Agricultural Development Plan
For
Johnston County, North Carolina

Executive Summary

Prepared for the
Johnston County Voluntary Agricultural District Board

April, 2010

This project received support from the NC ADFP Trust Fund.
EXECUTIVE SUMMARY

INTRODUCTION

The purpose of this project is to analyze and to understand the foundations of Johnston County’s agricultural economy and to create an Agricultural Development Plan that will address a suite of issues facing farmers and citizens in the County today as well as set the stage for agricultural growth in the future.

The project output encourages long-term policy formation in support of agriculture while providing a specific short-term framework to guide local programs regarding specific agricultural economic development and land use initiatives. Because the Agricultural Development Plan addresses so many divergent issues, ranging from land planning to industrial development, the Plan is broken into two separate, but inter-related sections. These sections are:

1. The Johnston County Agricultural Land Use Findings and Recommendations
2. The Johnston County Agricultural Economic Development Findings and Recommendations

Each component of the Plan is intended to support agriculture as a continuing and economically productive land use. The result of the process is a series of findings relative to agricultural business and land use conditions. Additionally, the study team makes seventeen recommendations for action to improve these conditions to advance both the agricultural industry and local communities.

This study uses a broad definition of agriculture to include all aspects of the cultivation and production of plant material and animal products as well as the marketing, processing and distribution of these products, and other secondary on-farm activities (e.g., agricultural tourism, forestry, and aquaculture).

CURRENT CONDITIONS

Johnston County’s agricultural industry is an economic stimulus and important employment base for the County. In 2007, agricultural sales totaled over $135 million, and there were 1,190 self-employed farm operators plus 1,759 farm workers in Johnston County. Agriculture is also a significant land use in the County with 38% (194,090 acres) of the land in farms.

The largest shares of land in farms in Johnston County include 128,227 acres of cropland (66%) and 42,700 acres of woodland (22%). Much of the land in farms is controlled by farm operators but only 50% derive their full income from farming and 30% having full ownership of the farm.

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1 Agricultural data in this section derived from the United States Census of Agriculture. Population and demographic data supplied by ESRI.
2 Adjusted using 2005 Prices Paid by Farmers Index.
Farmlands in the County are divided by the central development corridor along I-95 and there are significant differences between the northern and southern agricultural regions. The southern region is known to have the highest concentration of prime and productive soils and is generally the area of the County with the highest concentration of field crops and livestock operations. The northern agricultural region has more piedmont soils and smaller farm operations. Tobacco and livestock production are important in this region of the County. Farms are most challenged by development in this region, as well.

Until 2004, the foundation of Johnston County’s agricultural economy was primarily in its crop sector. Crop value has historically been dominated by two sectors, tobacco (31 percent of crop receipts) and nursery-greenhouse production (62 percent of crop receipts). Because of their historic significance, both sectors have strong marketing infrastructure, production support, as well as producer associations. Both sectors are also important entry points for new farmers into the industry.

Since then, the livestock sector, particularly hogs and pigs production, has accounted for the largest share of agricultural output. Hog production represents 32 percent of farm market value sold in the County in 2007, up from 30 percent in 2002. If the study was to include the poultry sector, which is a significant industry in the State, then the importance of the livestock sector would be even more pronounced.

Population growth poses a serious challenge to the future of agriculture in the County. Between 2000 and 2010, Johnston County’s population is expected to increase by 16.3 percent. By 2020, Johnston is expected to add another 24,000 residents. This makes Johnston County one of the fastest growing counties in the State as well as the United States.

Johnston County is, and will continue to be, a significant beneficiary of its proximity to the Raleigh-Cary consumer market. This strength is becoming increasingly important as fuel and transportation costs continue to rise. Additionally, the demographic characteristics of this market are quite favorable. The Raleigh Designated Market Area has an aggregate demand for food and beverage products of more than $4.1 billion and supports a population of approximately 2.8 million people, over 1 million households and a median income $43,669. While the median household income is below the national average, the area has many wealthy communities, like Cary ($75,122 median household income) which provide solid marketing opportunities. Trends over the years have shown that population and income levels have been improving in the County leading to net increases in population and consumption indicators, which bodes well for Johnston County’s livestock sector.

There are many other factors that influence the direction of agriculture in Johnston County which are summarized in both the land use and economic development elements of the Agricultural Development Plan. Many of these factors are incorporated within the SWOT Matrix (Strengths, Weaknesses, Opportunities, and Threats). SWOT is a very simple technique that supports strategic decision making by identifying the key trends and leveraging events facing Johnston County agriculture today.
The matrix provides highlights of the opportunities and challenges facing Johnston County. Managing the balance between community growth and the economic viability of agriculture will be one of the greatest challenges facing the County as it seeks to implement this Plan.

MOVING FORWARD WITH THE PLAN

Agriculture in Johnston County, North Carolina is undergoing significant structural change as its economy changes from a rural, resource and manufacturing based economy to a more suburban, service driven economy. The challenge faced by Johnston County is to successfully manage this transition for the benefit of the agricultural industry, individual farms, and the community at large. Because of this complexity, the Plan’s recommendations are divided into two distinct topic areas, land use and economic development. These sections are defined below.

Agricultural Land Use Findings and Recommendations

The land use recommendations are offered to improve the integration among agriculture, forestry, and suburban land uses in Johnston County. Given the rate of residential growth in Johnston, these traditionally land-dependent industry sectors suffer from neighbor conflict, land fragmentation, transportation limitations, and other challenges to traditional production practices. Many of these limitations are driven by the incompatibility of mixing residential and industrial uses. Because rural zoning typically treats agriculture, forestry, and residential uses as complementary, the conflict has been built into land use regulations.

Beyond issues of inter-sector conflict, Johnston County’s proximity to the greater Raleigh-Durham metropolitan area, and its robust housing market, have made open land more valuable, often putting its cost beyond its profit-making ability to support commodity agriculture and
forestry uses. Land use policies such as zoning, infrastructure development, and subdivision regulations can also detract from agricultural and forestry value while enhancing residential and commercial values.

The land use recommendations fall within three broad focus areas. The focus areas are largely independent, but have some level of interactivity and are briefly described below:

1. **Working Lands Protection** – These recommendations target improvements in or development of policies and programs with the sole purpose of protecting the land base that supports the industries of agriculture and forestry. The general purpose is to respect the needs of these industries while providing reasonable protections for all citizens and industry constituents.

2. **Future County Policy and Planning** – This area focuses on meeting the needs of modern agricultural and forestry practices and ensuring that future planning and policy support such needs. Therefore, it examines a wider array of policies than just land use and includes taxation, health, transportation, and labor that are intended to bring local conditions in line with regional competitors.

3. **State and Federal Advocacy** – This category’s recommendations are influenced more heavily by people and groups outside of Johnston County, its local municipalities, agencies, and other entities.

### Agricultural Economic Development Findings and Recommendations

In order to support agricultural and forest products industry development that fits local conditions and needs, the County should consider a combination of structural economic development programs, such as business retention, expansion, and attraction programming related to primary production sectors; recruitment or internal development of secondary market opportunities; broad based work force development; and infrastructure planning, as well as business development programming that specifically addresses the needs of individual agricultural enterprises. Such activities may include supporting the development of a wood waste aggregation facility to create energy markets from forest residue.

The agricultural economic development recommendations fall within three broad focus areas. The focus areas are largely independent with some level of interactivity as described below:

1. **Agricultural Development and Marketing** – These recommendations target improvements in access to local and regional markets at both the wholesale and retail levels. Market development activities look to expand the capability of individual farms to improve market position and access higher value supply chains. The business development support elements of this focus area include counseling, concept development, land access, and financing support with the intent to support growth and transition in the agricultural economy. Beyond individual farm businesses, additional programming is recommended to enhance the
agribusiness policy climate and encourage infrastructure development to support industry sector growth.

2. **Training and Education** – This area focuses on developing the future human capital needs of agriculture beginning with creating a base of well qualified farm leaders and creating a source of new and renewing farm operators. Recommendations also highlight the need to create a reliable source of skilled and unskilled labor which can meet the needs of modern agricultural practices for the range of industries already present in the County.

3. **Public Policy and Regulation** – This area is dedicated to land use, environmental, health, and transportation policy support needs that are intended to bring local conditions in line with industry needs, so that Johnston County producers can compete more effectively in the marketplace.

Successful implementation of these recommendations will involve a multidisciplinary effort supported by the public sector, private industry and agricultural operations as well as state and local agencies. The necessary partnerships will be driven by the specific implementation needs of each recommendation. Funding support for each respective recommendation must also be built independently on the merits of the recommendation and evidenced needs. Key elements of recommendations are presented on the following pages.
Figure E-1 summarizes the recommendations and highlights the required agency involvement and partnerships. Full recommendations can be found respectively in the Agricultural Land Use Findings and Recommendations and the Agricultural Economic Development Findings and Recommendations plans.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Number of Major Action Items</th>
<th>Implementation Partnerships</th>
<th>County Agencies</th>
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<th>State</th>
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<td>✓</td>
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</tbody>
</table>

**Notes:**
1. *Other* includes Johnston County Commissioners, Cooperative Extension, the Soil and Water Conservation District, Public Works, and other County departments.
2. *Private* includes the Chamber of Commerce, Foundations, Farm Bureau, The Triangle Land Conservancy, private businesses, citizen groups, and other private/quasi-governmental entities.
Figure E-2 prioritizes the Plans’ recommendations and provides a rough timeline for implementation based on the needs and concerns of the industry as expressed during the interview process.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Priority Ranking</th>
<th>Implementation Timeline</th>
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<tbody>
<tr>
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<tr>
<td>Create a County Supported Farmland Protection Program</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Update Subdivision Regulations and Zoning Code</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Formally Adopt the Agricultural Development Plan as a Policy Guidance Document</td>
<td>1</td>
<td></td>
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<tr>
<td>Develop a Regulatory and Policy Action Program</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Create an Outreach and Public Relations Program</td>
<td>2</td>
<td></td>
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<tr>
<td>Advocate for Farm Friendly State Policies</td>
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<tr>
<td><strong>Agricultural Economic Development Recommendations</strong></td>
<td></td>
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<tr>
<td>Improve Regional Market Access</td>
<td>1</td>
<td>√</td>
</tr>
<tr>
<td>Support Entrepreneurship and On-Farm Skills Development</td>
<td>1</td>
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</tr>
<tr>
<td>Develop an Agribusiness Retention, Expansion, and Attraction Plan</td>
<td>1</td>
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</tr>
<tr>
<td>Facilitate Integration with Broader Financial Markets</td>
<td>2</td>
<td></td>
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<tr>
<td>Explore Feasibility of an Agribusiness Park</td>
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<tr>
<td>Expand Education and Training Programs</td>
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<tr>
<td>Support Regional Agricultural Leadership Development</td>
<td>1</td>
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<tr>
<td>Enhance Labor Force Relationships</td>
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<tr>
<td>Create an Outreach and Public Relations Program</td>
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<tr>
<td>Support Farm and Forestry Friendly Land Use Policies</td>
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</table>
Agricultural Development Plan
For
Johnston County, North Carolina

SECTION I

AGRICULTURAL LAND USE
FINDINGS AND RECOMMENDATIONS

~Prepared for the~

Johnston County
Voluntary Agricultural District Board

December, 2009
ACKNOWLEDGEMENTS

This project was funded by the North Carolina Development and Farmland Preservation Trust Fund (NCADFPTF) and the Johnston Voluntary Agriculture District Board, Johnston County Soil and Water Conservation District, and Johnston County Commissioners. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect those of the Johnston County Government or the Johnston County Voluntary Agricultural District Board.

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AGRICULTURAL LAND USE PLAN

Johnston County’s agricultural industry is an economic stimulus and important employment base for the County. In 2007, agricultural sales totaled over $135 million\(^1\), and there were 1,190 self-employed farm operators plus 1,759 farm workers in Johnston County. Agriculture is also a significant land use in the County with 38% (194,090 acres) of the land in farms.

This section analyzes land use trends for Johnston County and their implications for the County’s agricultural industry. For comparative purposes, housing and population trends for counties within a 40-mile radius are provided as well as comparative agricultural and farmland statistics for adjacent counties.

POPULATION AND HOUSING

Johnston County’s population is expected to increase by 16.3%, from 2000-2010 to a total of more than 152,000 residents. By 2020, Johnston is expected to add another 24,000 residents. This makes Johnston one of the fastest growing counties in the State as well as the 40-mile market area.

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>Johnston County</td>
<td>121,965</td>
<td>162,381</td>
<td>40,416</td>
<td>192,878</td>
<td>30,497</td>
</tr>
<tr>
<td>North Carolina</td>
<td>8,049,313</td>
<td>9,231,191</td>
<td>1,181,878</td>
<td>10,087,671</td>
<td>856,480</td>
</tr>
</tbody>
</table>

Source: ESRI

As is noted in Table 2, Johnston County is adding households at a rate greater than the market area, partly due to its lower cost of housing and its convenient location east of the Raleigh metropolitan area to the West and rural communities like Wayne and Wilson counties to the East. Johnston offers a housing stock that is biased towards lower wage earners, attracting low and fixed income residents, who are often elderly, increasing the County’s median age. This population tends to own their own homes, mostly single family, and have much of their equity invested in their residences. Low vacancy rates indicate that housing is in relatively high demand.

Most new housing is single family in nature and oriented to the Raleigh marketplace. Because of this, development patterns are relatively easy to predict and are likely to occur within water and sewer service areas and along major thoroughfares as has historically been the case. Due to its demographics and commute distances to regional cities, development within these corridors is likely to target active seniors and young, working families with moderately priced housing stock. The capacity of the incorporated and unincorporated areas to manage this growth will be a long-term question that has implications for farmland protection. Issues of

\(^{1}\) Adjusted using 2005 Prices Paid by Farmers Index.
annexation and land use regulation may become a high priority of non-farming residents, particularly in the incorporated areas.

Figure 1: Population Density in Johnston County
## Table 2: Comparative Housing Market Statistics

<table>
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<tr>
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<th>Census 2000</th>
<th>2008</th>
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<td></td>
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<td>Number</td>
<td>Percent change from '00</td>
<td>Number</td>
<td>Percent change from '08</td>
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<tr>
<td>Total Population</td>
<td>121,965</td>
<td>162,381</td>
<td>33%</td>
<td>192,878</td>
<td>19%</td>
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<tr>
<td>Total Households</td>
<td>46,595</td>
<td>61,005</td>
<td>31%</td>
<td>72,303</td>
<td>19%</td>
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<tr>
<td>Median HH Income in $US</td>
<td>40,863</td>
<td>54,405</td>
<td>33%</td>
<td>62,456</td>
<td>15%</td>
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<tr>
<td>Median Age</td>
<td>34.2</td>
<td>36.0</td>
<td>5%</td>
<td>37.0</td>
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<td>Average Household Size</td>
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<td>2.63</td>
<td>2%</td>
<td>2.64</td>
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<tr>
<td>Total Housing Units</td>
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<td>65,730</td>
<td>31%</td>
<td>76,884</td>
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<td>Occupied</td>
<td>46,595</td>
<td>61,005</td>
<td>31%</td>
<td>72,303</td>
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<tr>
<td>Owner</td>
<td>34,213</td>
<td>44,465</td>
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<td>Renter</td>
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<td>16,540</td>
<td>34%</td>
<td>20,029</td>
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<td>Vacant</td>
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<td>4,725</td>
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<td>4,581</td>
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<td>Median House Value in $US</td>
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<td>145,974</td>
<td>50%</td>
<td>156,666</td>
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<td>Average House Value in $US</td>
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<td>162,639</td>
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<td>Average Monthly Owner Costs for Units with Mortgage</td>
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<td>Average Gross Rent (with Utilities)</td>
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### Table 2 - Continued

#### 40 Mile Market Area

(Harnett, Nash, Sampson, Wake, Wayne, and Wilson Counties)

<table>
<thead>
<tr>
<th></th>
<th>Census 2000</th>
<th>2008</th>
<th>Percent change from '00</th>
<th>2013</th>
<th>Percent change from '08</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Population</strong></td>
<td>1,175,560</td>
<td>1,468,861</td>
<td>25%</td>
<td>1,690,480</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total Households</strong></td>
<td>449,577</td>
<td>565,302</td>
<td>26%</td>
<td>652,157</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Median HH Income in $US</strong></td>
<td>45,064</td>
<td>61,283</td>
<td>36%</td>
<td>73,025</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Median Age</strong></td>
<td>33.7</td>
<td>35.4</td>
<td>5%</td>
<td>36.0</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Average Household Size</strong></td>
<td>2.5</td>
<td>2.5</td>
<td>0%</td>
<td>2.5</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total Housing Units</strong></td>
<td>487,989</td>
<td>620,314</td>
<td>27%</td>
<td>715,588</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Occupied</strong></td>
<td>449,577</td>
<td>565,302</td>
<td>26%</td>
<td>652,157</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Owner</strong></td>
<td>301,917</td>
<td>382,456</td>
<td>27%</td>
<td>437,341</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Renter</strong></td>
<td>147,660</td>
<td>182,846</td>
<td>24%</td>
<td>214,816</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Vacant</strong></td>
<td>38,412</td>
<td>55,012</td>
<td>43%</td>
<td>63,431</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Median House Value in $US</strong></td>
<td>118,080</td>
<td>175,602</td>
<td>49%</td>
<td>192,250</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Average House Value in $US</strong></td>
<td>144,707</td>
<td>216,949</td>
<td>50%</td>
<td>237,306</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Median Monthly Owner Costs for Units with Mortgage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,139</td>
</tr>
<tr>
<td><strong>Average Monthly Owner Costs for Units with Mortgage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,264</td>
</tr>
<tr>
<td><strong>Median Rent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>508</td>
</tr>
<tr>
<td><strong>Average Rent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>514</td>
</tr>
<tr>
<td><strong>Average Gross Rent (with Utilities)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>638</td>
</tr>
</tbody>
</table>

*Source: ESRI, 2007.*
Infrastructure Assessment

Johnston County Public Utilities Department provides water, wastewater, solid waste, and recycling services. Growth rates in Johnston County present a challenge to providing utility services in the County, and the Public Utilities Department has taken a number of steps to ensure consistent service provision.

In 1997, the county adopted a water conservation ordinance to address periodic water shortages by authorizing mandatory and voluntary water conservation measures. The Central Johnston County Regional Wastewater Facilities collects and treats wastewater from Smithfield, Selma, Four Oaks, Wilson’s Mills, Pine Level, as well as the East Clayton Industrial Park, the Cleveland Community, NC 210/40 interchange, and NC 42 area east of the Neuse River, a nutrient-impaired water body. Since the late 1990s, Johnston County has taken water quality improvement measures to reduce levels of nitrogen and phosphorous in the Neuse River, even as the population it serves has grown. The county plans to extend water into northern and western areas of the county and sewer to the western areas of the County, respectively.

The utilities department also observes special storm water regulations that protect the Neuse River. The county adopted a storm water management ordinance that establishes development criteria within an Environmentally Sensitive Area District to mitigate impacts of storm water resulting from development. The County Public Utilities Department also developed a storm water design manual, last revised in January 2008, offering guidance and suggesting storm water best management practices to developers.

Johnston County’ Office of Emergency Services includes emergency management services, emergency medical service and the fire protection services. There are 27 volunteer fire departments in the county.
Figure 2: Johnston County Infrastructure Map
Land Use Controls Assessment

Land within the County’s jurisdiction is divided among six land use types: agricultural, commercial, industrial, office/institutional, residential, and underdeveloped. Much of the County’s residential land is concentrated to the west around the town of Clayton and between Clayton and Benson. Office and institutional uses are concentrated to the east and north along transportation corridors. Agriculture is the most common land use in the County’s planning area and undeveloped open land is concentrated along the Neuse River and the wetland areas.

Currently, most land within the County’s jurisdiction is zoned as agricultural residential. A concentration of planned unit development zoning runs along Clayton’s eastern border, and industrial zoning is scattered throughout, with the larger industrially-zoned areas along transportation routes and at major intersections.

The maximum development potential for Johnston County is an additional 155,449 acres\(^2\), assuming that there are no water or sewer limitations and no development restrictions on currently non-built-out land. Since it is projected that an additional 21,388 acres of land will be required to accommodate population growth into 2030, land is not a limiting factor to growth at this time. At this point, the County has plans to extend new sewer services to the northern and western portions of the County where most approved residential development is located.

\(^2\) According to data provided by the Johnston County Comprehensive Land Use Plan.
Figure 3: Generalized Zoning Map
FARMLAND ASSESSMENT

In 2007, approximately 38% (194,090 acres) of Johnston County’s 506,880 acres were estimated to be in farm ownership or farm use, making agriculture one of the largest land uses in the County. The largest shares of land in farms in Johnston County include 128,227 acres of cropland (66%) and 42,700 acres of woodland (22%). Much of the land in farms is controlled by farm operators but only 50% derive their full income from farming and 30% having full ownership of the farm.

Figure 4: Land in Farms

Source: 2007 U.S. Census of Agriculture

Farmlands in the County are divided by the I-95 corridor and there are significant differences between the northern and southern agricultural regions. The southern region is known to have the highest concentration of prime and productive soils and is generally the area of the County with the highest concentration of field crops and livestock operations. The northern agricultural region has more piedmont soils and smaller farm operations. Tobacco and livestock production are important in this region of the County. Farms are most challenged by development in this region, as well.
Figure 5: Prime Farmlands
Figure 6: Voluntary Agricultural Districts and Protected Areas

Voluntary Ag Districts with Preserved Areas and EEP Projects
Johnston County, North Carolina

Legend:
- Voluntary Agricultural Districts (VADs)
- Bermuda Battlefield State Historic Site
- Camp Tuckersville (CT)
- Clementine State Forest
- EEP Projects
- EEP-Pleasant
- Hewett Woods
- Mountains to the Sea Trail
- Archeological Sites/Trails/Streets
- City Limits
- Creek or Stream

Approximate Scale: 1 inch = 25,000 feet
Date: September 23, 2009

Johnston County
TECHNOLOGY SERVICES
P.O. Box 1373, Smithfield, North Carolina 27577
Phone: (919) 988-0153 - Fax: (919) 988-0156
Website: www.johnstonnc.com
Table 3 compares agricultural land use across counties adjacent to Johnston from 2002 to 2007. Johnston agricultural acreage remains intact unlike most of its neighbors. Much of the acreage lost in the County is pastureland at a 36% loss between 2002 and 2007. The loss of pastureland is consistent with development patterns since pasturelands are typically well drained and therefore typically suitable for development. The main issue related to this type of agricultural land loss is the loss of access to productive soils, and, in the case of the livestock and dairy industries, loss of support industries such as milk haulers and grain dealers.

