one benefit authorized by state law and included in the majority of county farmland preservation ordinances across North Carolina: *Public hearings on the condemnation of enrolled farmland*. If the VAD board seeks to revise their ordinance, this additional low-cost benefit could be added to give added stability and public awareness to landowners. This provision would in no way restrict the ability of state, county, or municipal jurisdictions to exercise their right of acquiring land by eminent domain, but it would provide added comfort to landowners that government would make every effort to find alternative options in public land acquisition to avoid negative impacts on active working farms.

The VAD program is administered by the Guilford Soil and Water Conservation District, which processes applications and helps create a map of enrolled farms for display in county offices. This establishes a visual and quantifiable presence for local farms, raises public awareness of agricultural activity and helps leaders plan future development that will support and encourage the continued viability of local agriculture.

Landowners can withdraw from the VAD program at any time without penalty. For landowners willing to consider a longer commitment, there are additional options.

Enhanced Voluntary Agricultural Districts

Revisions to the state farmland preservation legislation in 2005 authorized a new **Enhanced Voluntary Agricultural Districts** (EVAD) option that counties and cities can add to their local Farmland Preservation ordinances⁵. This EVAD option created a new category that would offer landowners an additional tier of benefits, if they were willing to waive their right to withdraw from the VAD program at any time. Those landowners who wished to retain their right for immediate withdrawal could continue under current guidelines. For those landowners willing to waive that right and enroll in the EVAD category, counties could offer an increased set of benefits:

1. Enrolled farms can receive up to 25 percent of revenue from the sale of other non-farm products, while still retaining their bona fide farming exemption from county zoning.
2. Enrolled farms would have lower cost-share requirements for NC Agricultural Conservation Cost-Share funds.
3. Counties and cities may hold all utility assessments in abeyance for any enrolled farms that choose not to connect to the utility lines.

⁵ <http://www.cals.ncsu.edu/wq/lpn/ncordinances.htm>

4. State and local agencies are encouraged to tie additional future benefits and funding priority to participants in the EVAD, given their commitment to maintain their farms.
5. Municipalities are explicitly authorized to adopt their own VAD ordinances, including the enhanced VAD option.
6. Cities are authorized to amend their zoning ordinances to provide greater flexibility and stability to farming operations. This can be particularly important to farms that are newly included within expanded Extra Territorial Jurisdiction lines.

As of August 2010, 20 North Carolina counties had adopted EVAD ordinances.

Guilford County has not yet adopted an Enhanced Voluntary Agricultural District program; thus, this offers a new farmland protection tool to be considered in the near future. Development of this farmland protection plan has revealed several possible additional EVAD benefits, which could be added to the basic menu of options, to help support agriculture and guide development away from active farming communities. See the Conclusions section for details.

Agricultural Conservation Easements

An **Agricultural Conservation Easement (ACE)** is a voluntary deed restriction that landowners can place on their land. It can be permanent or have a term limit and it restricts subdivision and non-agricultural development. Landowners retain ownership of the property and can continue to farm as they choose. Public access is not required, and the land can be sold or passed along to heirs. However, future owners must abide by the terms set by the original Granting landowner of the easement. This ensures that the land always will be available for agricultural use⁶.

Landowners who choose to place an agricultural conservation easement on their land are known as *easement grantors*. Such grantor must find a qualified *easement grantee*, either a government entity, such as some county's SWCD (not yet authorized in Guilford County's SWCD as of 2009), or a conservation land trust, such as the Piedmont Land Conservancy, of whom to grant an easement. That grantee is obligated to annually monitor the property to be sure that the terms of the easement are adhered to in perpetuity. The grantee also has a legal expectation to defend the easement if they discover that a person(s) has violated any of the terms in the easement. The transfer of those development rights carries a value, calculated by appraisers by determining the highest and best use of the property on the fair market and subtracting the value of the property with the encumbrances on that property created by the terms of the easement.