Despite the losses in pastureland, aggregate land and building value has risen dramatically across the region. Much of this change is driven by increases in raw land value while some of the change is driven by increased investment in infrastructure. Johnston County’s average land and building values increased 17% between 2002 and 2007, which was slower than percentage changes in other counties. Another point of interest in the farmland use data is the fact that Johnston posted growth in the acreage committed to house lots, ponds, and roads indicating more intense development of non-operating land assets. This may be indicative of growth in small farms since these features have a higher lot coverage on small acreages.
LAND USE TOOLS

Loss of farmland and its associated benefits of food production, stabilization of local economies, protection of the environment, and enhancement of the quality of life are being felt to varying degrees throughout the country. Common to most situations is the threat to the land base from sprawling suburban development and the vulnerability of a challenged industry, often in transition. Given the diversity of types of agriculture and the various governmental structures, protection of agriculture and farmland takes many forms. They are often in the form of land use regulations, agricultural economic development initiatives, and purchase of development rights to permanently secure a land base for the industry. The communities around the nation making the greatest strides are those employing some combination of the tools described in this section, as well as a robust economic development strategy – all customized to their respective circumstances.

In this section, land use planning techniques are discussed, as well as programming considerations for Voluntary Agricultural Districts, Purchase of Development Rights (PDR) and Transfer of Development Rights (TDR). Finally, the current menu of options made available to jurisdictions and landowners by the State of North Carolina to help protect agriculture in their communities, completes this section.

**Examples Of Counties With Farmland Protection In Their Land Use Planning Process**

**Cumberland County, Buffering Bases**– In response to mounting development pressure from Fort Bragg, the County saw a need to restrict growth within a 1 mile buffer from the base. The Regional Land Use Advisory Commission recommended a 5-acre minimum lot size for these properties; however, the County has developed a unique solution which offers landowners with 5-acre tracts a compensation payment, equivalent to a percentage of their property taxes, in exchange for 5 or 10 year conservation agreements to limit residential development. This agreement allows all manner of agricultural and silviculture activities, including retail and processing facilities, to remain on the land.

**Davie County, Agribusiness Ordinance**– The Davie County Commissioners approved an Agribusiness Use amendment to the County zoning text, allowing a streamlined permitting process for the construction of buildings, signs, and parking areas associated with existing farm operations. According to Davie County Planning Director Andrew Meadwell, “Ninety percent of our land is zoned rural-agriculture, and we didn’t have any guidelines that addressed these situations that would encourage consumers to go directly to farms for sales or festivals. Our permitting process was too cumbersome, and we wanted to speed up the process for new investments.”

*Source: American Farmland Trust.*

General and specific farmland preservation tools are highlighted in the following pages.
GENERAL LAND USE MANAGEMENT TOOLS AND TECHNIQUES

At the county and city level, planning and zoning are important farmland protection tools. When a local area strives to sustain its agricultural economy and protect farmland, these objectives should be reflected in the planning and zoning process. The most commonly used tools are highlighted below.

Comprehensive Plans ³

The Comprehensive Plan is the county’s documented vision and guidebook for the future. It provides the social, political, and economic frameworks on which local leaders make land use decisions. It explains the county’s position on development policy to the public and provides a basis for public decisions on spending over the next 10 to 20 years. North Carolina state law requires jurisdictions that use zoning to have a comprehensive plan to guide development and administration of local zoning.

Comprehensive plans are developed under the leadership of county staff and in collaboration with multi-sector organizations in the county, region, and state. This assures that the outcomes of the plan have the support of everyone affected by it. A comprehensive plan covers a wide range of topics from private land use, to parks and recreation, to housing. The plan is updated every five years and helps elected officials make decisions about development applications, infrastructure development, zoning (where applicable) and other concerns about the county’s long-term priorities.

Because of the depth and breadth of the plan’s coverage, it is a crucial document in determining the long-term viability of the agricultural sector. Through codified and documented data on agriculture such as maps and coordinates, it gives a visual picture of agriculture’s current state and where the future should be headed. More importantly, it also envisions the future needs of agriculture and development and in which areas the two are likely to intersect or collide. While it is focused on the county, its geographic coverage extends to larger areas, such as the state and region, and smaller communities within it. The coverage allows more specific citizen input and detail for the planned development of a particular section.

While comprehensive plans will vary in specifics, all plans are roughly similar structures. It includes: 1) a jurisdiction’s goals and vision, 2) objectives, policies to meet those objectives, and 3) implementation strategies and the schedule for updating the plan. The plan may also include separate elements to address specific areas of concern, such as local food manufacturing and marketing. Johnston County’s Comprehensive Land Use Plan includes several agriculturally related objectives including the establishment of targeted agricultural zones within the County.

³ See the Johnston County, North Carolina 2030 Comprehensive Plan.
Zoning

Zoning is a common land use planning tool or law that divides a county or town into districts, or “zones” that specify allowable or conforming land uses. For example, manufacturing may be allowed in the industrial district but housing is not. Zoning codes also prescribe the intensity or density of the use such as the number of residential units per acre or apartment buildings with ceiling limits. Codes are usually attached with contingent clauses to provide added protections to neighboring property owners. The official zoning map allows property owners to see the type of restrictions that apply to their land. Zoning codes can be amended in later periods so farmers should look carefully at the list of allowed uses to be sure that all farm activities of interest in that area are included.

According to North Carolina state law, new and existing bona fide farms are exempt from county zoning. However, as agricultural processing approaches the scale of a commercial manufacturing facility, the agricultural nature of the land use is put under question. In addition, counties do not have the right to regulate forestry activity, as long as that activity is a bona fide farm activity or meets the requirements to be exempt from county regulation under state law.

Cities and towns still retain the right to exercise zoning powers and their zoning codes often do not allow certain agricultural uses within city limits. Except for planning and zoning authority specified in local laws and for state and federal requirements, cities are prohibited from restricting forestry activities when the landowner is following a forestry management plan or the land is taxed on the basis of its present use value as forestland.

Under House Bill #607, the 2005 Agricultural Development and Farmland Preservation Enabling Act, cities may amend their ordinances applicable to their planning jurisdiction to provide flexibility to farming operations that are part of VAD programs. Some municipalities have also received authority through state bills to provide exemptions for farming or forestry operations that meet certain criteria. Under its current zoning code, Johnston County does provide for specific open space protections, however, the definition of open space is unclear and does not specifically provide for farmland protection under its open space programs.

Several different zoning techniques that may be used to encourage the protection of farmland are outlined below.

**Performance Standards** - Performance standards can minimize the impact of development on farming. They may be used to steer development away from prime agricultural soils and existing farm operations. They usually are applied on a case-by-case basis, and they require discretionary decisions by a local planning board. Some factors that can be used as performance standards are:

- Potential for conflict with agriculture.
- Need to minimize the amount of converted agricultural soils.
- Agricultural productivity of the land and soils involved.

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• Compatibility with existing or permitted uses on adjacent property.

Cluster Zoning - Cluster zoning ordinances allow or require houses to be grouped close together on small lots to protect open land. They increase density on part of a parcel while leaving the rest undeveloped. This allows the construction of the same number of houses, while minimizing the impact to the area’s natural resources.

For example, the zone’s residential density is one unit per five acres and the parcel in question is 100 acres. This parcel could be divided into either 20 5-acre parcels or 20 1-acre parcels and an 80-acre undeveloped parcel. In both examples, the result is 20 building lots (not considering the 80-acre parcel as a separate building lot) with a density of one unit per five acres. In the latter example, however, a relatively large, agriculturally viable parcel remains.

Cluster subdivisions may keep land open for future agricultural use, but generally they are not designed to support commercial agriculture. In addition, clustering may create tension between residential and agricultural land uses if new neighbors object to the sights, sounds and smells of commercial farming. To increase its usefulness as a farmland protection tool, provisions should be made to protect commercial farming or recognize that cluster arrangements may be more appropriate near less-intensive farming operations.

Sliding Scale Zoning - Sliding scale zoning uses a scale to determine the number of lots that potentially could be developed in an area. Owners of smaller parcels are allowed to divide more land into lots than are owners of larger parcels. To keep farmland in productive use, maximum lot sizes (usually two or three acres) typically are established. Non-farm development is directed to less productive land.

Large-Lot Zoning - Generally, large-lot zoning (that designates minimum lot sizes as small as five to ten acres) is not considered a farmland protection technique. In fact, it may encourage the premature conversion of farmland since it often results in the purchase of more residential acreage than homebuilders actually want or need. Large-lot zoning is often used in conjunction with lists of “permitted by right” uses that fail to view agricultural areas as important commercial zones worthy of special protection from incompatible uses.

Agricultural Protection Zoning (APZ) - Agricultural protection zoning stabilizes the agricultural land base by keeping large tracts of land relatively free of non-farm development. For APZ to be effective, the area’s farming industry must be profitable, and farmers must be committed to keeping their land in production. Agricultural protection zoning ordinances designate areas where farming is the primary land use. They discourage development that could impair the land’s use for commercial agriculture and they restrict the density of residential development. They generally require building on small lots as opposed to dividing tracts into large, equally sized lots. Most ordinances make use of a fixed density, for instance, Montgomery County.
Maryland allows only one dwelling for every 25 acres. Others are based on a sliding scale, with the dwelling and acreage allowances more flexible.

**Overlay Districts** - Some communities have used agricultural overlay districts to direct development away from prime farmland. While overlays lessen the impact of development on agriculture, they generally regulate how— not if— farmland is developed. So far, such districts have not been used to change underlying density requirements or limit non-farm uses. Agricultural overlay districts can be used to trigger cluster zoning provisions, buffer strips or other performance standards.

**Subdivision Regulations**

Municipalities and counties typically have local laws to control how property owners divide land into smaller parcels and these subdivision ordinances include minimum requirements for water supply, road construction, setbacks, and other public safety considerations. Ordinances usually require a map that shows all the new parcels being created. Minor subdivisions may be exempt from formal review, but the Planning Commission typically reviews all subdivision proposals. It often calls a public meeting as part of the review process to provide community members— including farmers— an opportunity to comment. Once approved, a subdivision map is recorded at the courthouse as a permanent record of the change in property lines. If a VAD is nearby, some local laws require a notice of that district to be recorded with the subdivision map.
SPECIFIC FARMLAND PROTECTION TOOLS AND TECHNIQUES

Voluntary Agricultural Districts

In 1985, the North Carolina General Assembly, through the Farmland Preservation Enabling Act, set forth the concept of “voluntary agricultural districts” as an effective and politically viable way to protect North Carolina farmland. Voluntary Agricultural Districts (VADs) form partnerships between farmers, county commissioners, and land use planners in order to promote and protect agriculture as an integral part of the County.

Half of North Carolina’s 100 counties (including Johnston County) have passed ordinances establishing VADs since 1985, and in doing so, commissioners appoint a local board to oversee the program. This board determines eligibility and guidelines for enrollment, specific to each county. The Johnston County Voluntary Farmland Preservation Program Ordinance states its purpose to provide the following benefits to farmers and county residents:

- The program preserves and maintains agricultural areas within the County;
- The program informs non-farming neighbors and potential land purchasers that the participating farm may emit noise, dust, and smells (this feature may help avoid conflicts between neighbors and potential nuisance claims);
- The program gives the farming community a better voice in Johnston County policy affecting farmland;
- Farmer participation in the program is voluntary and the farmer may terminate his/her participation at any time;
- The program requires the Johnston County Commissioners to use farmland “as a last resort” if they are attempting to condemn county lands;
- The program would provide green space and natural resources as the County’s population and development expands;
- The program maintains opportunities to produce locally grown food and fiber.

An agricultural district is initiated when interested landowners submit a proposal to the Johnston County Agricultural Advisory Board. The district shall contain a minimum of 5 acres for horticultural use, 10 acres for agricultural use, and 20 acres for forestry use. This includes leased and/or rented land.
Enhanced Voluntary Agricultural Districts

Authorized in 2005, Enhanced Voluntary Agricultural Districts (EVAD) create a new category that offers landowners an additional tier of benefits, if they are willing to waive their right to withdraw from the VAD program at any time. These additional benefits include:

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.
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 EVAD 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 extraterritorial jurisdiction lines.

Agricultural Conservation Easements

In general, landowners possess a variety of rights to their property, including the rights to use water resources, harvest timber or develop the property consistent with local regulations. Some or all of these rights can be transferred or sold to another person. The mechanism for transfer is known as Agricultural Conservation Easements (ACE), which includes both the donation of rights as well as the purchase of rights (also known as Purchase of Development Rights programs (PDR)). Such programs enable landowners to voluntarily separate and sell their right to develop land from their other property rights. Participating farmers are typically offered the difference between the restricted value of the land and the fair market value of the land. A permanent conservation easement is recorded in the land records binding all future owners. The land remains in private ownership and on the tax rolls.

Conservation Easement

Whether the program is called a Purchase of Development Rights, or Agricultural Conservation Easement Program, the same basic principles apply. Restrictions are placed on the agricultural property, which will limit the use of the property to agriculture and prevent its subdivision in a manner that will harm its agricultural viability. The conservation easement is attached to the deed of the property in order to ensure that the aforementioned restrictions apply to all future owners of the property. Typically, landowners either donate the easement to receive a tax shelter, or receive remuneration from the sale of the easement. Property generally faces lower property tax assessments, however, the value of the land is lowered and the use of the land is limited.

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

**Benefits**
- Protects farmland permanently, while keeping it in private ownership.
- Participation in PDR programs is voluntary.
- Allows farmers to capitalize on unrealized assets—their land.
- Can be implemented by state or local governments, or by private organizations.
- Can provide farmers with a financially competitive alternative to development.
- Can protect ecological as well as agricultural resources.
- Removes the non-agricultural value of land, which, in some places helps keep it affordable to farmers.

**Drawbacks**
- It is expensive.
- Can be oversubscribed. In North Carolina, funding for PDR has been limited, with demand far exceeding available funds.
- Can be time consuming to purchase easements is time consuming. Participants in the State program generally must wait at least a year before all details regarding their easements are finalized.
- Requires an ongoing investment of time and resources to monitoring and enforcing easements.

**Agricultural Conservation Easements in North Carolina**

The conservation easement is the legal instrument that protects the land for agriculture over time. It is a voluntary deed restriction that landowners place over their own land. Ownership is maintained and the land may be sold or passed to heirs, however, future owners must abide by the easement. Most conservation easements are permanent. The farmland owner retains all other rights of ownership and can continue to farm the land as he or she did before. The land remains private and on the tax rolls.

Because agriculture is always evolving, agricultural conservation easements must be flexible and tailored to meet its ever-changing conditions. Generally, they:
- Extinguish virtually all non-farm development rights (i.e., the right to build residential or non-agricultural structures).
- Limit future uses of the land that degrade the agricultural value or productivity of the land.
- Encourage the business of farming.
- Permit the construction of new farm buildings and farm employee housing.
- Do not require public access.
Landowners in North Carolina must work with a government entity, such as a county or Soil and Water Conservation District (SWCD), or a conservation organization, such as a land trust, to agree to develop the conservation easement and monitor the property to be sure that the terms of the easement are fulfilled in perpetuity. Landowners who donate an agricultural conservation easement may receive a federal income tax deduction, as well as a reduction in the value of the property for estate tax purposes. North Carolina has a state conservation tax credit available for donations of property or easements for conservation purposes.

The effectiveness of PDR programs depends on how well communities address several key issues. These include deciding what kind of farmland to protect, which geographical areas to focus on and how to set priorities; what restrictions to put on the use of the land; how much to pay for easements; how to raise purchase funds; how to administer PDR programs; and how to monitor and enforce easements.

**Setting Priorities**

Setting priorities for a PDR program is an exercise in achieving balance. Since the program is voluntary, it needs to be attractive to the farmers who own the county’s prime agricultural resources. Flexible easement conditions and reasonable prices to facilitate participation by farmland owners are as important as raising the public funds to buy the easements. The process of setting priorities assumes funding and participation. It takes a number of forms.

With the development of Geographic Information Systems (GIS), strategic farmland mapping is a relatively new expression of a jurisdiction’s priorities. It is a very effective way to graphically depict what are the most important and the most vulnerable land so that purchases with limited funds can be strategic. This sort of mapping is also an indispensable tool for education of the public and local officials about the connection between the agricultural resources and public infrastructure decisions.

Eligibility criteria are minimum requirements for participation. Sometimes they are reflections of purpose clauses or other legal requirements in state PDR enabling legislation or local ordinances. They often include categories such as location, developability, parcel or farm size, soil quality, and stewardship provisions. These criteria are the first round of a selection process because they decide who can apply to sell easements.

Once applications are received, a ranking formula is used to decide the order in which offers will be made until the funds allocated to that ‘batch’ of properties is spent. It is a means of stating preferences among eligible applicants. Because the goal of the program is the long-term protection of the land base, ranking formulas typically are heavily weighted for soil quality and size characteristics and for adjacency to other farmed and/or protected land. However, they often contain categories of points measuring economic productivity, capital investment, ease of development/threat, and
degree of public policy support (i.e., agricultural protection zoning) context for the purchase.

Determining Easement Value

In general, the value of an easement is the fair market value of the property minus its restricted value, as determined by a qualified appraiser. For example, if the market value of an unprotected parcel of farmland is $200,000, but worth only $100,000 if protected with an agricultural conservation easement, then the farmer is paid the difference of $100,000 for selling the development rights. Landowners may choose to donate some or all of the value of their development rights as a way to permanently protect their farmland and potentially reduce income and estate taxes.

Program Costs

Most PDR programs (including North Carolina’s) require a local dollar match from the land owners, a land trust, county or municipal government, or other another source for the implementation of PDR projects. If a county is to implement its own PDR program, as is the interest in Johnston County, the county government must provide funding to leverage additional state and federal dollars even for basic program costs such as easement management and monitoring. A partnership with a competent entity, such as a land trust, is often an effective way to start a county program by reducing cost and developing institutional background and experience.

The following outlines several ways local communities can finance their PDR programs. There are, of course, many other innovative ways to fund land preservation.

**Bonds** - In the past decade, many North Carolina communities have recognized that farmland conservation is a long-term investment. While bonding has been successful in other States, no North Carolina county has bonded directly for farmland protection. Wake County issued bonds for watershed protection, with a portion being used for farmland conservation. Orange County has issued bonds for public recreation facilities and has matched the amount with a general appropriation for farmland protection.

**General Revenues** - Other communities have set aside annual appropriations to pay for farmland protection projects by using current revenues. The Counties of Buncombe, Orange, Currituck, Rowan, and Forsyth have all used general appropriations to fund conservation easements.

**Real Estate Transfer Taxes** – Many states and local governments fund the purchase of development rights through real estate transfer taxes at a rate of 1% to 2% of the transaction value. This option was not available in North Carolina until less than a year ago. A change in State law will allow a community to link the revenue needed to preserve farmland to the source of development pressure.

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5 http://www.wakegov.com/parks/openspace/default.htm
that is causing farmland transition. Most areas exempt low income and elderly from the requirements.

**Purchase of Development Rights (PDR) Grants** - In 1985, the North Carolina Department of Agricultural and Consumer Services established an Agricultural Development and Farmland Preservation Trust Fund (ADFPTF), to act as the primary state-wide purchaser of agricultural conservation easements (PACE). From 1998-2002, the ADFPTF gave out $2.4 million in five grant cycles, protecting 4,412 acres on 33 farms. The General Assembly has only appropriated minimal funding since then.

House Bill 607, in 2005, revived the fund for $8 million, which is now guided by a 19 member advisory committee providing recommendations to the Commissioner of Agriculture, although funding was allocated until the 2007 budget. It has a particular interest in supporting local VAD programs. In 2006, five pilot programs promoting local partnerships, conservation easements and the development of VADs, received grants.

Additionally, the Clean Water Management Trust Fund issues grants to local governments, state agencies, and conservation nonprofits to purchase conservation easements on farms that serve as riparian buffers to priority waterways. The North Carolina Tobacco Trust Fund Commission has provided funding to land trusts to purchase development rights on tobacco farms in transition.

At the federal level, Federal Farm and Ranch Land Protection Program (FRPP) makes grants available for conservation easements on a nationally competitive basis. Several land trusts (Piedmont Land Conservancy, Tar River Land Conservancy, Land Trust for Central NC, etc.) as well as counties (Wake and Durham) have used these funds to protect farmland in North Carolina.

**Public/Private Partnerships** - Some communities have successfully used partnerships with private organizations to facilitate their PDR programs. In some areas, local land trusts, once formed primarily by conservationists concerned about vanishing habitat and open space, have formed to tackle the challenges of preserving farmland. It is possible for a private land trust to have the needed easement settlement and administration expertise that communities may lack.

For example, a land trust may play a key role in assembling PDR applications; holding, monitoring and enforcing easements; managing the PDR program; or providing a portion of the local match as in-kind credit or in cash. In addition, land trust involvement may increase the incentive for farmer participation, since landowners who donate an easement or a portion of their property to a qualified conservation organization such as a land trust or Soil and Water Conservation...
District may receive a federal tax deduction, thus offsetting some of their capital gains tax liability.
Stewardship and Monitoring

When landowners sell or donate an agricultural conservation easement to the State, municipality or a qualified nonprofit conservation organization, that agency or organization then ‘holds’ the easement. The holder of an easement is obligated to monitor the land involved and uphold and enforce the terms of the agreement.

Known as stewardship, the process of holding and maintaining easements is an important consideration to any PDR program. Good stewardship will help ensure the perpetual nature of the easement. The entity holding the easement should set up a system for administering, monitoring and enforcing the easement terms. That involves creating baseline documentation, maintaining a good working relationship with the landowner, monitoring the property, and, if needed, addressing violations.

The Triangle Land Conservancy and Stewardship in Johnston County

Triangle Land Conservancy (TLC) is the non-profit local land trust serving Johnston County. Our mission is to protect important open space—stream corridors, forests, wildlife habitat, farmland and natural areas—in Chatham, Durham, Johnston, Lee, Orange and Wake Counties to help keep our region a healthy and vibrant place to live and work.

TLC protects farms and forests to ensure that productive lands are available now and in the future to meet the food and fiber needs of this area, the State, and the world. TLC works with landowners to develop strategies that meet their long-term conservation and land management goals while realizing potential financial benefits including tax incentives and available funding sources.

TLC aims to conserve open space and protect soil and water quality by promoting the economic and environmental sustainability of working farms and forests. A conservation easement is the most common tool used by TLC to protect farm and forest land. To date, TLC has acquired 27 conservation easements totaling 3,259 acres that allow the practice of agriculture and/or forestry. Ten of these conservation easements are on farm and forest land in Johnston County protecting a total of 926 acres.

Transfer of Development Rights (TDR)

Transfer of development rights programs, also known as density exchange programs, allow landowners to transfer the right to develop one parcel of land to a different parcel of land. (By contrast, cluster zoning usually shifts density within a parcel.) TDR programs can protect farmland by shifting development from agricultural areas to areas planned for growth. It is important to recognize that TDR programs do not reduce the number of building rights. TDR programs simply reallocate them geographically.
Since TDR programs are based on having a definable right to development, any area seeking to implement such a program must have a means, preferably statutory, to allocate such rights. Typically this is done through zoned density and in areas without zoning, may be achieved through an assignment of engineering capacity in accordance with subdivision regulations. Without a means to assign such development rights, a TDR program simply cannot be implemented.

The TDR legislation itself provides the legal framework under which development rights are transferred from one lot, parcel or area of land in any sending district to another lot, parcel, or area of land in one or more receiving districts. To implement TDR, receiving and sending districts are designated and mapped in accordance with a comprehensive plan. Sending districts may include agricultural land and the receiving districts must have the infrastructure needed to support increased development. Development rights are documented as conservation easements that are enforceable by the town or other designated entity. They may be bought or sold by the municipality for deposit in a development rights bank.

Flexibility is important throughout the TDR process. For TDR to work, communities must build consensus on its use as a way to protect resources and direct future growth. A market must exist for both the development rights (either in the private sector or via a community development rights bank) and the higher density development that will result. While the TDR technique holds promise in theory, it has not been greatly utilized in North Carolina due to the complexity of its administration and its unproven track record. However, Orange County is currently in the third and final phase of a study to develop a TDR program.

Because residential TDR programs are notoriously hard to implement, variations have been adopted to allow the application of a residential sending unit to either an environmental or commercial receiving purpose. While this is not a common practice and does not involve like kind and quality exchange, it has been used to some success in the United States, most specifically the States of Colorado, Washington, Pennsylvania, and Maryland. An example of such application is St. Mary’s County Maryland.

*St. Mary’s County* in Maryland also allows the use of TDRs to enhance the maximum footprint of a commercial structure using TDRs in all but three zoning districts; Residential - High Density, Industrial (I) and Commercial Marine (CM). Each TDR can be used to increase the building footprint by 2,000 square feet up to 60,000 square feet, where allowed, beyond which TDRs can be used to increase the building foot print in 1,000 square foot increments. The TDR program allows developers a fee in lieu option that is equivalent to $12,000 per TDR and sets a de facto TDR price cap at the fee in lieu rate.

Because it is uncommon for commercial development to exceed the allowed maximum lot coverage ratios and building footprints, TDRs have only been used once on a commercial project. This project is currently being submitted for Commissioner approval and involves a 90,000 square foot expansion to a 50,000 square foot retail facility. According to St. Mary’s Land Use and Growth Management Department staff, the project had little difficulty attracting TDR sellers with most TDRs transferring...
between $8,500 and $10,000 per right. In terms of the cost of the development project, TDRs added approximately $10.00 per square foot to the cost of new construction.

**Agricultural Tax Relief**

Tax relief is an important issue for farmers. Farms need land to operate and property taxes on farmland are a significant expense. Taxes on farm buildings are often substantial as well. Farmers often say, “Cows don’t go to school,” which reflects the concept that taxes on agricultural land should be proportionate to its demand on municipal services and its ability to generate income. As proven in over 200 County Cost of Community Services (COCS) studies, farmland provides more in property tax revenues than it requires in public services, keeping it in production may help control the cost of community services.

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

- **Property** - Present Use Value assessment allows for agricultural and forested land to be taxed at its farming value, rather than market value for development. When land 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. Owners of agricultural land need to apply to the county tax assessor to receive this assessment. Farmers are entitled to a state income tax credit equal to the amount of property tax paid on farm machinery, attachments and repair parts.

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

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

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

The continued development of agricultural areas has increased the potential for conflicts between farmers and their neighbors. North Carolina implemented Right to Farm laws to protect farm and forestry operations from being declared a nuisance as long as they have been in operation for at least one year. They are, however, not protected if there is evidence of negligence or improper operation. Other state protections include the notice of proximity provision which is provided as a benefit for participants in a VAD program, and the pre-litigation mediation of farm nuisance disputes. With state authorization, counties have the power to adopt stronger Right to Farm laws.

**Definition of a Farm**

The State of North Carolina (N.C. Gen. Stat. § 153A-340 (2006)) defines *bona fide farm purposes* to include:

...the production and activities relating or incidental to the production of crops, fruits, vegetables, ornamental and flowering plants, dairy, livestock, poultry, and all other forms of agricultural products as defined in G.S. 106.581.1 having a domestic or foreign market.

Swine production in the State of North Carolina is treated as a special case, and local governments may regulate swine facilities designed to handle 600,000 pounds of livestock or more annually.

Agricultural land is defined as: *Land that is part of a farm unit that is actively engaged in the commercial production or growing of crops, plants, or animals under a sound management program.*

Horticultural Land is defined as: *Land that is ... engaged in the commercial production or growing of fruits or vegetables or nursery or floral production.*

N.C. Gen. Stat. § 105-277.3 (2006) provides further specifics for the three classes of farmland. Agricultural and horticultural land must produce and average gross income of at least $1,000 and be under a sound management program. Forestland must be following a written sound forest management plan for the production and sale of forest products. Agricultural land must include 10 acres, forestland must include 20 acres, and horticultural land must include 5 acres in production.
### FARMLAND PROTECTION TOOLS IN JOHNSTON COUNTY

<table>
<thead>
<tr>
<th>Protection Tool</th>
<th>Definition</th>
<th>Benefits</th>
<th>Drawbacks</th>
<th>Applicability/Status- Johnston County</th>
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</thead>
<tbody>
<tr>
<td><strong>Comprehensive Plan</strong></td>
<td>Guiding vision of what a community wants to be in the future and a strategy for achieving that.</td>
<td>An organized way to identify productive farmland and set growth and protection goals. Serves as basis for land use regulations.</td>
<td>Not legally binding may be changed or ignored by officials as they rule on development proposals.</td>
<td>Johnston County has adopted the 2030 Comprehensive Plan with the following themes: • Managing growth and infrastructure • Expanding economic opportunities • Providing housing and protecting neighborhoods • Preserving farmland/rural character • Protecting environmental and cultural sites • Enhancing mobility • Intergovernmental coordination</td>
</tr>
<tr>
<td><strong>Differential Assessment</strong></td>
<td>Taxation of farmland based on its agricultural use rather than its development value.</td>
<td>Modest incentive to keep land in commercial farming.</td>
<td>Also benefits land speculators waiting to develop land.</td>
<td>Tax benefits through Present Use Tax Valuation are available to farmers in Johnston County, and must be applied for. There are specific requirements on ownership, size, income, and management requirements to participate in the program. Additional tax benefits and incentives are available for estates. The donation or sale of an agricultural conservation easement usually reduces the land value for estate tax purposes.</td>
</tr>
<tr>
<td><strong>Agricultural Districts</strong></td>
<td>Designation of an area of viable agricultural land. Initiated and self-selected by landowners, adopted by county. Eligibility, minimum acreage is determined by each county. Land can go in and out at any time. Not tied to agricultural assessment.</td>
<td>Farmed land within district is provided a minimum level of protection from nuisance claims and public condemnation processes. Enhanced districts allow for additional benefits including a higher level of protection.</td>
<td>Area defined by willing landowners and has no real longevity as a protection tool.</td>
<td>Johnston County, along with the all counties in the State, has enrolled in the Voluntary Agricultural District (VAD) Program. Landowners receive a locally determined set of benefits in exchange for a restriction on developing their land for 10 years. In 2005, the General Assembly authorized an Enhanced VAD that would offer landowners an additional set of benefits if they were willing to waive their right to withdraw from the VAD program anytime.</td>
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<tr>
<td>Protection Tool</td>
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</table>
| **Right to Farm Laws**          | In NC for land in ag district:  
1. Definition of agriculture  
2. One-Year of Operation  
3. Sound ag practices determination | Strengthens the ability of farmers to defend themselves against nuisance suits. Shields farmers from excessively restrictive local laws and unwanted public infrastructure. Available to all farms in the State. | Not meant to shield from all legal disputes with neighbors. Does not stop complaints from non-farm neighbors. May not protect major changes in farm operations or new operations. | These protections are afforded to all farms in the State under North Carolina State Law. Other protections include the notice of proximity provisions for farmers in a VAD program and the pre-litigation mediation of farm nuisance disputes. Johnston County, with state authorization, may adopt a more stringent Right to Farm Ordinance to protect against specious nuisance claims. |
<p>| <strong>Agricultural Zoning</strong>         | Zoning that allows residential development at a rate of one unit per 20 acres or lower in a predominantly farming area. Ideally, the allowed density can be built on much smaller lots rather than large lots with each residence. | Limits non-farm development in areas intended for agricultural use. Can protect large areas of farmland at low public cost. | Local government can rezone land. Landowners may complain about loss of ‘equity value’ if land values have begun to escalate due to development pressure. | Unincorporated areas of the County are not zoned, providing no specific protection for commercial farming operations. As land use changes to include more suburban homes, this may become a serious challenge to agricultural operations. Counties also cannot regulate forestry as long as it is a bona fide farm activity or meets county exemption regulations under state law. |
| <strong>Agricultural Conservation Easements</strong> | Voluntary separation and sale of the development rights from land in exchange for a permanent conservation easement. Easements can be donated or landowners can be paid the difference between restricted value and fair market value. Land remains in private ownership and on tax rolls. | Provides permanent protection of farmland. Donated easements allow a low cost preservation option and landowners can capture benefits through tax shelter effects. Purchased easements put cash into farm and farm economy. | Public cost may be high. The voluntary nature may make it difficult to protect a critical mass of farmland. If a County is limited to donated easements, it may be difficult to attract landowner participation. | House Bill 607, passed in 2005, revamped and revived the Agricultural Development and Farmland Preservation Trust Fund (ADFPTF) to expand the range of conservation agreements and enterprise programs for long term farming. The ADFPTF gave out $2.4 million between 1998 and 2002 to protect 4,412 acres but had received minimal appropriations until House Bill 607’s passage. The program does not currently have a dedicated funding source. Planners, farmers, and local officials can create local purchase of agricultural conservation easement (PACE) programs. |</p>
<table>
<thead>
<tr>
<th>Protection Tool</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Transfer of Development Rights</strong></td>
<td>Voluntary separation and sale of development rights from land in one part of a jurisdiction to be used to increase density in another part. Conservation easement placed on sending parcel.</td>
<td>Developers compensate farmland owners. Creates permanent protection of farmland and shifts some costs to private sector.</td>
<td>Difficult to establish and administer. Opposition by landowners in receiving areas. Needs to be an integral part of a jurisdiction’s growth management strategy at a time that sending area resources are relatively intact and intensification of receiving areas is feasible.</td>
<td>With rising development pressure, there is justification to explore the creation of a county-wide TDR. As well, there are natural sending and receiving areas. Currently no real means to assign development rights to un-zoned properties. Furthermore, a county-wide TDR program would require inter-municipal agreements with the incorporated areas of the County.</td>
</tr>
<tr>
<td><strong>Private Land Trusts</strong></td>
<td>Local non-profit 501.c (3) corporations designed to identify resources to be protected, accept permanent conservation easements from landowners, and monitor their provisions through time.</td>
<td>Can provide permanent land protection. Can forge public-private partnerships. Greatly facilitate the donation of conservation easements from landowners able to benefit from income tax benefits.</td>
<td>Private land trusts rarely have funds to buy easements. May create islands of protection rather than a critical mass of contiguous lands due to focus on donations. Unless specifically designed for agricultural protection, farming may not be the focus of a land trust’s easements.</td>
<td>The Triangle Land Conservancy is currently managing several easements in Johnston County and is the only active Land Trust in Johnston. Johnston County may choose to leverage a county-based land preservation program by partnering with TLC to manage and monitor easements until the County has been able to fully fund its own program.</td>
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</table>
IMPLICATIONS FOR THE AGRICULTURAL DEVELOPMENT PLAN

This analysis of land use trends and projections found the following issues to be of particular importance to Johnston County’s agricultural industry:

Residential development and population growth in Johnston County exceeds statewide and regional averages. Such development is impacting agriculture by competing for scarce land resources. This is particularly true in rural areas where there are few development controls. Farmland protection initiatives should have zoning requirements such as the cluster zoning to enhance soil protection.

Although Johnston County has experienced a decrease in land in farms, the agricultural land base is still relatively intact. Once farmland is lost to development of any kind, it is rarely converted back to agricultural use. Maintaining a core land base in active agriculture is necessary for the survival of the industry. The continuation of the VAD program is a key element in preserving the inventory of farmland in Johnston County and protecting operators from nuisance suits. Implementation of the EVAD should be actively promoted to achieve permanence in the preservation of farmland.

Low density rural residential development occurring in Johnston County has a significant impact on farm businesses. Poorly planned, scattered residential development can bring new non-farm neighbors to the doorstep of farm businesses. These new neighbors may be unfamiliar with agricultural practices and can generate time consuming and potentially expensive conflicts. Subdivision of land should include a review of setback requirement, an examination of performance standards to incorporate flexibility in agricultural operations, and an analysis of the implications of clustering. Right to Farm laws should be properly enforced to minimize conflicts.

The rate and type of development that occurs in Johnston County will be influenced by broader economic factors as well as by local land use policies and decisions. Planning for agriculture at the County level can positively affect development patterns within the community so that both agriculture and the broader community benefit.

Land Use Plan decisions made by individual municipalities will have a major impact on unincorporated areas of the County, both through their extraterritorial jurisdiction control and through where they channel growth. Without coordination, land use planning efforts will only go so far. Though not binding, the 2030 Comprehensive Land Use Plan should be referred to for planning decisions.
RECOMMENDATIONS

As the 31st fastest growing county in the United States, Johnston County’s agricultural land base can be best described as fragmented. Particular to central and western Johnston, the dominant development pattern is in low density residential development. Throughout the areas where farming still exists, the predominance of residential and commercial development limits the tools available to protect the remaining farmland. The County’s new comprehensive plan seeks to address this condition, but does not fully or adequately address agriculture within municipalities and their ETJ’s, which increasingly impact agricultural operations.

The following recommendations are offered to improve the integration between agriculture, forestry, and suburban land uses in Johnston County. Given the rapid rate of residential growth in Johnston, these traditionally land dependent industry sectors suffer from neighbor conflict, land fragmentation, transportation limitations, and impairments to traditional production practices. Many of these limitations are driven by the incompatibility of mixing residential and industrial uses. Because rural zoning typically treats agriculture, forestry, and residential uses as complementary, the conflict has been built into land use regulations. That assumption is generally not accurate since both agriculture and forestry are industrial uses.

Beyond issues of inter-sector conflict, Johnston County’s proximity to the Research Triangle and its robust housing market have made open land more valuable, often putting its cost beyond its ability to support commodity agriculture uses. Land use policies such as zoning, infrastructure development, and subdivision regulations can also detract from agricultural and forestry value while enhancing residential and commercial values. The consequences of such policies can be seen in the Route 40 and 42 corridors. State and federal policies also impact agricultural use and value. Locally, such programs include historic site development (Bentonville Battleground) in eastern Johnston and the implementation of EEP mitigation requirements, which will compete for agricultural land.

The seven recommendations in this document fall within three broad categories or focus areas. The focus areas are largely independent, but have some level of interactivity. The focus areas are briefly described below:

1. **Working Lands Protection** – These recommendations target improvements in or development of policies and programs with the sole purpose of protecting the land base that supports the industries of agriculture and forestry. The general purpose of these recommendations is to respect the commercial needs of these industries while providing reasonable protections for all citizens and industry constituents.

2. **County and Municipal Policy and Planning** – This focus area distinguishes itself from Working Lands Protection by focusing on meeting the needs of modern agricultural and forestry practices and ensuring that future planning and policy support such needs, as necessary. Therefore, it examines a wider array of policies than just land use and
includes taxation, health, transportation, and labor that are intended to bring local conditions in line with regional competitors.

3. **State and Federal Advocacy** – This category’s recommendations are influenced more heavily by people and groups outside of Johnston County, its local municipalities, agencies, and other entities. Effecting changes within this Focus Area will require advocacy and education.

Successful implementation of these recommendations will involve a multidisciplinary effort supported by the public sector, private industry and agricultural operations as well as state and local agencies. The partnerships necessary will be driven by the specific implementation needs of each recommendation. Funding support for each respective recommendation must also be built independently on the merits of the recommendation and evidenced needs.

Recommendations are presented and described on the following pages.
FOCUS AREA 1: WORKING LANDS PROTECTION

Access to commercially viable tracts of working land is imperative to maintaining both Johnston County’s rural beauty, but also its rural industries such as agriculture and forestry. The following recommendations provide policy guidance to protecting such working lands while integrating agriculture and forestry within the increasing residential context of the County.

RECOMMENDATION 1

Strengthen the Johnston County Voluntary Agricultural District Program

*Johnston County has recently implemented the Voluntary Agricultural District (VAD) as a countywide initiative. As noted earlier in the report, the VAD is a vital first step in protecting agriculture in a rapidly growing area, but it is no substitute for a viable agricultural industry. If strengthened, however, the VAD has the potential to be a powerful focal point of education for the real estate community, the general public, and local elected officials about the benefits and needs of agriculture in their communities.*

*Strengthening of the VAD can also bring additional benefits to farmers over and above those offered by notification or expansion to an Enhanced Voluntary Agricultural District. The specific action items recommended follow:*

**ACTIONS**

- Adopt the Enhanced Voluntary Agricultural District Program to expand options for landowners to include a term payment option.
- Encourage all local towns and municipalities to adopt the County Voluntary Agricultural District Ordinance.
- Create a countywide right to farm law that applies to agricultural district properties. Right to Farm protections should include annual notification of property location with affected area with tax notifications as well as required notification forms at settlement, and the creation of a mandatory arbitration/mediation board to review, as a requirement, agricultural nuisance claims with VAD/EVAD districts to determine good agricultural practices and make remedy. (See Appendix A for sample ordinance.)
- Explore the legal basis of developing a countywide ordinance to protect agricultural water rights for qualifying district properties, based on agronomic and livestock requirements. May include provisions to allow for lateral connections to service livestock and crop needs.
- Conduct an annual educational tour of district properties to keep public officials informed of the importance of the VAD/EVAD structure and to establish a formal contact mechanism between farmers and public officials.
IMPLEMENTATION RESPONSIBILITY: Voluntary Agricultural District Board, Cooperative Extension Service, Farm Bureau, Johnston County Soil and Water District, and County Planning Department staff.

RECOMMENDATION 2

Create a county farmland conservation program

Demand for permanent land preservation programming is high in Johnston County, particularly among young farmers. Given the current state of funding at the North Carolina Agricultural Development and Farmland Preservation Trust Fund, the ability of Johnston County to compete for funds may be stymied both by the limited funding of the program statewide as well as by the criteria by which priority is given to funding individual easement projects. If the County is to compete successfully and meet constituent demand, new programs and funding sources may be required.

ACTIONS

• Create a Farmland Preservation Coordinator position in Johnston County Cooperative Extension or the Johnston County Soil and Water Conservation District.
  o Conduct educational seminars with public officials and landowners in cooperation with local land trusts and the NCADPPTF.
  o Examine county funding options to support the position (e.g., Rollback tax.)
  o Develop a farmland protection program of work
    ▪ Introduce program and policy ideas to the community.
    ▪ Work with agencies and industry to implement protection programming.

• Enable the creation of a county PDR program specifically authorizing both purchase and lease of development rights options. (See Appendix B for a discussion of PDR program options)
  o Develop a preservation target set as a function of acreage and land quality.
  o Develop an application and screening process.
  o Develop a sample easement contract as exemplified by the Alamance County PDR contract.
  o Create a valuation and parcel ranking procedure.
    ▪ Offer priority ranking to parcels that leverage young/beginning farmer participation.
    ▪ Offer priority ranking to parcels that meet county and municipal planning objectives.
  o Target priority agricultural areas as identified by the Comprehensive Land-Use Plan.

• Explore local funding options.
  o Link to development (e.g. roll back tax, open space funds, storm water management fees, adequate public facilities fees, or recordation fees).
  o Examine use of dedicated funds to facilitate leveraging of installment purchases.

• Create flexible easement payment terms to meet land owners needs. (See Appendix C for additional information.)
o Support lump-sum payments.
  o Implement Installment Agreements to encourage participation from tax motivated landowners.
  o Develop a revolving loan fund to facilitate cash motivated transactions and support young farmer access.

- Prepare materials directed at landowners explaining agricultural conservation easements generally to include a sample easement.
- Conduct before and after easement appraisals on a representative sample of willing farmland owners to determine approximate easement values and develop an understanding of the process.
- Explore contract management with existing, experienced contractors such as a land trust or Soil and Water District.
- Examine easement enhancements such as visual easements in historic areas such as the Civil War battlefield in Bentonville.
- Explore use of term easements to protect farm and forest land in lower development pressure areas such as the Delaware Commercial Forest Plantation Act easements. (See Appendix D for further information.)
- Develop a strategic farmland map to highlight key agricultural and community assets using existing map layers.

**IMPLEMENTATION RESPONSIBILITY:** Voluntary Agricultural District Board, Cooperative Extension Service, Farm Bureau, and County Planning Department staff.

**RECOMMENDATION 3**

**Update subdivision regulations and zoning to make land-use policies farm friendly**

Local land use policy in Johnston County generally treats agriculture as being in a holding pattern for residential development and thereby encourages the co-mingling of residences with ag-industrial activity. This is nowhere more evident than in the western portions of the County where agricultural, residential, and commercial uses are seemingly randomly mixed. The development pressures created by hopscotch development of mixed use and quality have varied local impacts on agricultural land value. The general trend, even through the current recession, has been a steady state increase in land values that favors residential development over other activities.