Donated Conservation Easements

Landowners who *donate* an agricultural conservation easement may receive a federal income tax charitable deduction, as well as a reduction in the value of the property for estate tax purposes. North Carolina also has a unique state conservation tax credit, available for donations of property or easements for conservation purposes.⁷ The federal and state tax incentive available depends on the tax year, as tax laws are constantly manipulated by the legislatures, but depending on the law during the year the donation takes place the land owners deduction or tax credit is based on the value of the development rights donated to the grantee.

⁶ Small, Steven J. *Preserving Family Lands: Book II*. Desktop Design and Publication 1997 Boston, MA

⁷ <http://www.enr.state.nc.us/conservationtaxcredit>

Purchase of Agricultural Conservation Easements

A powerful tool used with increasing frequency around the country is to provide direct financial compensation to landowners interested in placing an ACE on their farms⁸. This is known as the **Purchase of Agricultural Conservation Easements (PACE)** or **Purchase of Development Rights (PDR)**. Funding for these purchases comes from local, state, federal, and private sources. Demand for these funds generally outstrips supply, and conservation partners must use considerable creativity and persistence in leveraging different funding sources on individual projects⁹.

Landowners will usually sell their development rights for less than their fair market value, as determined by the type of appraisal described above, at a *bargain sale*, receiving a fraction of those federal and state tax incentives mentioned above for donated easements, eligible for that amount equivalent to the fraction of the bargain sale relative to the fair market appraised value of those development rights. These bargain sales allow public funds to be spread more efficiently to protect larger amounts of farmland, while still providing liquid cash for families practicing agriculture to meet retirement needs, provide for non-farming heirs, or reinvest in the farming operation.

Ranking System

In counties which the County Commission or other local government body provides funding for the purchase of ACE, the ADAB, with assistance from any open space program and SWCD, typically develops a numerical ranking system to prioritize farmland protection spending and efforts. This system creates an objective and transparent selection process to reflect the county's unique priorities and values. It looks at a broad range of factors relating to a farm's location, productivity, and public benefit and how this can contribute to the long-term viability of the property remaining in productivity and benefiting the local agricultural economy. The ranking system also typically considers any factors given priority on applications to federal and state farmland grant programs to increase a farm's likelihood to acquire matching funds.

These ranking factors have historically been chosen to prioritize funding allocation to those farms which serve to benefit well beyond the landowner; i.e. the presence of: agriculturally productive soils, infrastructure which serves the greater agricultural community, environmental and open space amenities, scenic amenities, and historical and cultural amenities. Additional factors have also promoted farms with a generational transition plans as well as farmers conducting agricultural practices that are consistent with existing comprehensive and open space plans¹⁰. This acts to assure that farms receiving funding will remain as viable farms and continue to offer the most public benefit while remaining privately owned.

Scoring systems openly advertise the objective criteria used to weigh worthy projects competing for limited funding, demonstrating to the public a fair and transparent process, and assuring that top candidates for matching state and federal funds will rank highly in those scoring systems.

⁸ http://farmlandinfo.org/documents/27762/ACE_06-05.pdf

⁹ <http://www.ces.purdue.edu/extmedia/ID/ID-275.pdf>

¹⁰ <http://www.ncadfp.org/>

Perhaps most importantly, creating/revising a ranking system engages the agricultural community to determine how best to preserve an agricultural future. The VAD and SWCD Boards can use small area meetings to circulate a draft ranking system and ask for feedback. Through their input and involvement, landowners can develop stronger “ownership” of a potential program and become important advocates within their community and the broader political process.

Current Funding

Local Funding

As of 2009, Guilford County has provided no local funding for the PACE. Surrounding counties have been statewide leaders in this area. Alamance County provided \$100,000 through its VAD program to support applications to state and federal funding sources in 2007 and 2008. From 2004-2007, Orange County protected 716 acres on 7 working farms through its Land Legacy Program; their 2001 bond measure included \$3 million for the purchase of agricultural conservation easements. Forsyth County created one of the country’s first PACE programs in 1984; although funding support has lagged in recent years, the county has been able to protect a total of 1600 acres¹¹. Rowan County protected 2400 acres of productive farmland since 2003, in partnership with the Land Trust for Central North Carolina and the local SWCD¹².

State Matching Funds

Since North Carolina’s original farmland preservation legislation was passed in 1985, the North Carolina Department of Agriculture and Consumer Services has operated the **Agricultural Development and Farmland Preservation Trust Fund** (ADFPTF), the primary statewide fund for the purchase of agricultural conservation easements¹³. From 1998–2002, the ADFPTF gave out a total of \$2.4 million in five grant cycles, protecting 4,412 acres on 33 farms. No Guilford County farms were protected in this first phase of funding.

The passage of NC [House Bill 607](#) in 2005 revamped and revived the fund, which is now guided by a 19-member advisory committee providing recommendations to the Commissioner of Agriculture. Its mandate also has been expanded to fund a range of conservation agreements and enterprise programs that could improve long-term viability for the farming operation, with particular emphasis on supporting local VAD programs. Five pilot projects received grants in 2006, promoting local partnerships, conservation easements and the development of VADs. The ADFPTF approved the allotment of \$4 million in 2008 and \$2 million in 2009 and 2010. Local governments and qualified conservation nonprofit organizations are eligible to submit applications to the ADFPTF.

Guilford County submitted an application to the ADFPTF in 2008 to protect the Gerringer Farm. Although the project ranked very highly and \$250,000 in funding was approved by the ADFPTF,

¹¹ <http://www.co.forsyth.nc.us/CES/Conservation/FPP.aspx>

¹² <http://www.landtrustenc.org/>

¹³ <http://www.ncadfp.org/>

the Guilford County Commissioners refused to provide any matching funds to complete this project, citing objections to using public funding to protect privately owned land. They insisted that any Open Space bond funding go towards public ownership of land, rather than the purchase of a conservation easement.

Given the risk of losing this large chunk of leveraged state funding, the Piedmont Land Conservancy stepped into the void to complete this project with the assistance of leveraged local and federal funds (see section under Federal Matching Funds).

The **Clean Water Management Trust Fund (CWMTF)**, funded by annual appropriations from the North Carolina General Assembly, issues grants to local governments, state agencies and qualified conservation nonprofits to help finance projects that specifically address water pollution problems¹⁴. This funding can be used to purchase very strict no disturbance conservation easements on portions of farms that serve as riparian buffers on waterways which provide significant water resources to the public.

Federal Matching Funds

The USDA Natural Resources Conservation Service (NRCS) provides matching funds (up to 50% of the value of the development rights) for PACE through its Farm and Ranch Lands Protection Program (FRPP)¹⁵. Only parcels large enough to sustain agricultural production are eligible. With NRCS assistance, participants develop a conservation plan that outlines the management strategies that they propose to use on the enrolled land. The North Carolina NRCS accepts applications from eligible entities during an annual application period.

The Piedmont Land Conservancy (PLC) has played a prominent role in leveraging FRPP funding to protect farms in Randolph, Alamance, and Chatham Counties. In 2008, PLC was one of only two applicants permitted to submit applications for FRPP funding, as its long history with the program assured fund managers that the land trust could complete projects promptly and efficiently. This was a fortuitous occurrence, as the Gerringer project was threatened by the county's refusal to provide any match for the state grant mentioned above. PLC used this opportunity to match the \$250,000 grant from the NC ADFPTF with \$250,000 from the American Canoe Association's South Buffalo Watershed protection fund to leverage an additional \$500,000 from FRPP to complete the fundraising for this project. Unfortunately, due to tightening federal review requirements this project has taken much longer to close than past projects but is expected to close in 2010.

Additional Funding Options

North Carolina's counties and municipalities have a limited range of funding options available to finance farmland preservation activities. Most matches for the state and federal programs mentioned above have been done through the annual county appropriations process. Even when there is strong public support for farmland preservation on an annual basis, the ups and downs of the budgetary process make it difficult to plan strategically. Private funds have been leveraged in

¹⁴ <http://www.cwmtf.net/a/index.html#home.html>

¹⁵ <http://www.nrcs.usda.gov>

the past but are even less predictable as the ever changing economy continues to alter the decrease the generosity of such donors. It may take 2-4 years before a project can be completed, and landowners find it difficult to make that commitment in an uncertain funding climate. A dedicated funding stream is much more effective in helping conservation partners plan ahead and access competitive state and federal funds.