Agricultural operations find it difficult to operate in such an environment, and the opportunity cost of holding land in that situation often outweighs the operational gains. Local and county ordinances exacerbate some of the operational effects of farming in these areas. For instance, required setbacks for wells are minimal on a residential lot in a farming area, yet a farmer must yield production ground to keep mandatory setbacks on the application of inputs. Farmers view these actions as a de facto taking of their right to generate an income from their property. Code written to deal with development pressure needs to be reviewed and managed with agriculture in mind, if agriculture in these areas is going to survive.
ACTIONS

- Seek appoint of a farmer led team, such as the VAD board, to review county land-use regulations and policy with involvement from elected officials and community members.
  - Require that proposals for changes to zoning, subdivision code, and county infrastructure plans be submitted to team for review of agricultural impact.
  - Review permitted uses vis-à-vis current farm industry needs.
    - Agriculturally related processing.
    - Food distribution.
    - Alternative energy.
    - High intensity agriculture.
  - Examine the need to create performance based standards for agriculture and agribusiness activities including emerging opportunities such as those above.
  - Make recommendations for changes and updates as necessary.

- Conduct regularly scheduled workshops with elected officials and the public on a regular schedule to apprise them of changing market and regulatory conditions.
  - Prepare an annual 'state of agriculture report.'
  - Develop a response system to manage farmer interests in proposed regulatory changes.

- Develop a virtual agricultural policy book to keep farmers informed of land-use related development requirements.

- Build beneficial relationships with neighboring jurisdictions and municipalities to improve inter-jurisdictional planning efforts to avoid unintended cross-jurisdictional effects such as development spillover, orphaned water and sewer improvements, ETJ expansions, etc.

- Update subdivision code to enforce greater set-backs on residential and commercial development in VAD/EVAD impact areas. By example, well setbacks of 50 feet may be advisable.

- Plan to use this as an opportunity to educate people about the benefits of agriculture.

IMPLEMENTATION RESPONSIBILITY: Voluntary Agricultural District Board, Cooperative Extension Service, Farm Bureau, and County Planning Department staff.
FOCUS AREA 2: COUNTY AND MUNICIPAL POLICY AND PLANNING

Planning is an ongoing process particularly in a county undergoing significant structural change. Because of this, Johnston must actively and continuously support agriculture, forestry and related industries across all policy areas. As with any policy or planning element, education and training play a key role in the successful outcome of this Focus Area.

RECOMMENDATION 1

Formally adopt the Agricultural Development Plan as a County Policy Guidance Instrument

Because Agricultural Development Plans require the efforts of numerous county departments to be truly successful, it is highly recommended that the Voluntary Agricultural District Board seek formal adoption of the Plan by the Johnston County Commissioners. Furthermore, the Plan should be integrated within the County’s Comprehensive Land Use Plan and other, similar documents.

ACTIONS:

- Seek the explicit inclusion of the Agricultural Development Plan as an element of the Johnston County Comprehensive Land Use Plan.
- Seek inclusion of the appropriate elements of the Agricultural Development Plan within the strategic and/or comprehensive plans of other, related, agencies such as the Johnston County Economic Development, Department of Public Works, Parks and Recreation, local water and sewer agencies, and others as deemed appropriate.
- Seek adoption of VAD by incorporated towns and municipalities.
- Communicate with state legislators and North Carolina State Farm Bureau about the need for programs outlined in the Plan. Coordinate efforts to adopt state funding and state legislation, as needed, to support full implementation of the Plan, especially where regional cooperation is necessary for successful implementation.
- Encourage towns and municipalities to adopt relevant elements of the Plan as part of their comprehensive land use strategies.
- Encourage adoption of Land Use elements of the Agricultural Development Plan in ETJ’s.

IMPLEMENTATION RESPONSIBILITY: Voluntary Agricultural District Board, Cooperative Extension Service, Farm Bureau, and County Planning Department staff.
RECOMMENDATION 2

Develop a Regulatory and Policy Action Program

The stated policy of Johnston County and the State of North Carolina is to be supportive of agriculture and attendant industries. Yet, many policies and regulatory enforcement actions have inadvertent negative impacts on the industry. Addressing these issues in a non-confrontational manner, as early in the process as possible, can reduce these impacts.

ACTIONS

- Develop a policy action program to improve agricultural economic viability and public health.
  - Ensure continuation of Present Use Value taxation.
  - Expand EEP program to agricultural soil protection.
  - Explore amendments to state health code and local zoning ordinances to expand on-farm processing capacity (e.g., Maine, Pennsylvania, and Ohio).
- Develop an on-going ombudsman function to support the regulatory, infrastructure, and program needs of individual farmers and industry clusters.
- Develop a policy to reduce county property taxes on eased properties to reflect restricted value.
- Review transportation policy.
  - Highway infrastructure development.
  - Road speed.
  - Shoulder width.
  - Tagging and overweight limits for agricultural and forestry uses.
- Support development of a countywide institutional food buying program supporting local food purchases.
- Create a countywide Right to Farm law.

IMPLEMENTATION RESPONSIBILITY: Voluntary Agricultural District Board, Cooperative Extension Service, Farm Bureau, and County Planning Department staff.
RECOMMENDATION 3

Create an Outreach and Public Relations Program

An informed citizenry that understands and accepts the industrial nature of agriculture will make better neighbors and better consumers.

ACTIONS

- Develop a municipally focused outreach program to address the impacts of municipal land use regulations and ETJ expansions on the viability of farming and forestry.
- Develop a farmer based committee to coordinate outreach and serve as a first line of response in neighbor/industrial conflict.
  - Identify key audiences/stakeholder groups that impact agriculture.
  - Develop important message statements to deliver to above audiences.
  - Produce collateral material and programming such as:
    - Print material.
    - Media kit.
    - Television and radio programming.
    - Website.
    - Special events.
  - Hold quarterly meetings with editorial boards of local papers.
  - Create an agricultural speakers’ bureau to carry the “message” to important community and civic groups through periodic public speaking engagements.
- Sponsor “Farm-City” tours and dinner.
- Work with the public school system and youth programs such as 4-H and youth equine activities, to integrate the “message” of agriculture within the primary school system and youth training events.
- Develop farm tours to support the “message” of agriculture as well as topical “on-farm” issues.
- Enhance the public relations network and partnerships with other agencies that have an active public outreach program such as the Chamber of Commerce.

IMPLEMENTATION RESPONSIBILITY: Action items under this recommendation require significant interagency cooperation with a range of potential task leaders. It is expected that overall leadership will be provided by the North Carolina Cooperative Extension Service with support from Farm Bureau, NCDACS, Soil and Water District, agricultural industry associations, as well as other agencies.
FOCUS AREA 3: STATE AND FEDERAL PUBLIC POLICY AND REGULATION

Some of the success of agriculture is predicated on a series of private and public actions, most of which are outside of the jurisdictional control of Johnston County. In light of this, the recommendations are influenced more heavily by people and groups outside of Johnston County, its local municipalities, agencies, and other entities. Effecting changes within this Focus Area will require advocacy and education.

Recommendation 1: Advocate for farm friendly state agricultural policies

As agriculture becomes a smaller element of both the County’s land use and economy, it will become increasingly difficult to keep the interests of agriculture in the forefront of policy. Study team members found that keeping policy makers, agricultural industry leaders, and the general public informed and educated goes a long way toward developing better relations. In addition, the agricultural industry has common needs in workforce development, farm management, finance, and other issues that can be met through public training resources.

ACTIONS

- Seek a resolution from the Johnston County Commissioners to support the continuation of the Present Use Value system.
- Support full funding of the North Carolina Agricultural Development and Farmland Preservation Trust Fund at levels that match other programs in the Mid-Atlantic.
- Advocate for a state water policy that gives agriculture preferential access for irrigation and livestock watering.
- Encourage statewide funding of grey water irrigation systems for nonfood crops.
- Improve wildlife controls to reduce crop damage losses from deer.
- Expand the EEP program to include protection of Prime and Productive Soils and Soils of Statewide Importance.
- Develop an individualized new/young farmer training program at the State level.
  - Identify feeder sources for interns and participant screening criteria,
  - Create a program of work tailored individual farm and intern needs
  - Develop a formal mentor program.
  - Provide evening farm start-up and management classes targeting beginning farmer classes.
- Work with educational institutions at the post-secondary and continuing education level to develop flexible training modules for use by agricultural operations.
  - Develop language training for managers and workers,
  - Create advanced farm management training,
  - Provide other issue based training as necessary.

IMPLEMENTATION RESPONSIBILITY: Action items under this recommendation require significant interagency cooperation with a range of potential task leaders. It is expected that overall leadership will be provided by the North Carolina Cooperative Extension Service with support from Farm Bureau, NCDACS, Soil and Water District, agricultural industry associations, as well as other agencies.
APPENDIX A
Sample Right to Farm Law
§ 173-1. Findings and policy.

A. It is the declared policy of the county to preserve, protect, and encourage the development and improvement of its agricultural land for the production of food and other agricultural products. It is the purpose of this chapter to reduce the loss to the County of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance, trespass, or other interference with the reasonable use and enjoyment of land, including, but not limited to, smoke, odors, flies, dust, noise, chemicals, or vibration, provided that nothing in this chapter shall in any way restrict or impede the authority of the state and of the County to protect the public health, safety, and welfare. [Amended 11/21/02 by Ord. No. 02-18]

B. It is in the public interest to promote a more clear understanding between agricultural operations and nonagricultural residential neighbors concerning the normal inconveniences of agricultural operations which follow generally accepted agricultural practices and do not endanger public health or safety.

C. This chapter is not intended to and shall not be construed as in any way modifying or abridging local, state, or federal laws relating to health, safety, zoning, licensing requirements, environmental standards (including those standards which relate to air and water quality), and the like.

D. An additional purpose of this chapter is to promote a good-neighbor policy by advising purchasers and users of property adjacent to or near agricultural operations of the inherent potential problems associated with such purchase or use. These potential problems include, but are not limited to, noises, odors, dust, flies, chemicals, smoke, vibration, and hours of operation that may accompany agricultural operations. It is intended that, through mandatory disclosures, purchasers and users will better understand the impact of living near agricultural operations and be prepared to accept attendant conditions as the natural result of living in or near rural areas. However, this chapter shall be effective regardless of whether disclosure was made in accordance with § 173-5 herein.

As used in this chapter, the following terms shall have the meanings indicated:

AGRICULTURAL LAND -- All real property within the boundaries of Carroll County that is lying in the Agriculture and Conservation Districts, or that is lying in other zoning districts if carried on the tax rolls of the State Department of Assessments and Taxation as agricultural or that is lying in other zoning districts if it has been used as an agricultural operation continuously for one year. [Amended 11/21/02 by Ord. No. 02-18]

AGRICULTURAL OPERATION -- Includes, but is not limited to, all matters set forth in the definition of “operation” in the Courts and Judicial Proceedings Article of the Annotated Code § 5-308(a), as amended from time to time; the production of all matters encompassed within the definition of “farm product” in the Agriculture Article of the Annotated Code § 10-601(c), as amended from time to time; the cultivation and tillage of the soil; composting; production, harvesting, and processing of agricultural crops; raising poultry; production of eggs; production of milk and dairy products; production of livestock, including pasturage; production of bees and their products; production of fish; production of fruit, vegetables, and other horticultural crops; production of aquatic plants; aquaculture; production of timber and any commercial agricultural procedure performed as incident to or in conjunction with such operations, including preparation for market, delivery to storage or to market or to carriers for transportation to market; and usage of land in furtherance of educational and social goals, such as 4-H, Future Farmers of America, and the like.

GENERALLY ACCEPTED AGRICULTURAL PRACTICES -- Those methods used in connection with agricultural operations which do not violate applicable federal, state, or local laws or public health, safety, and welfare and which are generally accepted agricultural practices in the agriculture industry. “Generally accepted agricultural practices” includes practices which are recognized as best management practices and those methods which are authorized by various governmental agencies, bureaus, and departments, such as the Carroll County Cooperative Extension Service of the University of Maryland, the Carroll County Natural Resource Conservation Service, and the like. If no generally accepted agricultural practice exists or there is no method authorized by those agencies mentioned herein which governs a practice, the practice is presumed to be a generally accepted agricultural practice.

§ 173-3. Limitation of actions.

A. A private action may not be sustained with respect to an agricultural operation conducted on agricultural land on the grounds that the agricultural operation interferes or has interfered with the use or enjoyment of property, whether public or private, if the agricultural operation was, at the time the interference is alleged to arise, conducted substantially in accordance with generally accepted agricultural practices.

B. Notwithstanding any provision of this section, no action alleging that an agricultural operation has interfered with the reasonable use or enjoyment of real property or personal well-being shall be maintained if the plaintiff has not sought and obtained a final judgment of the agricultural reconciliation committee, as defined in § 173-4 herein.
§ 173-4. Resolution of disputes and procedure for complaints; investigation and declaration.

A. Nuisances which affect public health.

(1) Complaints. A person may complain to the Carroll County Health Department to declare that a nuisance which affects public health exists.

(2) Investigations. The Health Officer may investigate all complaints of nuisance received against an agricultural operation. When a previous complaint involving the same condition resulted in a determination by the Health Officer that a nuisance condition did not exist, the Health Officer may investigate the complaint, but the Health Officer may also determine not to investigate such a complaint. The Carroll County Health Department may initiate any investigation without citizen complaint.

(3) Declaration of nuisance. If the Health Officer determines that a nuisance exists, the Health Department may declare the existence of a nuisance. In determining whether a nuisance condition exists in connection with an agricultural operation, the Health Officer shall apply the criteria provided in this chapter. Further, the Health Officer may consider the professional opinion of the Carroll County Cooperative Extension Service of the University of Maryland, or other qualified experts in the relevant field in determining whether the agricultural operation being investigated is conducted in accordance with generally accepted agricultural management practices.

B. Resolution of disputes regarding agricultural operations.

(1) Should any matter arise regarding an interference with the use or enjoyment of property from agricultural operations conducted on agricultural land, the parties to that matter shall submit the matter to the Agricultural Reconciliation Committee by first contacting the Agricultural Land Preservation Program Administrator, Carroll County Department of Planning, 225 North Center Street, Westminster, Maryland, 21157. [Amended 11/21/02 by Ord. No. 02-18]

(2) There is hereby established the Carroll County Agricultural Reconciliation Committee, which shall arbitrate and mediate disputes involving agricultural operations conducted on agricultural lands and issue opinions on whether such agricultural operations are conducted in a manner consistent with generally accepted agricultural management practices.

(3) The Agricultural Reconciliation Committee shall be composed of five persons. The Carroll County Board of County Commissioners shall appoint the members of the Agricultural Reconciliation Committee, one member shall be from a municipality and chosen from a list of recommendations submitted by the Carroll County Chapter of the Maryland Municipal League, one member shall be a member of a homeowners' association and a resident of Carroll County, one member shall be a resident of Carroll County who is not engaged or otherwise has a pecuniary interest in the commercial practice of agriculture, and two members who shall be members of the Agriculture Commission and selected as set forth herein. The Agriculture Commission shall select from among its members on a case-by-case basis, two people with competence in the subject matter of the dispute at issue, whose names shall be submitted to the
Board of County Commissioners and upon the Board's approval shall serve as members of the Agricultural Reconciliation Committee.

(4) The Agricultural Reconciliation Committee will conduct its proceedings in an informal manner, and the rules of evidence shall not apply. The Agricultural Reconciliation Committee has the power, but is not required hereunder, to hold hearings, to compel testimony under oath and the production of documents. In each case before it the Agricultural Reconciliation Committee shall issue orders settling or otherwise resolving controversies arising out of agricultural operations, including but not limited to the invasion of property and personal rights by agricultural operations conducted on agricultural land. Proceedings shall be conducted in accordance with the duly adopted Rules of Procedure for the Carroll County Agricultural Reconciliation Committee which may be amended from time to time. The Reconciliation Committee will render a written decision within 30 days of the final proceedings and may extend the decision deadline for one additional 30-day period. [Amended 11/21/02 by Ord. No. 02-18]

(5) Orders of the Agricultural Reconciliation Committee shall be binding on the parties as a matter of law, but their enforcement shall be suspended by operation of law if, within 30 days of the date of the Committee's judgment, a party appeals such order to the Circuit Court for Carroll County. Appeal from orders of the Committee shall be by a trial de novo.

(6) If the Agricultural Reconciliation Committee or a Court finds that the conduct of a party in bringing or maintaining an action in connection with an agricultural operation conducted on agricultural land was in bad faith or without substantial justification, the Reconciliation Committee or Court may require that party to pay to the owner of the agricultural operation (or any other party opponent) the costs of the proceeding and the reasonable expenses, including reasonable attorney's fees, incurred by that party in defending against the action.

§ 173-5. Right-to-farm notice and real estate transfer disclosure.

A. Upon any transfer of real property by any means, the transferor shall provide the purchaser or lessee a statement specifically advising the purchaser or lessee of the existence of this chapter which shall be in substantially the form set forth in Appendix A at the end of this chapter.

B. Any person who violates any provision of this section is guilty of an infraction punishable by a civil penalty not exceeding $100.00. Failure to comply with any provision of this right-to-farm notice and real estate transfer disclosure section shall not prevent the recording of any document, or the title to real property or any mortgage or deed of trust made in good faith or for value, and it shall not affect the application of this chapter. [Amended 11/21/02 by Ord. No. 02-18]
APPENDIX A
REAL ESTATE TRANSFER DISCLOSURE STATEMENT

THIS DISCLOSURE STATEMENT CONCERNS THE REAL PROPERTY LOCATED IN THE COUNTY OF CARROLL, STATE OF MARYLAND, DESCRIBED AS ________________________. THIS STATEMENT IS A DISCLOSURE OF THE EXISTENCE OF THE CARROLL COUNTY RIGHT TO FARM ORDINANCE IN COMPLIANCE WITH CHAPTER 173 OF THE CODE OF PUBLIC LOCAL LAWS AND ORDINANCES OF CARROLL COUNTY (RIGHT TO FARM).

SELLER'S INFORMATION

THE FOLLOWING ARE REPRESENTATIONS MADE BY THE SELLER AND ARE NOT THE REPRESENTATIONS OF THE AGENT(S), IF ANY. THIS INFORMATION IS A DISCLOSURE AND IS NOT INTENDED TO BE PART OF ANY CONTRACT BETWEEN THE BUYER AND SELLER.

AGRICULTURAL OPERATIONS (as defined in the Carroll County Right to Farm Chapter) LAWFULLY EXIST IN ALL ZONING DISTRICTS WITHIN THE COUNTY. You may be subject to inconveniences or discomforts arising from such operations, including but not limited to noise, odors, fumes, dust, flies, the operation of machinery of any kind during any 24-hour period (including aircraft), vibration, the storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, and pesticides. Carroll County has determined that inconveniences or discomforts associated with such agricultural operations shall not be considered to be an interference with reasonable use and enjoyment of land, if such operations are conducted in accordance with generally accepted agricultural management practices. Carroll County has established a reconciliation committee to assist in the resolution of disputes which might arise between persons in this county regarding whether agricultural operations conducted on agricultural lands are causing an interference with the reasonable use and enjoyment of land or personal well being and whether those operations are being conducted in accordance with generally accepted agricultural practices. If you have any questions concerning this policy or the reconciliation committee, please contact the Carroll County Planning Department for additional information.

Seller _________________________               Date: ____________________

Seller _________________________               Date: ____________________

I/WE ACKNOWLEDGE RECEIPT OF A COPY OF THIS STATEMENT:

Buyer__________________________             Date:____________________

Buyer__________________________             Date:____________________

IF YOU DESIRE LEGAL ADVICE, CONSULT YOUR ATTORNEY.
APPENDIX B
CARROLL COUNTY RIGHT TO FARM NOTICE

Carroll County recognizes and supports the right to farm agricultural lands in a manner consistent with generally accepted agricultural management practices. Residents of property on or near agricultural land should be prepared to accept the inconveniences or discomforts associated with agricultural operations, including but not limited to noise, odors, flies, fumes, dust, the operation of machinery of any kind during any 24-hour period (including aircraft), vibration, the storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, herbicides and pesticides. Carroll County has determined that inconveniences or discomforts associated with such agricultural operations shall not be considered to be an interference with reasonable use and enjoyment of land, if such operations are conducted in accordance with generally accepted agricultural practices. Carroll County has established an agricultural reconciliation committee to assist in the resolution of disputes which might arise between persons in this county regarding whether agricultural operations conducted on agricultural lands are causing an interference with the reasonable use and enjoyment of land or personal well being and whether those operations are being conducted in accordance with generally accepted agricultural practices. If you have any questions concerning this policy or the reconciliation committee, please contact the Planning Department.
APPENDIX B

Conservation Program Structures
Structure Options

Depending on the County’s interests and capabilities, as well as those of other public and private partners in the region, there are several different structures that a Johnston County PDR program could assume. The benefits and drawbacks of three potential structures are described below.

STRUCTURE 1: County staff manages program and completes PDR projects

Benefits
- Provides County greater control of projects
- Reduces administrative costs for other partners

Drawbacks
- Increases County staff costs and potential legal liability
- Limits use of other public and private sector resources
- Requires significant staff expertise in land transactions

STRUCTURE 2: County hires contractor to manage program and projects (e.g., New York City Catskill Watershed Program)

Benefits
- Provides County greater control of projects
- Utilizes private sector expertise in land transactions

Drawbacks
- Increases cost to Johnston County and potential legal liability
- Limits use of other public sector resources

STRUCTURE 3: County staff oversees grants to towns or land trusts

Benefits
- Reduces County cost, staff requirements, and potential legal liability
- Leverages significant public and private sector resources

Drawbacks
- Affords County less control of projects

It is recommended that Johnston County pursue the third program structure and establish a matching grants program. This program would provide up to 50 percent of the funds required to purchase conservation easements on priority farmland. This approach is appropriate for Johnston County as it would compliment other public and private farmland protection efforts currently underway and would reduce the County’s overall program costs.
Governance

Several entities could have official oversight over a Johnston County PDR program, including:

- Johnston County Voluntary Agricultural District Board.
- Johnston County Soil and Water Conservation District.
- Johnston County Commissioner Committee
- a newly created PDR Program Committee.