Municipal Bond Option

The general obligation bond is the steadiest means of funding significant conservation investments at the local level. Bond funding is also useful in providing conservation funds quickly, before lands rise too much more in value. A bond must be approved by a majority of citizens at the voting booth; 85 percent of the local bond referenda for parks and conservation have passed in North Carolina in recent years (including Wake and Orange Counties, in addition to Guilford's successful efforts in 1988 and 2000), indicating strong citizen support for this method of financing.

Land Transfer Tax Option

One new funding source permitted to counties is the Land Transfer Tax. In 1985 the North Carolina General Assembly gave a handful of coastal counties the authority to levy *up to* a 1% tax on the sale of real property (land, structures) within their boundaries, and in 2007 the Assembly gave the remaining counties the authority to levy *up to* a 0.4% tax on the sale of real property¹⁶. This Land Transfer Tax allows counties to raise revenue from its citizens only in those unusual years that someone sells a house, rather than through an annual rise in the property tax rate. The Land Transfer Tax also ties development pressure closely with the need to preserve farmland, as the amount of revenue available increases as development pressure heats up, offering both practical and philosophical benefits of this source of revenue. Prior to implementing the tax, counties must receive approval through a majority vote of citizens. 24 counties in North Carolina have placed a land transfer tax on the ballot since 2007, and all have failed to pass.

The current Land Transfer Tax authorizations passed by the Assembly only allow the revenue generated from the tax to pay for schools and sewer additions/improvements related to growth, but several municipalities and regions throughout the United States and Canada have used the proceeds from similar land transfer taxes to raise revenue for farmland preservation in their area. Most notably, Maryland, Indiana, Rhode Island and Long Island, NY have successfully protected thousands of acres via their farmland preservation trust funds raised in such a manner¹⁷. The NC Assembly would have to amend their current authorization of the use a Land Transfer Tax or Counties would have to choose to redirect money from their general funding, which would historically have been put into schools and sewer, toward conservation knowing that school and sewer funds would then on be collected from the new land transfer tax. Before all else, NC Counties must educate their citizens further in hope that commissions can obtain the public vote to allow such tax, but most of the foundations for a conservation fund in North Carolina, such as exists in other states and Canada, are already in place.

¹⁶ NCGS §105(600-604) County Land Transfer Tax Act (2007-323, s. 31.17(a))

¹⁷ <http://www.ag-econ.ncsu.edu/faculty/walden/landtransfertax.pdf>

For a full discussion of financing options in North Carolina, see <http://landfortomorrow.org/stuff/contentmgr/files/8b57c8d7afceab2603a88d160af7e380/miscdocs/nclandconservationsurvey.pdf>. For an understanding of the many possible sources of income used for farmland protection around the country, see http://farmlandinfo.org//documents/27750/PACE_Sources_of_Funding_06-11.pdf.

Appendix G
Guilford County February, 2011 Profile

County Profile Contact (919) 715-6374

Commerce Economic Development Contact (919) 733-4977

Demographics

Population & Growth

	Population	Annual Growth Rate
2014 Total Population	507,852	1.3%
2009 Total Population	476,896	1.4%
2000 Total Population	421,048	
July 2009 Certified Population Estimate	475,953	
July 2009 Certified Population Growth	54,905	
July 2009 Certified Net Migration	32,043	

Urban/Rural Representation

	Population	Urban/Rural Percent
2000 Total Population: Urban - inside Urbanized Area	352,859	83.8%
2000 Total Population: Urban - inside Urbanized Clusters	0	0.0%
2000 Total Population: Rural - Farm	1,346	0.3%
2000 Total Population: Rural - Nonfarm	66,843	15.9%