It is recommended that Johnston County pursue the fourth option by creating a new Johnston County PDR Program Committee. This approach is beneficial as it: 1) dedicates a specific body to overseeing the county PDR program, 2) is best suited to integrating Johnston County’s interest in protecting farmland and open space, 3) can integrate the multiple groups interested in protecting farmland and open space in Johnston County. This newly formed committee should have representatives from:

- Johnston County Farm Bureau
- Conservation organization(s)
- Local farmers
- Local Forest Products Operators
- Municipal Government
- Johnston County Commission
- Johnston County VAD
- Johnston County Soil and Water District
- Johnston County Cooperative Extension
- Johnston County Planning Department

This new committee should have formal oversight responsibilities for the Johnston County PDR program. Specifically, the committee should:

1. define program objectives, including conservation targets for overall farmland protection goals
2. develop formal ranking criteria for evaluating potential projects
3. create an application form for all potential open space and farmland projects
4. establish an application process
5. coordinate public outreach efforts about the Johnston County PDR program
6. review pending applications and select program recipients
7. identify transaction tasks that must be completed prior to distribution of Johnston County funds
8. oversee the completion of accepted projects to insure program requirements are fulfilled
9. evaluate the operations of the Johnston County PDR program and make recommendations to the Johnston County Commissioners about ways to improve the program.

Operations

It is recommended that the Johnston County Soil and Water District provide staff support for the previously described Johnston County PDR Program Committee. However, this staff
Agricultural Conservation Easements

Agricultural conservation easements are designed to keep land available for farming and to support continued farm viability and productivity. In general, agricultural conservation easements limit subdivision of the property, non-farm development, and other uses that are inconsistent with commercial agriculture. Most of these agreements permit commercial development related to the farm operation and the construction of farm buildings. However, they do not restrict farming practices or require public access to the property.

One issue that Chatham County should pay close attention to is the affordability of farmland after it has been protected by an agricultural conservation easement. Some parts of the country – most notably in Massachusetts – have seen the price of protected farmland grow beyond the capability of farmers to purchase. These rising values are caused by competition from non-farmers that seek small farm estates who have the ability to pay significant sums of money for these properties.

As a result, the State of Massachusetts has required that all agricultural conservation easements (known as agricultural preservation restrictions) purchased by the State have a clause that gives the state a transferable right to repurchase the property at its agricultural value. Thus, when a protected farm property comes up for sale, the State has the right either to purchase the property at its agricultural value and re-sell it or transfer this purchase right to another farmer interested in buying the property. Under the state law, the land must remain in agricultural use.

This clause has been somewhat controversial in Massachusetts as it can be seen as having the effect of reducing the resale value of a protected farm property. However, Massachusetts' officials have responded that any diminution in value should be accounted for by an appraisal at the time of purchase so there should be no loss to the original landowner.

Chatham County should well heed the issue of farm affordability. Due to its proximity to Raleigh, it is likely that there will be strong competition between farmers and non-farmers for purchases of protected farmland. This competition could lead to the same problems noted in Massachusetts. Chatham County is strongly advised to consider requiring the inclusion of an option to repurchase at agricultural value clause in any conservation easements it helps purchase on farmland.

Assuming that the recommended program structure is accepted (a matching grants program), Johnston County Soil and Water District Staff should undertake the following limited operations:

1. assist the PDR Program Committee in the previously described functions
2. create educational materials for local officials and landowners about the Johnston County PDR program
3. collaborate in conducting educational workshops for local officials and landowners about PDR programs and conservation easements
4. assist in writing grants to leverage State, federal, or private funding
5. evaluate proposed agricultural conservation easements to insure consistency with principles outlined in the Johnston County Agricultural Development Plan
6. work with partner organizations, such as TLC, in the completion of accepted projects
7. review monitoring and stewardship efforts of grantees.

Application Process
Johnston County should establish an application process to solicit applications from interested towns and land trusts. In the program’s first year, it may be desirable to have a Request for Proposals (RFP) to broadly announce the new program and its availability to towns and land trusts on the behalf of landowners.

However, in future years, Johnston County should consider establishing minimum acceptance criteria and accepting applications year-round. If an application met the determined standard, it would be placed on a program waiting list. When funds become available, they would be allocated in the application order. Applications should be screened with the following evaluation criteria.
DRAFT ELIGIBILITY CRITERIA

To be eligible to participate in a County support Purchase of Development Rights program, the applicant property(s) must meet the following basic requirements:

☐ AGRICULTURAL DISTRICT: Property must be enrolled in a Voluntary Agricultural District or Enhanced Voluntary Agricultural District.

☐ DEVELOPABILITY: Applicant property must be developable based on zoning, soils, and other physical characteristics of the property (wetlands, steep slopes, etc.).

☐ ENCUMBERANCE: Applicant property may not be wholly encumbered by another restrictive easement or similar encumbrance.

☐ SIZE: Applicant property offered as a single easement, or in combination with others, must comprise at least 100 acres. Note: Individual applicants with fewer than 100 acres must demonstrate that the acres are contiguous to permanently preserved parcels and will serve a valuable in-fill purpose.

☐ SOILS: Applicant property must contain at least 50 percent Class I, II, or III soils or soils classified as “Unique” by the Natural Resource Conservation Service.

☐ STEWARDSHIP: Land must have a Soil Conservation and Water Quality Plan, Forest Management Plan, Nutrient Management Plan, Concentrated Animal Feeding Operation (CAFO) Plan, or similar plan.

☐ TAX STANDING: Applicant must be in good standing with local, state, federal tax authorities.

DRAFT Ranking Formula

Once an applicant has passed the initial screening outlined above, the applicant will be ranked against concurrent applications using the following formula. (Maximum score is 160)

Farm Characteristics  (Maximum: 60 Points)

1. Soil Quality (Maximum: 30 points)
   Applicant property has 60% or greater Class I and II soils (30 points)
   Applicant property has 40% to 59% Class I and II soils (20 points)

2. Size of Application (Maximum: 30 points)
   Application represents more than 200 acres (20 points)
   Application represents 100 to 199 acres (10 points)
   Application represents less than 100 acres, but is contiguous to permanently preserved parcels of more than 100 acres (5 points)
   Application represents contiguous acreage (10 points)
### Location Factors (Maximum: 75 points)

3. **Adjacency to Agricultural Land** (Maximum: 20 points)  
   - Applicant property is adjacent to permanently protected land (20 points)  
   - Applicant property is within ½ mile of permanently protected land (10 points)  
   - Applicant property is adjacent to actively farmed land (10 points)

4. **Adjacency to water and sewer service, highway access points, or principal/major arterial roadway** (Maximum: 20 points)  
   - Adjacent to water or sewer lines (10 points)  
   - Adjacent to highway access points or principal/major arterial roadway (10 points)  
   - Proximate to (within ½ mile) water or sewer lines (5 points)  
   - Proximate to (within ½ mile) highway access points or principal/major arterial roadway (5 points)

5. **Adjacency to developed areas** (Maximum: 10 points)  
   - Adjacent to municipalities and designated development areas (10 points)  
   - Adjacent to Extraterritorial Jurisdictions (5 points)

6. **Road Frontage** (Maximum: 10 points)  
   - Total feet of road frontage (up to 5,000 feet) 

7. **Development Pressure** (Maximum: 5 points)  
   - Town growth rate (5-yr simple average of new housing units) exceeds County growth rate (5 points)

8. **Adjacency to critical environmental areas or unique natural resources** (Maximum: 10 points)  
   - Adjacent to or within a critical or unique environmental resource (e.g. Neuse River watershed, planned reservoir watershed, etc.) (10 points)

### Discretionary Points (Maximum: 25 points)

At its own discretion, the County may award up to 25 points to an applicant’s ranking score based on qualitative considerations or specific, localized conditions at the time of the application. The rationale for awarding such points should be clearly delineated and may include factors such as:

- Value of the easement purchase (cost of easement relative to appraised value)
- Consistency of application with County, town, and municipal plans
- Imminent sale or intergenerational transfer
- Operational continuity
- Exceptional scenic value
- Economic productivity
- Cultural or historic significance (e.g., Bentonville Battlefield)
- Important agricultural infrastructure.
APPENDIX C

Installment Purchase Agreements
Introduction

The use of installment purchase agreements to save farmland is an innovative funding mechanism that has generated a great deal of interest as PACE programs gear up around the country. Its two-fold purpose is to help programs successfully compete with developers by providing unique financial and tax advantages to landowners and to enable jurisdictions to leverage present and future revenues to protect land while it is still available. First applied to the purchase of development rights in Howard County, Maryland in 1989, installment purchase agreements are now being used in a number of other jurisdictions as well to protect farmland.

What is an installment purchase agreement?

An installment purchase agreement (IPA) to save farmland is an alternative to a lump sum payment for the purchase of an agricultural conservation easement (PACE). Jurisdictions with PACE programs may use this landowner payment method if it suits their goals and conditions are right. An IPA is used by a governmental entity to buy agricultural conservation easements and pay for them over time, with dedicated revenues and maturing zero coupon bonds purchased at closing.

What are its components?

An agricultural conservation easement is a binding legal instrument, recorded in the land records, that restricts land to its agricultural and natural resource uses. The landowner continues to own the land and may sell it for its restricted value. The easement is permanent and binds all future owners as well.

An installment purchase agreement is the vehicle of payment by the jurisdiction to the landowner. Instead of cash at settlement, the landowner is given an installment purchase agreement, which is a legal, valid, and binding promise to pay in 20 or 30 years (typical time periods). While the principal will not be paid until the end of that time period, tax-free interest on the face value of the IPA will be paid to the landowner (or whomever holds the IPA) twice a year for the term of the agreement. While IPAs are used to buy permanent easements that bind all future owners of the land, the IPA itself is separate from the land and the easement and can be transferred to someone other than the original grantor of the easement.

A dedicated revenue source is a steady income stream to the jurisdiction during the term of its IPA commitments that is used to make the interest payments to the holders of the IPAs.

A zero-coupon bond is the means of financing the principal “balloon” payment at the end of the term of the IPA. A jurisdiction buys these U.S. Treasury bonds at a deep discount from their face value because they pay no periodic interest payments. Instead, the interest from the zero-coupon bond builds up over time (accrues) and is paid in a lump sum at maturity when the bond is redeemed at its face value. After buying the “zero,” the government entity simply holds it until maturity into order to make the final principal payment to the holder of the IPA.
How does it work?

A landowner voluntarily applies to sell an agricultural conservation easement to a government farmland preservation program. After going through a process of eligibility determination, public notice, priority ranking, price determination, and official approval action, a date is set for settlement of purchase of the easement. The day before settlement, the jurisdiction purchases a zero-coupon bond with a face value equal to the purchase price of the easement. Because these bonds are deeply discounted, the jurisdiction only spends a small percentage (approximately 27 percent to 18 percent for a 20- to 30-year obligation) of the purchase price of the easement at the time of sale. On that same day, the interest of the IPA is locked into an amount at least equal to the yield on the zeros purchased. A jurisdiction may choose to guarantee a minimum interest rate on the IPAs for predictability during the easement acquisition process. If this is the case, on the day of settlement, the interest rate to the landowner from the IPA is the higher of the jurisdiction’s minimum or the zero’s yield. This interest remains the same throughout the term of the IPA.

At settlement, the landowner grants a permanent agricultural conservation easement to the jurisdiction that is recorded in the land records. An IPA, which has the full faith and obligation of the jurisdiction behind it, is given to the landowner to hold until the end of its term (typically 20 or 30 years). The jurisdiction makes twice yearly interest payments to the holder of the IPA over this term. These interest payments come from whatever identified revenue source the jurisdiction has established.

Why use it?

The use of installment purchase agreements has advantages for both the landowners and the jurisdiction purchasing conservation easements.

The landowner, who has sold the easement and accepted an installment purchase agreement as compensation, receives semi-annual interest payments on the face value of the IPA. This stream of interest income over the term of the agreement (typically 20 or 30 years) is tax exempt from federal, State, and local income taxes. By entering into an IPA for the sale of a conservation easement, landowners may defer capital gains until they actually receive the principal amount at the end of the term.

If the landowner needs to realize the purchase price of the easement during the term of the agreement, the IPA can be securitized, that is, sold on the bond market. This particular course of action does trigger capital gains, however. The ability to sell the IPA offers flexibility for better estate planning. If they choose, the heirs can sell the IPA, rather than having to sell the land to pay estate taxes.

As with lump sum payments for easements, if landowners agree to a price for the easement that is less than its appraised value, they may be able to realize a charitable tax deduction on their federal income taxes for the difference.
All of these financial and tax advantages are in addition to the traditional advantages to selling an easement, rather than selling out to development – namely, the ability to keep one’s home, land and livelihood. As one Howard County farmer said when weighing his choices, “It’s not what you get; it’s what you get to keep!”

When a jurisdiction enters into an IPA with a landowner, it purchases zero-coupon bonds for the face value of the easement. The “zeros” cost the jurisdiction approximately 10 percent of their face value. The jurisdiction holds this bond while it accrues in value and then uses it to pay the “balloon” principal payment at the end of the term of the IPA. The use of these two components offers several advantages to jurisdictions. Payment with an IPA requires minimal depletion of program funds while protecting large numbers of acres at a critical point in time. By financing the principal payments with zeros, the jurisdiction leverages dollars over time but does not leave future governments with balloon payments.

The landowner’s “bundle of benefits” – financial, tax, flexibility, and intangibles – can make the jurisdiction’s offer competitive with developers and may make some landowners willing to sell easements at less than full easement value. This allows for further leveraging of current dollars by the jurisdiction.

History

The use of installment purchase agreements for farmland protection was pioneered in Howard County, Maryland in 1989. Equidistant between Baltimore, Maryland and Washington, D.C., Howard County experienced intense development pressure in the 1970s and 1980s. The county participated in the state purchase of development rights program for a number of years, beginning in 1980. In 1982, after a public referendum, the county began its own program, funded by a dedicated portion of a 1 percent real estate tax. By 1987, the state and county programs had protected 7,500 acres. The late eighties brought intense development pressure and the purchase of development rights program stalled because land prices had risen dramatically and the lump sum payments were not nearly enough to be a viable option for farmers. The farmland available for protection was rapidly diminishing and the county was challenged to find a way to make the program work or give up on ten years of farmland protection.

The solution came in the form of a reinvigorated program, conceived by financial advisor Daniel P. O’Connell, that combined installment purchase agreements and zero-coupon bond financing with traditional elements of a farmland protection program. Directed by the County Executive, county agencies, financial advisor, and bond counsel worked together to develop the innovative approach. Once up and running in 1989, the county began buying easements at a rate that allowed it to double, in the first three years, the acreage accomplishments of the previous ten years. It became a viable alternative to development for almost 80 landowners, preserving another 9,000 acres, to date. In the process, it has allowed the county to leverage $9 million upfront and $3 million annually to enter into $55 million worth of IPAs. Ten of the IPAs have been sold by landowners through competitive bids to local brokerage firms in order to liquidate them. In 1990, the new program won the Government Finance Officers Association Award for Excellence in Financial Management.
Since then, Harford County (Maryland), Burlington County (New Jersey), Peninsula Township (Michigan), and Virginia Beach (Virginia) have developed PACE programs using installment purchase agreements and zero-coupon bonds.

**Transferability**

The basic concept of paying for preservation easements through a long-term installment purchase agreement offering tax-exempt interest income and principal at the end of the term should be applicable in other public jurisdictions. The financing plan is adaptable for use by a jurisdiction that 1) seeks to preserve for public purposes valuable assets owned by individuals, 2) is enabled under State and any applicable local laws to enter into bonding multi-year obligations, and 3) has a predictable cash flow for the term of the obligation.

**Issues to Consider**

*Dedicated revenue stream* – Since IPAs have the “full faith and obligation” of the jurisdiction behind it, the interest payments must be made throughout the term of the agreement. The ability to make the interest payments should be secured with a dedicated revenue source to ensure the smooth operation of the financing mechanism. The act of dedicating a revenue source to farmland protection, rather than leaving it to the uncertainties of annual budget allocations, reinforces the notion that farmland protection is a long-term investment, both in the land base for agriculture and in growth management.

*Administrative costs* – Once the program is set up, most of the operating expenses are those that accompany the running of the easement program itself, rather than the IPA. Somewhat more support from the county’s legal and finance departments may be needed and the county’s bond counsel assists in each settlement. A bank, serving as paying agent, mails semi-annual checks to IPA holders.

*Authority* – Since IPAs constitute long-term debt, each agreement will require approval of the purchaser’s governing body in the same manner that bonds require approval. Different state and local laws may mandate voter or State regulatory/legislative approval, and may dictate the time and terms of each IPA. Finally, any State or local limitations on negotiating the sale of IPAs with balloon payments at the end will need to be addressed, potentially by using another government agency or authority as a conduit for payments. In general, however, a local government can enter into IPAs if it can negotiate the sale of general obligation bonds.

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Princeton, NJ 08542-0190
609-279-0068
## PAYMENT COMPARISON

### Farmer Jones – 102 acres

<table>
<thead>
<tr>
<th>Lump Sum Method</th>
<th>Installment Purchase Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>102 acres</td>
<td>102 acres</td>
</tr>
<tr>
<td>Easement valued at $3,500/acre</td>
<td>Easement valued at $3,500/acre</td>
</tr>
<tr>
<td><strong>$357,000</strong></td>
<td><strong>$357,000</strong></td>
</tr>
<tr>
<td>Direct cash payment</td>
<td>Installment purchase agreement</td>
</tr>
<tr>
<td><strong>$357,000</strong></td>
<td>6.5% tax free interest for 30 years</td>
</tr>
<tr>
<td></td>
<td>$357,000 x 6.5% = $23,205 annually (in semi annual payments)</td>
</tr>
<tr>
<td></td>
<td><strong>$23,205</strong></td>
</tr>
</tbody>
</table>

### CUMULATIVE EFFECT

- Total Tax free interest paid over 30 years **$696,150**
- Principal payment after 30 years (subject to capital gains) **$357,000**
- Total benefit to farmer minus 25% in taxes **$357,000**
- Total benefit to farmer **$1,053,150**
- Depletion of Farmland Protection Fund **$357,000**
- Initial county cost to secure easement **$35,700**
APPENDIX D

Term Easement Programs
Program Descriptions

Agriculture Term Easements or Leasing of Development Rights (LDR) are perhaps best described as “Term Agreements.” All are phrases used to describe a voluntary mechanism to temporarily suspend the potential development of agricultural real estate for a definitive time frame in exchange for some contractual (monetary or otherwise) consideration.

The length of the term of the agricultural agreement will vary depending on the goal of the program. Unlike most PDR programs that remove the development right for a perpetual period, the agreed upon price for a shorter term should require less monetary consideration (or other types of compensation) as the term is shortened.

For example, the price offered for a PDR typically uses an approach of taking the difference of the current “best use” appraised value minus the agricultural value. This method results in areas with the most development pressure attracting the higher PDR values. This has proven to be effective, but does require significant capital investment and commitment to buy PDRs.

Conversely, term agreements do not necessarily result in the same “lost value” approach. Such would be the case when the term (speculation period) is reduced within a reasonable planning horizon. Factors that affect an acceptable price for a willing seller may change considerably when the term is much shorter and do not necessarily coincide with the loss of the land’s development value.

At the purest level, term agreements are very similar to a landowner leasing a property to a farmer to be used entirely for an agricultural operation. If, during the term of the lease, the land owner wanted to change the use of the property, the lease would have to be renegotiated with all parties agreeing to make the changes.

Examples of Usage

In Southern Maryland, an effort to entice farmers to halt production of tobacco included payments made over a ten-year period to the farmer based on the quantity of voluntary forgone tobacco production. In return for the money, the farmer entered a covenant that included a promise to keep the real estate in farming. This met the region’s goal of stopping the production of tobacco and protecting the agricultural land base without disadvantaging the underlying agricultural infrastructure.

The Massachusetts Farm Viability Program requires farmers that accept grants and technical assistance to place a development term agreement on the farm real estate. Depending on the size of the farm, the owner enters term agreements of either five or ten years. The State anticipates the benefit of the training, improved economics from the farm, and the time afforded for the various land planning and PDR strategies.

Given the long production cycle of most managed forests, term protection is often a valuable means to protect access to the resource. This is particularly true in areas with significant
hardwood resources such as Chatham County, which has 102,000 acres of hardwood forest types with a production cycle of thirty years or longer. States such as Delaware and New York have developed thirty-year term easement programs that significantly restrict development rights on protected lands in exchange for a property tax abatement. Delaware’s program is authorized by the Commercial Forest Plantation Act (Title 3, Chapter 26) which gives landowners a property tax exemption for forests that are managed for timber production. In order to qualify for this thirty (30) year exemption, landowners must have at least ten contiguous forested acres and follow a forest management plan approved by the Delaware Forest Service.

**Issues Associated with Term Agreements**

Term agreements, by themselves, do not easily fit long-term farmland protection goals. Several states have tried to use term agreements of 25 years or more only to find them expensive and cumbersome. Both Vermont and Pennsylvania found the capital expended to attract a long-term easement was not much different than the capital needed for perpetual PDRs.

Term agreements can be attractive when the goal of the program is not solely to preserve the real estate. Term agreements are best used when both the farmer and the municipality share the burden of *enhancing farm viability*. The combination of a relatively short-term period (less than 10 years) and decoupling the monetary consideration with a perceived “lost development” value communicates the goals and can better balance the pricing mechanisms.

**Applicability of Term Easements in Johnston County**

Johnston County has a very diverse base of agricultural real estate due to the various degrees of development pressure and types of soils. This diversity results in towns having very different land planning and economic policies. Compounding the problem is the rapid rate of the change in the demographics and current weak farm economy.

The municipalities’ need for immediate attention to the development pressure, along with the present economic concerns of land owners, has put some towns in the position of considering various types of development moratoriums and/or rezoning. The rate of change is making it extremely difficult for political policies to be lasting and widely accepted. Raising funds for PDR programs at a pace that properly abates the concerns may not be practical.

Using term agreements allows time for the planning process to catch up, while providing an incentive for farmers to maintain farm real estate, thus meeting both land planning and economic goals. For example, a five-year term agreement that is equivalent to a real estate tax or the price a farmer would pay to lease a property for five years will prohibit the real estate from being sub-divided, while improving the income of the farmer.

The pricing of the agreement does not necessarily need to be solely based on a monetary price per acre. Instead, the agreement may be in exchange for technical or non-specific funding programs. Programs similar to the Massachusetts program that requires recipients of loans,
grants etc., to participate in a term agreement are practical. But not all farmers have the same needs. Therefore, a term agreement program could include the real estate easement in exchange for a variety of services such as: training, loan or grant programs, flat out price-per-acre offers, or a combination of the factors. For example, if the farmer enrolls in an education program that further enhances the long-term viability of the farm community, he/she may be eligible for a higher value term agreement than the farmer who doesn’t want to participate in other programs. Or, if loans or grants are offered, there may be no additional monetary consideration for the term agreement, etc.

Other options to consider include the County establishing a minimum price per acre, with the option of the towns enhancing the value based on their own needs. In this example, the price set by the County may be based on the lowest denominator with the expectation that the towns could increase the value for the more developable properties.