Estimated Population by Age

	Population	Pop by Age, % Est.
2014 Median Age	37	
2009 Median Age	37	
2000 Median Age	35	
2009 Total Pop 0-19	125,758	26.4%
2009 Total Pop 20-29	69,342	14.5%
2009 Total Pop 30-39	64,925	13.6%
2009 Total Pop 40-49	70,506	14.8%
2009 Total Pop 50-59	63,262	13.3%
2009 Total Pop 60+	83,103	17.4%

Working Commuters, 2000 Census

Workers, Travel Time

Avg Travel Time, Not at Home	21
Workers Not Working at Home	207,192
Travel Time to Work: < 5 minutes	4,968
Travel Time to Work: 5-9 minutes	20,527
Travel Time to Work: 10-14 minutes	37,331
Travel Time to Work: 15-19 minutes	45,166
Travel Time to Work: 20-24 minutes	38,672
Travel Time to Work: 25-29 minutes	12,792
Travel Time to Work: 30-34 minutes	25,060
Travel Time to Work: 35-39 minutes	4,064
Travel Time to Work: 40-44 minutes	3,763
Travel Time to Work: 45-59 minutes	6,794
Travel Time to Work: 60-89 minutes	4,448
Travel Time to Work: 90+ minutes	3,607

Workers, By Transportation

Worker Mode, Base	213,079
Work at Home	5,887
Drove Car/Truck/Van Alone	173,063
Carpooled Car/Truck/Van	25,615
Bus/Trolley Bus	2,185
Streetcar/Trolley Car	91
Subway/Elevated	51
Railroad	76
Ferryboat	6
Taxicab	297
Motorcycle	132
Bicycle	364
Walked	3,688
Other Means	1,624

Travel to Work

	Commuters	Percent by Residence
Worked in State/County of Residence	187,150	87.8%
Worked in State/Outside County of Residence	23,997	11.3%
Worked Outside State of Residence	1,932	0.9%

Education

		Pop Age 25+, %
2009-10 Kindergarten-12th Enrollment	72,345	
2010 Average SAT score (2400 scale)	1,461	
2010 Percent of Graduates taking SAT	63.8%	
2008-09 Higher Education Completions	8,679	
2008-09 Higher Education Total Enrollment	62,114	
2009 Proj Education Attainment - At Least High School Graduate	270,688	85.9%
2009 Proj Education Attainment - At Least Bachelor's Degree	102,490	32.5%

Housing

		Growth / Appreciation Est
2014 Total Housing	226,541	6.9%
2009 Total Housing	211,869	
2014 Median Value of Owner Occupied Housing	\$122,491	0.2%
2009 Median Value of Owner Occupied Housing	\$122,293	8.6%
2009 Owner Occupied Housing	120,971	
2009 Renter Occupied Housing	72,469	
2009 Total Households	193,440	
2000 Median Year Housing Structure Built	1975	

Income

		Growth Est or Total %/ Percent
2014 Median Family Income	\$70,306	4.5%
2009 Median Family Income	\$67,255	27.3%
2000 Median Family Income	\$52,851	
2014 Median Household Income	\$60,105	6.8%
2009 Median Household Income	\$56,264	31.3%
2000 Median Household Income	\$42,860	
2009 Median Disposable Income	\$44,187	
2009-2014 Per Capita Income: Annual Compound Growth Rate %		0.8%
2014 Per Capita Income	\$30,739	4.2%
2009 Per Capita Income	\$29,487	26.3%
2000 Per Capita Income	\$23,340	
2000 Total Pop with Income Below Poverty Level	43,227	
2000 Percent of Pop with Income Below Poverty Level		10.6%

Employment / Unemployment

	Year to Date	2009 Annual
2010Q4 Employment	215,773	215,925
2010Q4 Unemployment	24,164	26,577
2010Q4 Unemployment Rate	10.1%	11.0%
2010Q4 Announced Job Creation	60	880
2010Q4 Total Announced Investments (\$mil)	\$34.2	\$86.8
Jan2011 Lost Jobs, Closings & Layoffs	1,574	2,883
Jan2011 Establishment Events, Closings & Layoffs	8	90

Employment / Wages by Industry	2010 2nd Qtr Employment	2009 Annual Employment	2010 2nd Qtr Avg Weekly Wage	2009 Avg Weekly Wage
Total All Industries	256,581	259,773	\$769	\$770
Total Government	24,142	24,651	\$810	\$846
Total Private Industry	224,384	228,379	\$760	\$758
Agriculture Forestry Fishing & Hunting	278	259	\$587	\$568
Mining	123	179	\$942	\$888
Utilities	381	403	\$1,281	\$1,209
Construction	9,425	10,499	\$796	\$798
Manufacturing	30,688	31,467	\$1,027	\$987
Wholesale Trade	15,476	15,498	\$965	\$965
Retail Trade	27,543	28,421	\$512	\$498
Transportation and Warehousing	15,818	16,131	\$851	\$826
Information	5,072	5,222	\$926	\$1,005
Finance and Insurance	15,025	15,387	\$1,045	\$1,029
Real Estate and Rental and Leasing	3,420	3,479	\$795	\$758
Professional and Technical Services	10,698	10,703	\$1,074	\$1,087
Mgt of Companies, Enterprises	5,885	6,419	\$1,314	\$1,490
Administrative and Waste Services	21,114	19,801	\$486	\$473
Educational Services	15,388	15,119	\$661	\$724
Health Care and Social Assistance	31,581	31,944	\$828	\$812
Arts, Entertainment and Recreation	3,211	2,779	\$308	\$339
Accommodation and Food Services	21,147	21,829	\$275	\$273
Other Services Ex. Public Admin	6,161	6,359	\$550	\$549
Public Administration	10,000	10,713	\$860	\$864
Unclassified	92	419	\$1,086	\$873

Commercial/Retail/Industrial

Local Businesses

Feb2011 Available Industrial Buildings	152
2010Q2 Establishments: Total Private Industry	13,934
2010Q2 Establishments: Manufacturing	726

Local Retail Business

2009 Total Retail Sales (With Food/Drink) (\$mil)	\$6,997.7
2009 Total Retail Businesses (With Food/Drink)	4,906
2009 Avg Sales/Business Total (with Food/Drink)	\$1,426,348

Quality of Life

Taxes

FY2010-11 Property Tax Rate per \$100 Value	\$0.7374
FY2009-10 Annual Taxable Retail Sales (\$mil)	\$5,069.1
2011 Tier designation	3

Childcare

Sep2010 Licensed Child Care Facilities	515
Sep2010 Licensed Child Care Enrollment	16,589

Weather

Annual Rainfall	49
Annual Snowfall	10
Average Annual Temperature	50
Average Annual High Temperature	72
Average Annual Low Temperature	49

Healthcare Providers

2009 Number of Physicians	1,145
2009 Physicians per 10,000 population	24.1
2009 RNs per 10,000 population	114.9
2009 Dentists per 10,000 population	5.3
2009 Pharmacists per 10,000 population	9.9

Sources:

ESRI for demographics, working population, educational attainment, housing, income, crime, weather, and retail data. <http://www.esri.com>
 NC Dept. of Education and various state education departments for SAT data by county system. <http://www.ncpublicschools.org>
 US Dept. of Education, National Center for Education Statistics for higher education data. <http://nces.ed.gov/ipeds/>
 NC Commerce for announced new jobs and investment, NC tiers, and number of industrial buildings. <http://www.nccommerce.com/en>
 NC Employment Security Commission for lost jobs and affected establishments data. <http://www.ncesc.com>
 NC Dept. of Health & Human Services for childcare data. <http://www.ncdhhs.gov/>
 UNC Sheps Center for healthcare provider statistics. <http://www.shepscenter.unc.edu/>
 US Bureau of Labor Statistics for employment and unemployment, wages and establishments by industry. <http://www.bls.gov>

Notes:

Data are the latest available at the date the profile was prepared. SAT scores use the new scoring system including a writing test for a perfect score of 2400 and represent county systems. ESRI 2009/2014 data are projections. Some data may be available only for North Carolina. For further details or questions, please check the Data Sources Guide at https://edis.commerce.state.nc.us/docs/bibliography/Data_Sources_Guide.pdf.