Contractual agreements are necessary, but do not need to be cumbersome. They need to incorporate features that prohibit the property from being entered into a development process. Furthermore, they need to provide a “make whole” provision that fairly compensates the County and provides a reasonable disincentive to keep farmers from pulling out of an agreement. Of course, since these are not perpetual agreements, the key to success will be to keep the program simple, yet attractive, to landowners of the developable farms.
Agricultural Development Plan

For

Johnston County, North Carolina

SECTION II

AGRICULTURAL ECONOMIC DEVELOPMENT
FINDINGS AND RECOMMENDATIONS

~Prepared for the~

Johnston County
Voluntary Agricultural District Board

December, 2009
ACKNOWLEDGEMENTS

This project was funded by the North Carolina Development and Farmland Preservation Trust Fund (NCADFPTF) and the Johnston Voluntary Agriculture District Board, Johnston County Soil and Water Conservation District, and Johnston County Commissioners. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect those of the Johnston County Government or the Johnston County Voluntary Agricultural District Board.

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The researchers and authors of the report owe a debt of gratitude to the many organizations and individuals that participated in interviews and focus groups for this project.
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PROJECT BACKGROUND

Recommendations in this plan are drawn from empirical and anecdotal evidence collected during the study period of January, 2009 through June, 2009. During this period an extensive amount of data was collected, only a portion of which is presented in this document. Interpretations of this data were utilized in preparing both the findings and recommendations section of this report.

Also critical in this analysis is the inclusive definition of agriculture that should motivate future agricultural programs in Johnston County.

DEFINITION OF AGRICULTURE

This study uses a broad definition of agriculture that includes all aspects of the cultivation and production of plant material and animal products; as well as the marketing, processing and distribution of these products; and other secondary on-farm activities (e.g., agricultural tourism, forestry, and aquaculture).

INFORMATION RESOURCES

Empirical Data Sources: A statistical analysis of the region was conducted using information from the United States Census of Agriculture, Bureau of Economic Analysis, Regional Economic Information System, ERSI, I-Market, and County Business Patterns. Information from these sources was adjusted for rural and urban bias and inflation. Trend analysis was conducted over the last twenty years as appropriate.

Because the agricultural economy reaches beyond the County’s borders, ACDS, LLC defined a regional market area from which to draw comparative data. This market area includes the counties of Harnett, Nash, Sampson, Wake, Wayne, and Wilson. Collectively, these counties are used as a comparative benchmark.

Anecdotal Data Sources: Interviews were conducted with approximately 40 farmers, agricultural service professionals, public officials, and other interested parties throughout the region. Information was gathered on individual perceptions of the agricultural industry, potential for future growth, and the impact of public policy. This information was used to validate trends discovered in the empirical analysis as well as to discover underlying issues of importance to the industry.

Individual comments focused on eight broad issue areas. Interview issues focused on availability of next generation farmers, market access at both the retail and wholesale levels, sprawling development patterns in western Johnston County, expansion of extraterritorial jurisdictions, poor relations with non-farm neighbors, loss of agricultural infrastructure, transportation problems, access to land preservation programming, and water access for irrigation and livestock uses. The viewpoints expressed ranged from pessimistic to optimistic. One commonality among the farmers interviewed was the desire to continue farming and pass the farm on to a next
generation. Interview results are integrated into the recommendations of the overall “Agricultural Development Plan.”

IMPLEMENTING THE PLAN

In order for a strategic plan to be effective over the long-term, it must be a dynamic, living document. To maintain its focus and vision, the Agricultural Development Plan for Johnston County should become an integral part of the Voluntary Agricultural District Board’s annual work plan and should be supported by county, state and local agencies. The Voluntary Agricultural District Board should work with the County Commissioners; the Johnston County Planning Department; Johnston County Farm Bureau, Johnston County GIS office, North Carolina Cooperative Extension; the Soil and Water Conservation District; Johnston County Office of Economic Development, The Association of Johnston County Chambers of Commerce; municipal Governments; and others to develop specific, measurable goals and to report progress toward those goals on an annual basis.

Furthermore, the Voluntary Agricultural District Board should undertake a periodic review of progress made toward fulfilling the long-term priorities set forth in this document and to update them as appropriate to current conditions. It is further recommended that the review process be open to the public as a means to receive up-to-date input.
INDUSTRY ANALYSIS AND OVERVIEW

Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis is a tool used by strategic planners and marketers to assess the competitive environment of a region, industry, business, or product. It is a very simple technique that supports strategic decision making by identifying the key trends and leveraging events facing Johnston County agriculture today.

To provide an initial framework for the County, the strengths, weakness, opportunities, and threats were assessed for the agricultural industry overall to include production agriculture as well as agricultural support industries and consumer markets. The SWOT criteria identified are drawn directly from ACDS’ interviews with the agricultural industry and empirical data analysis which serves to confirm the more subjective input received from industry interviews. As such, this analysis should be considered an industry self-assessment validated by ACDS’ data analysis and extensive experience.

Strengths

Until 2004, the foundation of Johnston County’s agricultural economy was primarily in its crop sector. Crop value has historically been dominated by two sectors, tobacco (31 percent of crop receipts) and nursery-greenhouse production (62 percent of crop receipts). Because of their historic significance, both sectors have strong marketing infrastructure, production support, as well as producer associations. Both sectors are also important entry points for new farmers into the industry.

Since then, the livestock sector, particularly the hogs and pigs production, has accounted for the largest share of agricultural output. Hog production represents 32 percent of farm market value sold in the County in 2007, up from 30 percent in 2002. If the study was to include the poultry sector, which is a significant industry in the State, then the importance of the livestock sector would be even more pronounced.

Johnston County is and will continue to be a significant beneficiary of its proximity to the Raleigh-Cary consumer market. This strength is becoming increasingly important as fuel and transportation costs continue to rise. Additionally, the demographic characteristics of this market are quite favorable. The Raleigh DMA has an aggregate demand for food and beverage products of more than $4.1 billion and supports a population of approximately 2.8 million people, over 1 million households and a median income $43,669. While the median household income is below the national average, the area has many wealthy communities, like Cary ($75,122 median household income) which provide solid marketing opportunities. Trends over the years have shown that population and income levels have been improving in the County leading to net increases in population and consumption indicators, which bodes well for Johnston County’s livestock sector.
Weaknesses

Johnston County’s agricultural sector has evidenced weaknesses in several key areas. Key among them is the volatility of commodity prices in recent years, particularly in poultry production. Additional volatility is also expected in the hog industry, as the public has mistakenly associated the swine flu risks with pork consumption. Recent volatility is responsible for drastic swings in farm sales and operator profitability. Livestock sales declined 7 percent between 2005 and 2006 due largely to market shifts in the poultry sector. Farm proprietor income went from $30,400 in 2005 to $22,600 in 2006, a 26 percent one year decline. Such unpredictability makes it difficult for farm operators to make farming their sole means of income and decreases the entrance of new operators to the agricultural industry. Combined with the aging of the farm population, whose average age is 57, this situation has led to an increasing number of farm transfers and loss of farm acreage to development and other uses.

These issues together also contributed to consolidation of farm operations and a continued decrease in the number of farm operators. Related to this development are the land values, which, as they increase, diminish the viability of low margin farm operations such as grain and dairy farms, in favor of development, particularly for housing. Increasing development leads to a greater incidence of neighbor conflicts as remaining farming operations compete with residential concerns. As traditional agricultural sectors decline, due to what can best be described as a “negative feedback loop” of economic conditions, a difficult-to-reverse loss of skills, agriculture workforce, investment and infrastructure is likely to occur.

Real estate demand for residential development is another key weakness for Johnston County’s agricultural and forestry sectors. Currently, the County is one of the top 50 fastest growing counties in the United States (31st) driven by its proximity to Raleigh and the Research Triangle. This growth presents three fundamental problems. First is rapid rise in land cost tied to development value rather than resource use value. This often means that agricultural land with development pressure may have an excess development value of $18,000 per acre. Second, unplanned growth, which is commonplace in the County, causes high levels of land fragmentation. Such remaining plots are often too small to economically farm or forest. Third, and previously mentioned, the intermixing of industrial uses (agriculture and forestry) and residential uses is a recipe for land use conflict.

Opportunities

Due to Johnston County’s proximity to East Coast consumer market, agricultural producers have the opportunity to benefit from the increasing demand for locally-grown agricultural products. Niche markets and opportunities within segments of traditional agricultural sectors offer additional opportunities for growth. Locally produced foods, such as dairy, are examples of markets seeing increased demand, as evidenced by such national and regional retailers as Whole Foods, Harris Teeter, and Food Lion. These retailers have successfully developed and sustained strong linkages with “local” food producers to supply their retail outlets.

In addition to retailers, interest in local foods is high regionally among restaurants and institutional buyers, such as hospitals and schools. These outlets offer additional opportunities to
facilitate transactions between food producers and end users, in a manner that makes sense for businesses of varying scale and sophistication. An auction market and/or electronic/virtual market for farm products are two possible ways of transmitting product and pricing information from small producers to the consumer in the region. Either option can be done in conjunction with existing organizations and the State Farmers’ Market system.

Biofuel production and consumption offer another opportunity. Biofuels produced from agricultural feedstock can enable farmers to make use of waste or primary products and can reduce consumption of traditional fuels and their attendant higher costs. Expansion of federal tax breaks and “stimulus” funding is expected to significantly increase these opportunities regionally.

Renewable Energy in general, and biomass-to-energy more specifically, are the subject of numerous state and federal policy and incentive programs designed to foster the development of renewable energy resources and applications to reduce our dependence on foreign sources of energy and improve the environment. There are 47 forest industry power plants in North Carolina using a total of 3.64 million tons of throughput for at-place energy generation. This includes pulp and paper mills, sawmills, veneer/plywood mills, and oriented strand board facilities. Most of the facilities are located in the Piedmont region but the Northern Coastal Plain region consumes the highest level of inputs at 1.24 million tons. The findings suggest that at-place biomass usage in the State is thriving and that the key resources for self-generation are abundant in the State. The demand for biomass resources for independent use is strong, but the variety of at-place supply sources should not affect supply or efficiency of the overall chip and residue marketplace.

Increasing use of mitigation and banking for wetland restoration/creation and carbon sequestration are similarly creating market opportunity for Johnston County farmers as the industry is demanding larger and larger quantities of specialized plant material.

**Threats**

One of the biggest threats to agriculture is the volatility of commodity markets. These drastic price swings impact short- and long-term investment patterns and business planning efforts. Tied to this trend is the increased globalization of the agricultural supply chain. Globalization forces many local farmers to compete with lower costs of production around the world, lowering their profit margins. This is another factor necessitating the move towards direct marketing of agricultural products.

An additional threat that impedes food distribution for small producers and direct marketing is the existing structure of food distribution. The regional food system is set up to serve either the Raleigh metropolitan market or for distribution to major metropolitan centers along the east coast, such as New York City. Within this context, local producers often serve the function of first-shipper and are at the lowest price point in the distribution system. Local growers compete with imported products (this includes grains, produce, tobacco, and meat products), often without receiving the benefit of the transportation differential of being located in close proximity to
markets. Keeping a locally viable system of distributors and manufacturers is a means to lessen the impacts of this trend.

Agriculture is a very labor intensive industry, and uncertain labor availability is an increasing threat. The agricultural industry in Johnston is highly dependent on the use of foreign workers as in much of the Country’s agricultural sector. Clarification of their legal right to work is an issue which, if not resolved, threatens the survival of agriculture in the County.

High commodity costs driven by increases in fuel, nutrients, and agricultural chemicals, as well as diminished competition in service and supply is a nationwide threat for both agriculture and forestry. Each industry remains keenly focused on these trends particularly in this environment of depressed prices and low market activity.

<table>
<thead>
<tr>
<th>TABLE 1: SWOT MATRIX</th>
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<tbody>
<tr>
<td><strong>STRENGTHS</strong></td>
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<tr>
<td>1. Strong Production Sectors</td>
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<tr>
<td>2. Strong Private Sector/Entrepreneurial Interests</td>
</tr>
<tr>
<td>3. Proximity To Consumer Markets</td>
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<tr>
<td>4. Strong Government Interest And Support</td>
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<tr>
<td>5. Good Soils And Climate Resources</td>
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<tr>
<td><strong>WEAKNESSES</strong></td>
</tr>
<tr>
<td>1. Aging Farm Population</td>
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<tr>
<td>2. High Land Values</td>
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<tr>
<td>3. Parcel Fragmentation</td>
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<tr>
<td>4. High Risk For Nuisance Suits</td>
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<tr>
<td><strong>OPPORTUNITIES</strong></td>
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<tr>
<td>1. Growth In “Local” Food Consumption</td>
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<tr>
<td>2. Increased Institutional “Local” Food Purchasing</td>
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<tr>
<td>3. Rise Of Niche Markets</td>
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<td>4. Development Of Regional Biofuels Markets</td>
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<td>5. Expansion Of Use In Forest Biomass For Energy</td>
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<tr>
<td><strong>THREATS</strong></td>
</tr>
<tr>
<td>1. Volatile Commodity Prices</td>
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<tr>
<td>2. Supply Chain Consolidation</td>
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<tr>
<td>3. Globalization</td>
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<td>4. Input Costs</td>
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<td>5. Labor Availability</td>
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</table>
AGRICULTURAL ECONOMY

Agriculture in Johnston County is a developed and productive industry consisting of 1,245 farm enterprises on 128,227 acres of farmland. The current situation reflects an increase since 2002 from 1,144 farms but a net decrease in acreage, from 132,019 acres.

The local farming economy suffers from similar economic woes as the country’s farm economy as a whole. Chronically volatile commodity prices and rising farm costs have been a common trend both nationally and locally for traditional farm commodities, such as poultry and pork products – primary outputs of Johnston County agriculture.

While lower farm prices and higher costs are indeed national phenomena for agriculture, Johnston County farmers find their problems exacerbated by local conditions. The development growth emanating from the Raleigh-Cary metropolitan area and throughout the State has put pressures on local land and has presented alternatives to farming that discourage production agriculture. Recent declines in tobacco contracts have also been important indicators of the mood of agriculture in the County and set the tone for on-farm investment.

As evidenced in the table below, Johnston County still retains strong resources in the hogs, poultry, tobacco, and sweet potato sectors. The challenge the County faces right now is harnessing its strong agricultural base and continuing to grow in the face of ongoing changes and transitioning these into opportunities for future growth.

<table>
<thead>
<tr>
<th>TABLE 2: AGRICULTURAL HIGHLIGHTS</th>
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<tr>
<td><strong>Agricultural Sector</strong></td>
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<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Poultry</td>
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<tr>
<td>Hogs</td>
</tr>
<tr>
<td>Floriculture</td>
</tr>
<tr>
<td>Sweet potato</td>
</tr>
<tr>
<td>Tobacco</td>
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<tr>
<td>Total</td>
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</table>

*Source: 2002 and 2007 Agriculture Census, USDA.*

*2007 data withheld due to proprietary reasons, 2002 figure is used for comparison purposes.*
Dealing with the financial health of farm operators is a key starting point in this process and one that begins with supporting sectors such as hogs, poultry, and sweet potato. Floriculture has a lower share of agricultural output, but it could offer growth opportunities in the future nonetheless.

Due to the much-discussed volatility in commodity prices, farm income has barely risen in the last four years. However, many costs have steadily risen. These increases are contributing to dwindling farm margins and flat farm proprietors’ income (see Table 3 below). The main contributor to this condition has been the rising cost of production inputs, such as energy, production chemicals, agronomic services, repairs, taxes, and depreciation. These rapid increases in part reflect the more capital intensive nature of agriculture practiced in Johnston County.

| Table 3: Johnston County Farm Proprietors Income (in $1,000s) |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Cash receipts from marketing | 197  | 188  | 157  | 170  | 190  | 182  | 184  |
| Total production expenses | 170  | 172  | 187  | 191  | 207  | 204  | 200  |
| Total net farm proprietors' income | 82   | 72   | 15   | 27   | 28   | 30   | 23   |

*Source: Bureau of labor Statistics, Regional Economic Information System, Table CA-45.*

As with most agricultural communities across the nation, farm income in the region has fluctuated radically throughout this decade. The result is that farm income has to be supplemented with off-farm income sources, resulting in a greater need for services to support farmers in their endeavor to remain profitable and maintain viable enterprises. Given these prevailing economic realities, services such as incubators, investment advisory services, and access to state and federal grant assistance become critical in support of the agriculture sector.
AGRICULTURAL INDUSTRY TRENDS FOR JOHNSTON COUNTY, NORTH CAROLINA

Industry Trends

The following analysis is intended to provide a snapshot of Johnson County’s primary industry sub-sectors. Data used in completing this analysis comes from interviews as well as the National Agricultural Statistics Service.

Tobacco


<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tobacco farms</td>
<td>509</td>
<td>360</td>
<td>145</td>
</tr>
<tr>
<td>Number of harvested acres</td>
<td>16,713</td>
<td>8,532</td>
<td>11,232</td>
</tr>
<tr>
<td>Total value of tobacco sold ($1,000’s)*</td>
<td>42,157</td>
<td>24,301</td>
<td>28,707</td>
</tr>
</tbody>
</table>

*Inflation-adjusted using 2005 Price Paid by Farmers Index

Tobacco was historically the largest crop commodity of North Carolina’s agricultural economy accounting for an average of 30% of the State’s agricultural cash receipts through the 1980’s. However, in the past 20 years, tobacco has lost much of this share, now accounting for no more than 10%. This decline is evident in Johnston County as well, where the value of harvested tobacco dropped 42% between 1997 and 2002, due in large part to changes in federal policy.

An 18% increase was seen between 2002 and 2007 due to higher levels of contract production but the tobacco market is unlikely to recover its former dominance in the State and region. Because of this, transitional strategies are important and are expected to be varied based, in part, on the interests of the next generation. Land acquisition, finance, market development, and labor availability (and quality) are important factors for these operations and are very important elements of transition.
Cotton


<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cotton farms</td>
<td>74</td>
<td>56</td>
<td>39</td>
</tr>
<tr>
<td>Number of harvested acres</td>
<td>12,716</td>
<td>18,538</td>
<td>9,883</td>
</tr>
<tr>
<td>Total value of cotton sold ($1,000’s)*</td>
<td>3,664</td>
<td>1,662</td>
<td>2,016</td>
</tr>
</tbody>
</table>

*Inflation-adjusted using 2005 Price Paid by Farmers Index

Cotton farming indicators continue to decline, reflecting the many challenges the sector is facing. The number of cotton farms declined 24% between 1997 and 2002 before dropping another 30% between 2002 and 2007. Production improved between 1997 and 2002, as harvested acreage increased 46% but declined at nearly the same rate from 2002 to 2007. Downward pressure on prices has also contributed to the 55% drop in the market value of cotton sold between 1997 and 2002 but a 21% recovery was seen between 2002 and 2007.

Challenges in cotton production are expected to continue in the near future as prices will continue to stay low due to local factors, such as poor market conditions, and global conditions, such as World Trade Organization rulings on U.S. cotton pricing programs.

Sweet Potatoes


<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sweet potato farms</td>
<td>87</td>
<td>91</td>
<td>62</td>
</tr>
<tr>
<td>Number of harvested acres</td>
<td>6,151</td>
<td>8,337</td>
<td>8,700</td>
</tr>
<tr>
<td>Vegetables, melons, potatoes, and sweet potatoes ($1,000’s)*</td>
<td>n/a</td>
<td>7,787</td>
<td>13,204</td>
</tr>
</tbody>
</table>

*Inflation-adjusted using 2005 Price Paid by Farmers Index

Johnston County remains one of North Carolina’s top sweet potato growers and production trends are expected to stay strong. Harvested acreage grew 36% between 1997 and 2002 though growth was more modest at 4% between 2002 and 2007.

Sweet potato farming has traditionally been known as a major operation in terms of production scales so entry or exit is rare among operators, as evidenced by the addition of only four farmers between 1997 and 2002. However, a loss of nearly one-third of farmers was seen between 2002 and 2007. But this decline, along with the growth in harvested acres, reflects increasing efficiencies in production among remaining operators.
Floriculture


<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of farms</td>
<td>24</td>
<td>33</td>
<td>29</td>
</tr>
<tr>
<td>Square feet under glass</td>
<td>244,655</td>
<td>374,068</td>
<td>404,972</td>
</tr>
<tr>
<td>Acres in the open</td>
<td>14</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>Total value of floriculture sold ($1,000’s)**</td>
<td>727</td>
<td>n/a</td>
<td>2,311</td>
</tr>
</tbody>
</table>

*Includes bedding/garden plants, cut flowers and cut florist greens, foliage plants, potted flowering plants, and other bedding crops.

**Inflation-adjusted using 2005 Prices Paid by Farmers Index

Floriculture operations continue to show stability, as growth rates in farming operations and land use have been steady. Nine farms were added between 1997 and 2002 but four farmers left between 2002 and 2007. From 1997 to 2002, square feet under glass used for production increased 53% while acres used in the open grew 93%. Between 2002 and 2007, square feet under glass used grew only 8% while acres used in the open declined 4%. But returns to floriculture operations have shown higher growth rates, as evidenced by the 218% increase the total value of products sold between 1997 and 2007.

Cattle

Table 8: Cattle Data for Johnston County: 1997, 2002, 2007

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cattle farms</td>
<td>491</td>
<td>319</td>
<td>302</td>
</tr>
<tr>
<td>Number of beef cows</td>
<td>7576*</td>
<td>12,550</td>
<td>11,581</td>
</tr>
<tr>
<td>Total value of cattle sold ($1,000’s)**</td>
<td>1,513</td>
<td>1,657</td>
<td>1,920</td>
</tr>
</tbody>
</table>

*The number generally includes beef cows, milk cows, and other cattle.

Data for 1997 does not have other cattle.

**Inflation-adjusted using 2005 Price Paid by Farmers Index

Cattle farms and cattle inventories have been declining in recent years but the sector is benefitting from strong market conditions. The number of farms dropped 35% between 1997 and 2002 and another 5% between 2002 and 2007. An increase in cattle inventory of 66% was seen between 1997 and 2002, but 1997 estimates do not include other cattle which historically accounts for 45% of all cattle inventory. Between 2002 and 2007, inventory fell 8%.

Despite the declines in the number of farms and inventory, the value of cattle sold in the market continues to increase. Total value of sales grew 10% between 1997 and 2002 and 16% between 2002 and 2007. The increase was largely due to strong market conditions.
As the economy was growing then, prices and quantities demanded for beef also increased. But expectations on future trends remain uncertain, as the slowing economy might shift tastes and preferences to more affordable meat products such as chicken or pork.

**Poultry**

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Number of poultry farms</td>
</tr>
<tr>
<td>Number of poultry and eggs</td>
</tr>
<tr>
<td>Total value of poultry and eggs sold ($1,000’s)*</td>
</tr>
</tbody>
</table>

*Inflation-adjusted using 2005 Price Paid by Farmers Index

Poultry production continues to be one of North Carolina’s leading agricultural sectors, accounting for nearly 40% of the State’s farm income in 2007. Johnson County continues to contribute its share to the State’s output, as the total value of poultry products sold continues to grow. From 1997 to 2002, 12 farms began operations in the County while poultry and egg production grew 63%. The increases led to a 22% rise in the total value of poultry products sold.

**Figure 2: Poultry Inventory**
Broiler production grew 63 percent between 1997 and 2002 but declined 11 percent between 2002 and 2007. The decline can be attributed to the expansion of broiler production throughout the State, resulting in rising inventories in some counties and declining inventories in others. The share of broiler production in poultry operations in the County is approximately the same as the 82 percent share for the State.

The prominence of poultry operations and its lower capital requirements encouraged market entry but the trend could put pressure on production levels. From 2002 to 2007, the number of farms surged 79%, but poultry and egg production declined 11%. While total value of sales still grew 39%, the continued dominance of poultry production along with low entry barriers might lead to possible saturation and lower returns in the sector.
CASE STUDIES

CASE STUDY: RIGHT TO FARM LAWS AND FARM/NON-FARM CONFLICT RESOLUTION

Throughout the U.S., suburban sprawl has meant increased encroachment of housing and commercial development into formerly rural, agricultural-based communities. While zoning ordinances and agricultural preservation statutes have served to avoid many larger scale conflicts, other smaller conflicts, usually neighbor-to-neighbor, have still taken place. Resolving those conflicts without excessive litigation has become a priority for farming communities throughout the U.S. and has garnered the attention of the U.S. Department of Agriculture on a national level and numerous states and counties on the local level. Maryland’s counties have established ordinances, often called “Right to Farm” regulations. Broadly speaking, these ordinances seek to promote a clear understanding between agricultural operators and their non-agricultural neighbors with regard to what constitutes “normal” and allowable agricultural practices and practices which are in fact restricted.

Before the Right to Farm laws were enacted in many parts of the country (during the 1980s), courts shut down many farmer’s operations because it was considered a nuisance to neighbors. This of course conflicts with the economic development and rural character of many regions, not to mention the inherent rights of farmers. Several states list specific annoyances that are not considered a legal nuisance to neighbors. The lists include odor, noise, dust and the use of pesticides, the very conditions which, without the laws, could lead to a lawsuit by a neighbor. Most Right to Farm laws do not give farmers carte-blanche to conduct their business in any manner they please. Farmers are still required to be in compliance with state and federal environmental, health, safety and labor regulations. The critical issue of arbitration springs from the Right to Farm ordinances; as most Right to Farm ordinances contain mediation and arbitration provisions.

Suburban Sprawl: The Impetus for Right to Farm

According to U.S. Census figures and the most recent Agricultural Census, one-third of all farms and 18 percent of all farmland are located in or near major metropolitan areas. This does not include farm service firms such as horse borders, landscape services or even farmers’ markets. Greater suburban sprawl has also meant that agriculture has had to adapt to increased real estate prices, often resulting in partial or complete farm land sales. Many times land is sold to part-time or recreational farmers. This introduction of new agricultural producers can result in conflicts with existing or new residential landowners and served as the impetus for arbitration.
Right to Farm Laws in Frederick County Maryland-Overview

The following is excerpted from the Maryland Department of Agriculture and highlights the Right to Farm (RTF) Provisions in Frederick County Maryland.

The State law related to “Right to Farm” is found in the Maryland Annotated Code and Judicial Proceedings Article, Section 5-403 and applies to an “agricultural operation” defined as “an operation for the processing of agricultural crops or on-farm production, harvesting, or marketing of any agricultural, horticultural, silvicultural, aquacultural or apicultural product that has been grown, raised or cultivated by the farmer.”

If an agricultural operation has been:

- Underway for a period of 1 year or more and
- Is in compliance with applicable federal, State, and local health, environmental, zoning and permit requirements, and
- Is not conducted in a negligent manner,

Then:

- The operation, including any noise, dust, or insects from the operation may not be deemed to be a private or public nuisance, and
- A private action may not be sustained on the grounds that the operation interferes with the use or enjoyment of other property, whether public or private.

State law does not prohibit a federal, state or local government from enforcing the health, environmental, zoning or any other applicable law or permitting regulations.

**Ordinances**

In Maryland, nearly all the counties have RTF ordinances of some form. The two critical components of these ordinances are some type of real estate transfer notice, which notifies new purchasers of real estate in a county of the various Right to Farm provisions and outlines the types of issues that might later result in conflict and arbitration procedures. In Carroll County, Maryland’s disclosure statement specifically alerts purchasers that: “You may be subject to inconveniences or discomforts …including but not limited to noise, odors, fumes, dust, flies, the operation of machinery of any kind during any 24-hour period…”

The importance of these overlapping laws, ordinances and disclosures is that they avoid conflict and reduce the necessity for lawsuits, administrative proceedings or arbitration.

**Arbitration**

As is clear from the main provisions of the RTF ordinances cited above, the main objective is the avoidance of legal proceedings in the event of disputes between farm...
operators and non-farm neighbors, both new residents as well as long-time residents. However, when conflict cannot be avoided, the RTF ordinances do provide a venue to address unresolved conflicts.

Arbitration procedures and their implementation differ from county to county but Frederick County’s procedures offer an excellent case study in arbitration procedures. There are two ways to deal with complaints.

1. If a concern involves a public health issue, the complaint is made to the County Health Department. The Health Department investigates and determines if in fact a health violation exists.

2. Any other concern is submitted to the Agricultural Reconciliation Committee (ARC), which arbitrates and mediates disputes involving agricultural operations and makes legally binding decisions in disputes. The ARC is appointed by the County Commissioners and has seven members, comprised of individuals from the agricultural community, civic associations, municipal offices and realty groups. Disputes can be appealed to the Circuit Court, and tried in a new proceeding. In disputes brought before the ARC or Circuit Court if either body finds that an action was brought in bad faith or without substantial justification, the court may require the party to pay the costs and expenses of the agricultural operator, including attorney fees.

**Issues Not Addressed by Right to Farm:**

- Trespass issues, including use of all terrain vehicles onto private property.
- Noise issues such as load music which disturb farm animals.

In Maryland, 13 counties have a formal arbitration process similar to that described above and nearly all Maryland counties have RTF ordinances of some type.
CASE STUDY: PENNSYLVANIA’S AUCTION MARKETS

Increased interest in locally produced foods is driving a greater interest among farmers and retailers in shorter supply chains and more direct relationships. This trend is evident across the U.S. and the Raleigh metropolitan area is no exception. In Raleigh, as in many areas, retailers and farmers find it difficult and inefficient to link inventory management and transaction systems, meaning much demand goes un-served. Pennsylvania’s Anabaptist communities, however, have found a means to efficiently link local food demand and small farmers through a statewide network of auction markets.

Pennsylvania’s produce auctions play an important role in the disposition of the State’s produce and are estimated by ACDS, LLC to account for 25% of the State’s produce sales. Pennsylvania has twelve produce auctions across the State, all sharing several common characteristics:

1. Auctions are privately owned and operated.
2. Auctions are un-graded, meaning that produce of any quality, packing standard, and lot size can be sold on the market.
3. Auctions are seasonal.

As the map below indicates, the auction markets are strongly correlated to the State’s primary fruit and vegetable production areas. The markets are also strongly associated with the State’s Anabaptist communities which include the Amish, Mennonite, and German Baptists. In fact, the Anabaptists are generally the founders of the auctions and provide a significant level of both product and financial commitment to the auctions. In return, the auctions provide market access and liquidity back to a producer group that tends to be made up of very small farmers. Produce auctions in Pennsylvania are a relatively new form of market system. The oldest of the produce auctions, Leola, was established in 1984 followed shortly thereafter by Shippensburg and Buffalo Valley in 1986 and 1988 respectively. While Leola was initially developed as an auction, Buffalo Valley and Shippensburg began as grower packing houses and transitioned into auctions as the dynamics of local and national markets changed.
The success of these early markets in reducing grower risk by diversifying the buyer base quickly became evident, attracting 9 new entrants over the next decade. The annual sales growth at these outlets has become widely known over the last decade (see below) and is a contributing factor to the expected start-up of two new auctions in Western Pennsylvania.

**Estimated Annual Growth Rate of Produce Auctions**

<table>
<thead>
<tr>
<th>Estimated Annual Growth</th>
<th>Rate</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Leola</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Weaverland</td>
<td>8%</td>
<td>1st couple years 30%</td>
</tr>
<tr>
<td>Shippensburg</td>
<td>NR</td>
<td></td>
</tr>
<tr>
<td>Kutztown</td>
<td>6%</td>
<td>1st 5 years 30-40%</td>
</tr>
<tr>
<td>Buffalo Valley</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Cumberland Valley</td>
<td>15%</td>
<td></td>
</tr>
</tbody>
</table>
Even though the auction markets are linked to the retail trade in Pennsylvania, as well as each other, there is no formal association between or among the markets. Any linkage is driven by market enforced quality and delivery standards, which assure wholesale buyers that product will be available at a market standard quantity, price, and quality. Given the limited availability of technology at the markets, price discovery and market efficiency suffer, thereby limiting sales potential and buyer participation.

Despite the inefficiencies in the individual markets, the auction system as a whole has been very successful in attracting wholesale-level buyers, mostly roadside stands and retailers, to this type of direct market outlet. Generally, the markets serve a producer base from within a ten- to twenty-mile radius (all have an in-state production requirement), while the buyers generally come from a market area of 100 to 125 miles. Over time, the larger auctions, such as Leola and Buffalo Valley, have seen their market service areas expand, both serving clients as far afield as North Carolina and Connecticut.

While the auction model is not appropriate for all areas, it provides proof that aggregation of farm products from multiple small farms can successfully expand market opportunity and serve a platform for growth. The auctions commitment to serving their local farm population and dedication to standards and quality of care, has also created a core of committed buyers who are by-passing local farms in the Northeast and Mid-Atlantic, taking market share directly from Columbia County and the entire Hudson Valley.
CASE STUDY: AGRICULTURAL WATER USE; FLINT RIVER BASIN, GEORGIA

**Water Availability**

Flint River drains an area of 8,460 square miles with headwaters of the river beginning near the Atlanta International Airport and flows 350 miles just above the Florida line at Lake Seminole. The river is important ecologically because it is one of the few rivers in the country that flows at least 125 miles unimpeded. It also recharges the Floridan Aquifer.

At the peak of the growing season, Flint River Basin (FRB) farmers use as much as 2 billion gallons of water per day. In Georgia as a whole, total annual demand is about 1.2 trillion gallons, but total annual rainfall equals 50 trillion gallons. During average years, water withdrawn for irrigation use does not threaten downstream users or the ecologic balance of the river and riparian areas. However, to address issues arising from times of prolonged drought, the State of Georgia developed a plan and attendant policies to protect all water users.

**Agriculture’s Role in Water Management**

Agricultural water use is concentrated during the growing season between May and August and demand is higher during a drought. During that season, as much as 90% of water use comes from agriculture. Just under one-third of the land area in the Flint River Basin is used in agriculture, including poultry, beef, dairy, crop, orchard and vegetable production. Most of the agricultural areas are found in the lower Flint River Basin beginning near Cordele.¹

In 1999, during a period of prolonged drought, the Georgia Environmental Protection Department (EPD) ceased issuing permits for farm-use water withdrawal (both groundwater and surface water) pending the results of studies and the development of the FRB Plan. In March 2006, the EPD released *The Flint River Basin Regional Water Development and Conservation Plan* and the moratorium was lifted, but permit applications are being closely evaluated to ensure they meet the requirements set out in the Plan.

Eleven farmers from southwest Georgia were a part of the stakeholder advisory committee that helped develop recommendations for the EPD.

Water Use Permits
The State of Georgia must issue an agricultural permit for “reasonable use” so long as the permit will not adversely impact other users but the State has the authority to suspend or modify existing permit holders to give someone else reasonable use. The EPD can, however, require changes to the permit, such as drilling in a different location, or permitting less withdrawal than requested. Newly issued use permits will also be required to include an economically feasible conservation plan.

Low Water Level and Agricultural Rights
In general, because it is the industry that uses the most water, agriculture has been the first industry affected by low water levels and drought. The EPD ceased issuing permits during 1999 as mentioned above, but farms with existing permits were grandfathered and continued to pump as permitted.

During that same time period, the Georgia General Assembly passed the Flint River Drought Protection Act. This law created a program of financial incentives to farmers to voluntarily and temporarily cease or slow irrigation during times of declared drought. The program enables the State to protect stream flow, and thus the ecology of the river, during very dry periods.

The inaugural auction for the Flint River Drought Protection Plan was held March 15, 2001. From that sale, 33,101 acres retired from irrigated production for the entire calendar year. The average winning bid was $136/acre resulting in $4.5 million paid to growers. In 2002, the auction was held again, which resulted in 40,894 acres retired, with an average bid of $128/acre equaling $5.2 million paid to growers.

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2 Statewide Water Planning and Management of Georgia Irrigated Agriculture, March 25, 2009, Mark Masters, Georgia Water Planning and Policy Center, p. 28.
3 Flint River Basin Regional Water Development and Conservation Plan, March 2006, Georgia Department of Natural Resources, p. 45.
4 Masters, p. 30.
ECONOMIC DEVELOPMENT TOOLS

Local communities often benefit by providing structured economic development support to regionally important industries. Agriculture is no exception. In fact, public policy efforts to protect the farmland base, such as land use planning and purchase of development rights, are often more effective when combined with economic development programming.

Effective economic development tools generally concentrate on supporting the private interest of the industries (i.e., the profit-making potential of individual firms within an industry sector) while providing a clear public benefit such as employment creation, infrastructure improvement, wealth generation, and quality of life enhancement. In the case of agriculture, the greatest public benefit may be the stability of the working landscape and all of the secondary benefits that follow. Examples of economic development programming that can benefit the agricultural industry at the local level are summarized below.

Strategic Planning
Many communities undergo an economic development processes very similar to, and often coinciding with, the comprehensive planning process. The intent is usually to develop a community vision and subsequent set of goals that will lead the community to a desired economic development outcome ten or more years in the future. Most often, these plans address the needs to enhance the job base, improve quality of life, retain local youth, provide sufficient economic diversity to weather economic cycles, improve tax base, and develop an infrastructure base that will facilitate future growth. Plans can be broad based and visionary or detailed and industry-specific. No matter what the process, the plans must have clear public policy and industry support in order to be effective. Otherwise, these plans will go unimplemented. Economic development strategic plans often include many of the elements described in the balance of this section.

Business Development
Business development programs focus on supporting the needs of small businesses, generally fewer than 500 employees, by addressing specific needs such as access to financing or technical and professional services. Nationwide, the U.S. Small Business Administration leads efforts to support small business development through its lending programs as well as technical and grant support. As well, most U.S. counties are supported by technical and professional counseling and mentoring services through a Small Business Development Center (SBDC) and the Service Corps of Retired Executives (SCORE). These services are generally offered through a local community college, economic development agency, or Chamber of Commerce. These agencies often add additional benefit to their services by providing access to a broad network of technical and professional specialists that enhance the base value of SBDC and SCORE.
In addition to the basic services noted above, some communities choose to provide more directed support to small businesses. Often these services are designed to fill a critical local gap in service provision or are designees to support the unique needs of targeted industry sectors. Examples of this type of enhanced business development programming include the following services.

**Business Incubators** - Business incubators generally provide flexible real estate and business service solutions for selected small businesses. Business service solutions are generally targeted to the needs of high growth industry sectors and may include professional assistance from attorneys, accountants, and marketing specialists; technical assistance from product developers, laboratories, and engineers; as well as administrative assistance with secretarial duties, personnel, and bookkeeping. Business incubators are costly and technically challenging to implement, but when successful have a proven track record of accelerating small business growth and keeping those businesses in the community. Agribusiness incubators are employed for a variety of uses ranging from developing biotechnology products (e.g., Monsanto’s incubator) to supporting value-added food products (e.g., Unlimited Future, Inc, in West Virginia).

**Entrepreneurship Training and Support** - Entrepreneurship training and support is very similar to business incubation in that it provides support services to start-up and early-stage companies that generally have a high need for specialized technical and professional services. However, these programs often support a wider array of business sectors ranging from agriculture to retail and high technology. These programs rarely offer real estate options or day-to-day business support and are therefore much less expensive to operate versus a business incubator. Agribusiness entrepreneurship training and support programs are becoming popular across the United States including Cornell University’s NxLevel cohort program.

**Small Business Support Networks** - Small business support networks tend to be informal, peer-based systems where small businesses counsel one another. These systems are often sponsored, but not operated, by an agency or organization such as an economic development office or industry association and rely on participating businesses to direct their programming. Programming may include a speakers’ series relative to topical industry issues, advisory boards, and brown bag lunches. Agribusiness roundtables are popular in many areas of the United States as a means to improve network development among farmers as well as upstream and downstream industries.

**Small Business Finance** - Small business finance programs generally target gaps in private sector funding such as limited access to equity capital within a region or specific industry sector. Most programs are oriented toward providing revolving credit and include provision of capital for early-stage businesses, farm ownership, interest rate buy-downs, loan guarantees, down payment loans, and operating
capital. One of the greatest challenges in making finance programs work is developing enough deal flow to cover the costs of operations. Agricultural finance programs, such as Aggie Bonds, are used nationally to improve farmer access to development capital and to enhance capital availability to new farmers.

Public Research and Development Support and Technology Transfer
Some communities are driven by a culture that supports innovation and technology development. Many of these communities choose to provide financial resources through grants and direct funding of research at universities and colleges in order to stimulate the creation of platform technologies that may be commercial and thus generate new business activity within the economy. Nationally, support for research and development ranges from production agriculture to biotechnology.

Supporting research and development alone is not sufficient to glean benefit from research and development. A community must be in a position to understand the needs of industry, thereby developing technology that meets a market need, and have a system in place to transfer those technologies to industry. In response to this, communities with a technology or entrepreneurial culture often focus human and financial resources on matching technology needs and technology solutions through a Technology Transfer Office or some similarly focused entity. These offices function as a networking system, matchmaker, and in some cases equity partners in technology deals.

Communities, especially throughout the southeastern United States, have allocated research and development funding for alternative crop research as well as new uses/new sources research. The intention is to improve the competitive positioning of local farmers versus regional and even international competitors.

Work Force Enhancement
Work force enhancement programs recognize that businesses and economies cannot function without a well-trained and available workforce. When companies, no matter the industry, seek to relocate or expand within a market place, work force conditions, both current and future, are among the first tier of criteria they examine. Because of this, communities often seek to address workforce development from a global, economy-wide, or firm level. At the economy level, communities use public financing through the school system, primarily through higher education, to reinforce the skills sets that are required by that community’s industrial base. In transitional economies, work force development issues are likely to focus on new job classifications rather than historic job classifications. Firm level work force development assistance is typically used to assist at-place and relocating employers with discrete training needs and is often supported through loans and grants.

Recent collaborations between agricultural industry associations and community colleges have led to the development of distance learning programs to educate field workers. For example, the Advanced Technology Center for Agriculture at Carroll Community
College in Maryland developed a CD-ROM based training program in English and Spanish to teach laborers field identification of plants.

**Business Cluster Development**

The United States has seen a trend toward concentrated clustering of industries during the last several decades led by access to key infrastructure, workforce characteristics, concentrations of wealth, advances in information technology, and enhanced telecommunications capacity. Communities have responded by developing targeted strategies, many of which are highlighted in this section, to enhance lifecycle development (lifecycle development includes companies at all stages of development, from start-up to mature) of companies within a business cluster (a business cluster includes a primary industry sector as well as its input, output, support sectors). Because business cluster development is industry specific and generally forward looking, it requires that significant community resources be speculatively dedicated to targeted assets in-place as a precursor to industry development. In order for this type of development to be successful, the area must support, or have the capacity to support, at least the minimum needs of the target industry otherwise, business cluster development will likely fail.

Agriculture is a business, especially as it relates to upstream and downstream industries and marketing, which is prone to clustering due to efficiencies of scale and the industry’s propensity to spin-off new ventures. For example, Lancaster County Pennsylvania has been successful, through its Chamber of Commerce, in attracting a strong agribusiness cluster. This cluster continues to grow in strength despite high growth pressure in the area.

**Economic Development Incentives**

Many communities offer economic development incentives to attract or retain their industrial base. Incentives are often financially based and tied to a corporation’s costs of relocation, real estate development, job creation, or expected tax impact. Incentives are best employed as part of a larger economic development strategy and must clearly be understood in the context of their fiscal impact to a community as well as their true impact on relocation decision making. Many incentive programs are put in place as a competitive response to programs in other jurisdictions and often do not match local needs and assets.

Economic development agencies in New York have been creative in using Payment in-Lieu of Taxes (PILOT) programs to facilitate capital investment in on-farm improvements in the dairy industry. Formerly, these programs were limited in use to non-agricultural businesses.
Business Recruitment, Retention, Expansion, and Attraction (BREA)

Once a community has decided its intended industrial mix, it is important to design a strategy to achieve this goal. A Business Retention, Expansion, and Attraction (BREA) plan is a key step in achieving this end. BREA planning requires that communities identify and understand its core asset base, and how this asset base can be leverage to generate future growth in a core group of industries. Because the plan is industry focused, it must address the discrete needs of each of its target industries to be successful. For instance, if a community has a strong tourism base due to its scenic vistas, that community would seek to protect its scenic vistas, an economic asset, as part of its strategy for attracting greater tourism investment. In addition, the BREA must develop a method of outreach to the targeted industries to deliver a message about why that community would be a relocation asset to the target industry.

Oneida County New York follows a policy of recruiting both farmers and agribusinesses from throughout the northeast as part of its overall strategy to strengthen the industry. Oneida focuses attraction on its key advantages including workforce availability, land affordability, and workforce quality.

Strategic Marketing

Strategic marketing is the means by which a community conveys its economic development mission to its various stakeholders, both internal and external. Depending on the messages and the audiences, these programs can utilize a wide variety of media and carry a diversity of messages. Despite this, all strategic marketing plans in economic development must have two key features. The first is a means to reach the constituent base of the community with a message that keeps the broader community, and therefore policy makers, engaged in economic development. At a minimum, this message must convey the community benefit of the economic development and seek continued/sustained support. Second, the message must reach the intended industry markets in a meaningful way. In other words, a strategic marketing campaign such as a BREA must reach a market that has a willingness to respond to the message, or the message will be lost. Even if the public constituency has bought into an economic development campaign, it will be ineffective if the market does not respond. Similarly, an effort to recruit businesses can be very successful in term of deal flow, but will fail if the community is not willing to support that type of business or industry.

In Genesee County New York, the Cooperative Extension Association follows a program of public sector outreach and education that keeps both the community at-large and the agricultural industry engaged in the future. The program is anchored by public school education, participation in radio talk shows, and policy education tours.

Infrastructure Development

A community cannot be effective in retaining or attracting industry if its basic infrastructure such as water and sewer cannot accommodate industry needs. Good economic development planning, therefore, makes sure that the current and future needs
of industry are accounted for as communities plan infrastructure. This becomes doubly important when a community is engaged in a BREA or business cluster development activity that requires the development or enhancement of specific infrastructure such as redundant broadband access.

Infrastructure development generally applies to upstream and downstream agribusinesses and includes such examples as Sandpoint, Idaho expanding its sewer and water capacity to accommodate the development of a new dairy processing facility. Currently, this is the only such facility in that region and serves as an important milk outlet for regional farmers.

**Real Estate Development**

In today’s corporate environment, many relocation decisions are made and implemented with very short development cycles. Communities that have worked with the real estate development industry to pre-position built capacity and/or pad sites often have an advantage in attracting and retaining businesses. As with other economic development tools, the target industries must be clearly understood and a marketing strategy in place for this tool to be effective. Otherwise, real estate investments may go unrecovered or moved at discounted rates.

The State of Georgia uses its system of statewide farmers markets, including the Atlanta State Farmers Market, to attract food industry to the region through the specialized development or real estate and infrastructure. Having pre-positioned real estate has allowed the State to close deals with several major food companies that would have located in other parts of the Southeast.

**Regulatory and Policy Guidance**

As the regulatory environment at the local, state, and federal level becomes more complex, compliance becomes more costly across all sectors. Many communities have developed responses to this issue through their economic development offices as a means to streamline processes and improve efficiency in both the development process as well as on-going corporate operations. Tools such as one-stop licensing, regulatory ombudsmen, and specialized training of enforcement officers have proven both inexpensive and effective.

Some communities, such as Saint Mary’s County Maryland, utilize economic development staff to act as regulatory ombudsmen on behalf of farmers. According to local farmers, this process can significantly shorten the development cycle and provides an important feedback loop to politicians regarding the agricultural impact of regulations.
RECOMMENDATIONS AND ACTION ITEMS

Agriculture in Johnston County, North Carolina is undergoing significant structural change as its economy changes from a rural, resource based economy to a suburban, service driven economy. All of this is occurring at a time when Johnston County is undergoing historically high population growth. The agricultural economy faces both opportunity and challenge during this transitional period and must actively plan for its economic future during this period.

The challenge faced by Johnston County is successfully managing this transition for the benefit of the agricultural industry, individual farms, and the community at large. In order to support agricultural industry cluster development that fits the current state of the industry, the County should consider a combination of structural economic development programs, such as business retention, expansion, and attraction programming related to primary production sectors; recruitment or internal development of secondary market opportunities; broad based workforce development; and infrastructure planning, as well as business development programming that specifically addresses the needs of individual agricultural enterprises.

The ten recommendations incorporated in this document fall within three broad categories or focus areas. The focus areas are largely independent with some level of interactivity. The focus areas are briefly described below:

1. **Agriculture Development and Marketing** – Within this focus area, recommendations target improvements in access to local and regional markets at both the wholesale and retail levels. Market development activities look to expand the capability of individual farms to improve market position and access higher value supply chains. The business development support elements of this focus area include counseling, concept development, land access, and financing support with the intent to support growth and transition in the agricultural economy. Beyond individual farm businesses, additional programming is recommended to enhance the agribusiness policy climate and encourage infrastructure development to support industry sector growth.

2. **Training and Education** – This focus area distinguishes itself from agriculture development and marketing by focusing on developing the future human capital needs of agriculture beginning with creating a base of well qualified farm leaders and a source of new and renewing farm operators. Recommendations under this focus area also highlight the need to create a reliable source of skilled and unskilled labor which can meet the needs of modern agricultural practices for the range of industries already present in the County.

3. **Public Policy and Regulation** – Activities in this focus area is dedicated to land use, environmental, health, and transportation policy support needs that are intended to bring
local conditions in line with regional competitors. By example, this may include modifying or extending nuisance suit protections to farmers who operate under good management practices or expanding the allowed distribution and value-added uses on a farm so that Johnston County producers can compete more effectively in the marketplace.

FOCUS AREA 1: AGRICULTURAL DEVELOPMENT AND MARKETING

These solutions are based on current economic needs and opportunities and seek outcomes that have a direct benefit to the community through such effects as industry stabilization, job creation, enhanced tax base, and improved quality of life.

RECOMMENDATION 1

Improve Regional Market Access at Wholesale and Retail Levels

*Johnston County sits within North Carolina’s largest consolidated food markets, yet farmers indicate that accessing markets is a challenge at all levels of the food system. Improving market access is therefore critical to agricultural development efforts.*

**ACTIONS**

- Conduct a feasibility study for a local meat packing facility.
- Develop a retailer supported marketing system.
  - Identify a core group of local restaurants and retailers with an expressed interest in providing year-round local products to customers.
    - Link to young and beginning farmers.
    - Develop a list of key target products.
  - Identify/assess delivery standards and methods.
  - Recruit farmer participants and integrate with marketing information system.
  - Develop consumer marketing and outreach program.
    - Brochures.
    - Window stickers.
    - Website.
    - Public relations packaging.
    - Advertising.
  - Conduct an annual fundraising event to support program promotion and financing needs.
  - Encourage use of cost plus marketing relationships to assure profit margins at all levels of the local marketing system.
  - Create a virtual market interface to facilitate brand development.
    - Develop a pilot project to test electronic brokerage of agricultural commodities in cooperation with local farmers and retailers.
• Provide a consumer interface to link farmers with direct market/agri-tourism consumers.
• Create internet based advertising program leveraging low cost consumer outreach methods such as Google Ads.
• Improve food safety and farm product traceability.
  o Support increased grower adoption of safe food handling practices such as Safe Quality Foods (SQF) and Good Agricultural Practices (GAP) training in area.
  ▪ Provide pre-audit support and training.
  ▪ Develop a web training protocol.
  o Explore development of local, returnable packing material program.
  o Support winter marketing meetings to focus on recordkeeping for full product traceability, packing, grading, and food safety standards.
• Enhance marketing infrastructure through farmers’ market, cold storage facility and distribution system development.
  o Develop the business case for transportation and cold storage facilities.
  o Work with NCDA & CS to expand State Farmers Market capacity in Raleigh.
• Expand accessibility of agricultural producers to processing facilities.

IMPLEMENTATION RESPONSIBILITY: North Carolina Cooperative Extension, agricultural industry groups, Farm Bureau, and others as necessary.

RECOMMENDATION 2
Support Entrepreneurship and On-Farm Skills Development

The success of any industry is incumbent on the success of the businesses and entrepreneurs that control the assets, take the risks, and make the markets. Agriculture in Johnston County is no exception and its long-term success will have as much to do with the savvy and skills of its agricultural entrepreneurs and farm managers as it does with market fundamentals. Enhancing the skills and business networks of these and future entrepreneurs has a significant positive impact on the future of agriculture in Johnston County.

ACTIONS
• Develop a pilot program to package a professional and technical service network made up of private sector expertise and built on the model of a virtual business incubator.
• Implement, in cooperation with regional partners and North Carolina Cooperative Extension, the NxLevel agricultural entrepreneurship or similar program.
• Develop a service corps of mentors and counselors with specific professional or technical expertise to provide direct support to agricultural entrepreneurs and to
work with the County SBDC and (Service Corps of Retired Executives (SCORE) programs with specific expertise in agricultural marketing and finance.

- Facilitate the development of formal “masterminding” roundtables of farmers, agribusinesses, and other related industries that may benefit from periodic meetings to discuss business and management issues, land preservation, market development, and other relevant topics.
- Conduct quarterly brown bag lunches for farmers that focus on networking and the topical discussion of important issues such as farm management, farm transition planning, marketing, timber management, real estate, policy/regulations, and other relevant topics.
- Work with farmers to improve non-production income sources such as hunting leases and woodlot management.

**IMPLEMENTATION RESPONSIBILITY:** Office of Economic Development, North Carolina Cooperative Extension, and Soils and Water District with assistance from industry associations, private businesses, higher education institutions, Farm Bureau, and other agencies as necessary.

**RECOMMENDATION 3**

**Develop an Agribusiness Retention, Expansion, and Attraction Plan**

*Johnston County is in a unique position to lead the region in agribusiness input-output infrastructure development. Based on current market conditions such as workforce composition, industrial development patterns, and access to primary interstate systems, the County is ideally situated to develop value-added and distribution related agribusiness industry clusters. Such development is already evident in communities along the I-95 corridor, but is not well integrated with the production agricultural sector. One of the primary impediments to developing such opportunities is the lack of a coordinated, inter-agency effort to retain, attract, expand, and develop such clusters. See [http://www.bth.ca.gov/capartnership/pdf/1006economicdevelopmentworkgroup.pdf](http://www.bth.ca.gov/capartnership/pdf/1006economicdevelopmentworkgroup.pdf) for an example of an agriculturally focused plan.**

**ACTIONS**

- Develop a targeted marketing plan focusing on strategic advantages of Johnston County:
  - Existing core of transportation and logistics businesses,
  - Accessible infrastructure,
  - Positive environmental assets,
  - Available and qualified workforce, and
  - Supportive public sector.
- Assess existing incentives, economic development programs, and real estate suitability for sectors outlined for recruitment and development.
• Identify key marketing partners and conduct outreach with generators of agribusiness deal flow such as:
  o Site location consultants and real estate brokers,
  o Business park developers,
  o Department of Commerce,
  o Department of Agriculture and Consumer Services,
  o Trade associations, and
  o Agricultural industry associations.
• Prepare marketing collateral and disseminate critical decision-making information through direct mail, industry “ambassador” programs, brokers tours, etc.
• Develop a pilot program for streamlining and/or fast-tracking agribusiness development projects within the key transportation corridors or around key environmental assets.
• Integrate the Agribusiness Retention, Expansion, and Attraction Plan (BREA) within broader economic development initiatives at the County and State levels.

IMPLEMENTATION RESPONSIBILITY: Office of Economic Development, North Carolina Cooperative Extension, and Soils and Water District with assistance from industry associations, private businesses, higher education institutions, Farm Bureau, and other agencies as necessary.

RECOMMENDATION 4
Facilitate Integration of Agriculture within Broader Capital Markets

Access to capital, and the attendant technical and professional networks, is essential to the growth and development of an entrepreneurial community. The agricultural industry is no exception. Despite the active entrepreneurism evident in the agricultural industry, and the presence of wealthy individuals throughout the region, little risk, or patient, capital seems to be available to the industry.

ACTIONS
• Collaborate with county and state efforts to develop new sources of capital dedicated to agriculture.
• Develop financial literacy training for young and start-up farmers.
• Assist farmers with match requirements for agribusiness development, value-added, and innovation oriented grants.
• Review existing successful models to expand finance opportunities targeting cost reduction and environmental technologies such as:
  o Biomass combined cycle power generation,
  o Manure digestion, and
  o New production technologies.
• Expand land-use financing alternatives by exploring development of long-term leases modeled after winery leaseholds.
  o Develop a model long term lease specific to pilot industries.
  o Examine inclusion of environmental management and other non-agricultural factors.
• Encourage greater estate planning.
  o Conduct estate planning workshops.
  o Means test and cost share estate planning for farms with critical assets or that are important to the continuation of agricultural activities in an area.
  o Integrate this recommendation with Business Development Recommendations.
• Increase critical farm funding levels to support farm transition.
• Explore the addition of an Option to Purchase at Agriculture Value to existing easement program to encourage sale of eased farms at agricultural value.

IMPLEMENTATION RESPONSIBILITY: Office of Economic Development, North Carolina Cooperative Extension, and Soils and Water District with assistance from industry associations, private businesses, higher education institutions, Farm Bureau, and other agencies as necessary.

RECOMMENDATION 5
Explore the Feasibility of an Agribusiness Park in the I-95 Corridor

Focusing on Johnston County’s comparative regional advantages in distribution, warehousing, and manufacturing, driven by its immediate access to Interstates 40 and 95, the prospect of successfully developing and filling an agribusiness park appears strong over the next five to ten years. Such a park could serve as a catalyst for the attraction and expansion of value-added agriculture and food industry development and, if properly administered, provide direct linkages to local and regional production agriculture.

ACTIONS
• Develop a scope of services and timeline for the completion of a feasibility analysis to include:
  o Market feasibility,
  o Financial feasibility,
  o Management and organizational issues,
  o Site assessment,
  o Preliminary engineering, and
  o Business and marketing plan.
• Seek funding support for feasibility analysis through USDA, Rural Development or as a planning grant from the Economic Development Administration.
- Conduct exploratory meetings with regional business park developers.
- Integrate the Agribusiness Park concept within the Agribusiness Retention, Expansion, and Attraction Plan.

**IMPLEMENTATION RESPONSIBILITY**: Office of Economic Development, North Carolina Cooperative Extension, and Soils and Water District with assistance from industry associations, private businesses, higher education institutions, regional commercial developers, Farm Bureau, and other agencies as necessary.
FOCUS AREA 2: EDUCATION AND TRAINING

The following recommendations are intended to bridge the gaps in understanding at both the farm and community levels. As an important note, the need to address the widening gap in understanding of farm operations at the broader community level was a frequent discussion point during the interview and focus group process.

Recommendation 1: Expand Education and Training Programs

As agriculture becomes a smaller element of both the County’s land use and economy, it will become increasingly difficult to keep the interests of agriculture in the forefront of policy. Study team members found that keeping policy makers, agricultural industry leaders, and the general public informed and educated goes a long way toward developing better relations. In addition, the agricultural industry has common needs in workforce development, farm management, finance, and other issues that can be met through public training resources.

The project team also found a high level of interest among young and beginning farmers in establishing farms in the County. While many such new farmers have agricultural backgrounds, many are new to the industry and require support and training.

ACTIONS

- Support programs that enhance youth education in agriculture and related fields of biology, technology, advanced manufacturing, genetics, and chemistry.
  - Seek a letter from County Commissioners and the VAD requesting an increased agricultural awareness programming in primary and secondary schools.
  - Meet with career/guidance counselors to raise awareness of employment and advancement opportunities in agriculture and related fields.
  - Develop a grade specific agricultural awareness day.
- Support development of a multi-year pilot program in conjunction with the interested local farmers that creates individualized new/young farmer training programs:
  - Identify of feeder sources for interns and participant screening criteria,
  - Create of a program of work tailored individual farm and intern needs
  - Develop of a formal mentor program targeting:
    - Newly graduating interns,
    - Other pre-qualified new/beginning farmers.
  - Provide evening farm start-up and management classes modeled after Central Carolina Community College’s beginning farmer classes.
- Work with educational institutions at the post-secondary and continuing education level to develop flexible training modules for use by agricultural operations, such as:
  - Language training for managers and workers,
Advanced farm management training,

Other issue based training as necessary.

- Conduct training and outreach relative to land use policy with a specific focus on agricultural land use planning and purchase of development rights programming.
  - Develop a policy makers’ tour, to include key agricultural industry leadership, of areas with recognized and long-standing agricultural land-use such as Suffolk County, New York; Carroll County, Maryland; Lancaster, Pennsylvania; and Howard County, Maryland.
  - Hold periodic discussion sessions with town and municipal officials as well as agricultural industry leaders to discuss agricultural industry needs and policy impacts.
  - Conduct an economic development training session inviting agricultural industry leaders and county and town policy makers.

- Work with the County school board to develop an advanced agriculture and biosciences curriculum modeled after “Microsoft Academies” and supported by agriculturally oriented bioscience companies such as Syngenta Crop Protection of Bayer Crop Sciences.

IMPLEMENTATION RESPONSIBILITY: Action items under this recommendation require significant interagency cooperation with a range of potential task leaders. It is expected that overall leadership will be provided by North Carolina Cooperative Extension, Farm Bureau, agricultural industry associations, Johnston County Community College, North Carolina State University, as well as other agencies.

RECOMMENDATION 2

Support Regional Agricultural Leadership Development

The long-term success of agriculture within Johnston County and the region are directly impacted by the quality of the industry’s existing and emerging leadership. Specifically, the development of new leadership to set the vision for the future of agriculture is critical to the success of the industry over the long-term.

ACTIONS

- Work with Agricultural Leadership Development Program graduates to develop an open-format leadership training program targeting local leadership development. Program should focus on broadening producer exposure to all elements of the agricultural industry as well as government, politics, and input/output industries.
- Encourage greater farmer participation in local, regional, and statewide leadership development programs such as Leadership Johnston program.
- Introduce board and leadership training to existing agricultural organizations.
- Enhance inter-industry communications through formal networking events between farmers and agribusinesses.

**IMPLEMENTATION RESPONSIBILITY:** North Carolina Cooperative Extension, Local Chambers of Commerce, Farm Bureau, and other agencies as necessary.

**RECOMMENDATION 3**

**Enhance Labor Force Relationships**

*While the local workforce is currently conducive to agriculture, with a competitive supply of low skilled and semi-skilled labor, transition of the economy to a service base may negatively affect this over time. If farmland conversion continues, with the attendant increase in farm land values, this situation could be exacerbated by the declining number of farmers and a low retention of next generation farmers. The resulting labor shortage may restrict future development of the industry.*

**ACTIONS**

- Improve accessibility of unskilled labor.
  - Create linkages with urban labor centers that house agriculturally focused labor force.
  - Develop on-site job training programs for laborers and managers.
    - Life skills.
    - Language skills.
  - Explore labor pooling options in collaboration with partners such as the Workforce Improvement Board.
    - Electronic work center.
    - Labor screening system.
    - Transportation provision.
- Improve accessibility of skilled labor.
  - Develop labor training programs at secondary and post secondary institutions.
  - Develop a recruitment program focusing on high demand skills.
  - Explore labor management and labor sharing arrangements.

**IMPLEMENTATION RESPONSIBILITY:** Action items under this recommendation require significant interagency cooperation with a range of potential task leaders. It is expected that overall leadership will be provided by North Carolina Cooperative Extension, Farm Bureau, agricultural industry associations, Johnston County Community College, North Carolina State University, as well as other agencies.
FOCUS AREA 3: PUBLIC POLICY AND REGULATION

The following recommendations address the broad-based issues relating to public policy and regulation at the State and local level as they affect the long-term sustainability of agriculture. The particular focus of these recommendations is to develop and maintain a relationship between and among the various constituent groups that influence agriculture.

RECOMMENDATION 1

Create an Outreach and Public Relations Program

An informed citizenry that understands and accepts the industrial nature of agriculture will make better neighbors and better consumers.

ACTIONS

- Work with the Farm Bureau to develop a farmer-based committee to coordinate outreach and serve as a first line of response in neighbor/industrial conflict.
  - Identify key audiences/stakeholder groups that impact agriculture.
  - Develop important message statements to deliver to above audiences.
  - Produce collateral material and programming, targeting various audiences, to include:
    - Print material,
    - Media kit,
    - Television and radio programming,
    - Website, and
    - Special events.
  - Hold quarterly meetings with editorial boards of local papers.
  - Create an agricultural speakers’ bureau to carry the “message” to community and civic groups through public speaking engagements.
  - Expand events affiliated with “Farm-City” tours and dinners.
  - Work with the public school system and youth programs such as 4-H and youth equine activities, to integrate the “message” of agriculture within the primary school system and youth training events.
  - Develop farm tours to support the “message” of agriculture as well as topical on-farm issues.
  - Enhance the public relations network and partnerships with other agencies that have an active public outreach program.

IMPLEMENTATION RESPONSIBILITY: Action items under this recommendation require significant interagency cooperation with a range of potential task leaders. It is expected that overall leadership will be provided by the North Carolina Cooperative Extension, Farm Bureau, agricultural industry associations, Johnston County Community College, North Carolina State, as well as other agencies.
RECOMMENDATION 2
Support Farm Friendly Land Use Policies and Programs

Land-use policy rarely treats agriculture as anything but a holding pattern for residential
development and thereby frequently encourages the co-mingling of residences with this
important economic function. Often these purposes prove to be incompatible and the
resulting change in regulations is frequently counter to the economic interests of
agriculture. In fact, the long-term survival of agriculture may hinge on managing this
inter-relationship as growth pressure mounts in Johnston County.

ACTIONS
- Improve Right to Farm protections with the creation of a mediation board to
  review, as a requirement, agricultural nuisance claims.
- Improve planning efforts to avoid unintended cross-jurisdictional effects such as
development spillover, orphaned water and sewer improvements, etc.
- Improve coordination in the development of regionally significant infrastructure
  improvements and review compatibility of current infrastructure plans in relation
to their potential impact on the agricultural industry.
- Improve land preservation programming to include dedicated funding of a county
  purchase of development rights program to maintain balance of protected
  farmland within core production areas.
- Develop a performance based definition of agriculture to facilitate agricultural
  marketing and production activities, including high intensity agriculture, based on
  models such as those in Suffolk County, NY and Baltimore County, MD.
  - Support cooperative marketing and value-added activities.
  - Support high intensity agricultural production activities such as
    greenhouse operations.
- Develop a water rights policy to assure access for irrigation and livestock
  watering needs.
- Support the requirement of buffers and other site design measures as strategies for
  reducing farmer/non-farm neighbor conflicts.
- Conduct regularly scheduled workshops with elected officials and public to
  apprise them of changing market and regulatory conditions.
  - Prepare an annual ‘state of agriculture report.’
  - Develop a response system to manage farmer interests in proposed
    regulatory changes.
- Develop a virtual agricultural policy book to keep farmers informed of land-use
  related development requirements.

IMPLEMENTATION RESPONSIBILITY: Voluntary Agricultural District Board,
Cooperative Extension Service, Farm Bureau, and County Planning Department staff.