

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

Prepared by:

Mitch Renkow  
Department of Agricultural and Resource Economics  
North Carolina State University

April 2007

## **Acknowledgements**

I would like to thank the many Chatham County officials who kindly contributed information and assistance in course of conducting this research:

Capt. Roy Allen, Sheriff's Department

Tom Bender, Fire Marshall

Ray Epley, Central Carolina Community College

Sam Groce, Cooperative Extension Service

Charlie Horne, County Manager

Kimberley Horton, Tax Assessor

Roy Lowder, Water Department

Keith Megginson, Planning

Vicki McConnell, Finance

Jennifer Nelson, Economic Development

Renee Paschal, Finance

Neha Shah, Pittsboro-Siler City Convention & Visitors Bureau

Brenda Williams, Soil and Water Conservation

Jenny Williams, Central Permitting

Jim Willis, Erosion Control

Glenn Woolard, Cooperative Extension Service

This study was requested by the Chatham Agricultural Advisory Committee. The project was funded by the Triangle Land Conservancy with funds for the Working Lands Initiative from the Save Our Undeveloped Land (SOUL) Fund of the Triangle Community Foundation. Able research assistance was provided by Rotua Lumbantobing.

# THE COST OF COMMUNITY SERVICES IN CHATHAM COUNTY

## Introduction

In rural counties located near fast-growing urban areas, there is considerable debate over the desirable mix of land uses, and the role that local government can and should play in affecting the rate at which new land uses supplant traditional ones. Chatham County is typical of such counties. The continuing economic growth of the adjoining counties of the Research Triangle and the Triad have created unprecedented demands for residential and industrial development in Chatham County. On the one hand, this situation has been welcomed by many because it has created significant economic development opportunities for the county's citizens and a significant increase in the county's revenue base. On the other hand, many of the county's citizens worry that the rapid pace of these changes will alter the rural character of Chatham County in ways that are undesirable. Moreover, there is concern that the increased local government expenditures on community services needed to accommodate accelerated residential and industrial development may exceed the contribution of that development to the county's revenue base.

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

The analysis presented here employs a methodology established by the American Farmland Trust, one that has been used in numerous Cost of Community Services (COCS) studies throughout the U.S. Like those studies, the current research was motivated by two

---

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

questions: (1) Do the property taxes and other revenues generated by residential land uses exceed the amount of publicly-provided services supplied to them? (2) Do farm and forest lands receive an unfair tax advantage when they are assessed at their actual use value – as is the case in Chatham County – instead of their potential value in residential or commercial uses?

As has been found in other COCS studies, the answers to these questions are “no” for Chatham County. The residential sector contributes only 87¢ to the county’s coffers for each dollar’s worth of services that it receives. Commercial and industrial land uses are the largest net contributors to the public purse, contributing \$3.01 in revenues for each dollar of publicly provided services that they receive. Despite being taxed on the basis of current land uses, property in agricultural land uses is found to be a net contributor to the local budget, generating \$1.72 in revenues for every dollar of public services that it receives.

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

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

relative costs and benefits of the specific distribution of financial resources implicit in the existing pattern of development.

## **Methodology**

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

Once revenues and expenditures were allocated to specific land use categories, the ratio of revenues to expenditures was computed for each. A revenue-expenditure ratio greater than one (1) indicates that that sector's contribution to the public purse exceeds its demands for public funds. Conversely, a revenue-expenditure ratio less than one indicates that the sector's demand for publicly financed services exceeds its contribution to local public finance.

The basis for the current analysis actual expenditures in the 2005-2006 fiscal year as Chatham County's Annual Operating Budget for 2006-2007. As noted above, the allocation of these data to specific sectors was done in consultation with a variety of local officials (listed in the Acknowledgements). These individuals were best equipped to assess the extent to which the various types of land uses partake of the services provided by their departments. Where feasible, expenditures were allocated to land use categories using available data on staff salaries and/or activities records.

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

100% of expenditures were allocated to the residential sector.<sup>2</sup> For departments whose activities benefited both residences and businesses (including agricultural businesses), expenditures were allocated based on the proportion of total property value accounted for by each land use category. This “default” breakdown of assessed property valuation for 2005 was 84.0% residential, 11.1% commercial, and 4.9% agricultural. The expenditures of most of the county’s general administration departments were allocated in this manner.

Revenues were handled in a manner similar to expenditures. Property tax revenues were allocated to specific land use categories based on the 2005 property tax assessments. Taxes and other revenue sources that are linked directly to commercial activities – for example, Article 39 sales taxes<sup>3</sup> and hotel occupancy taxes – were allocated to the commercial sector. Revenues from sources associated exclusively with households (such as pet license fees) were allocated to the residential sector, as were revenues from impact fees levied on new housing construction. Revenues raised by specific county government departments from fees charged for services or from inter-governmental transfers were allocated in direct proportion to the allocation of expenditures by those departments. For example, revenues originating in building inspection fees charged by the Planning Department were allocated to land use sectors in the same proportions as that department’s building inspection expenditures were allocated. Any remaining revenues that could not be directly allocated in these ways were allocated according to the proportion of total property value accounted for by each land use category.

## **Results**

A detailed breakdown of revenues sources is found in Appendix Table 1. Total county general fund revenues for 2005-2006 were \$56.7 million. About 58% of this money came from property taxes, while another 17% came from sales taxes.

---

<sup>2</sup> Chatham County separates the farm business from the farm residence, assessing the property value of farm residences in the same manner as any other residences. For this reason, farm residences were included in the residential land use category throughout the analysis.

<sup>3</sup> The state distributes Article 39 sales tax revenues back to counties on a point-of-sale basis. Article 40 and 42 sales taxes are distributed back to counties based on county population; revenues from these sources were allocated to residential land uses. Finally, Article 44 sales taxes are distributed to counties in part on the basis of point of sale and in part on the basis of county population; accordingly, these were allocated to residential and commercial land uses on a 50-50 basis.

Table 1 summarizes the overall breakdown of county expenditures for the 2005-2006 fiscal year. More detailed information is found in Appendix Table 2. Two departments – education and human services – accounted for nearly two-thirds of the total budget. Because all school expenditures, and nearly all of the activities of the Human Services department are exclusive to the residential sector, the large “footprint” of these two departments in county government has a dominant impact on the results of this study.

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

The revenue/expenditure ratio for the residential land use category is 0.87; this implies that for each dollar in property tax and other revenues generated by residential land uses, the county spends \$1.14 to provide services supporting those land uses. In other words, the residential sector is on balance a net user of local public finances. On the other hand, the other two land use categories are net contributors to local fiscal resources. The revenue/expenditure ratio of 1.72 for the agricultural category implies that for every dollar in revenues attributable to these land uses, the county spends only \$0.58 in services benefiting them. The commercial land use category stands out as having the highest revenue/expenditure ratio (3.01). This result indicates that the county spends only \$0.33 in services benefiting commercial and industrial establishments for every public dollar generated by those establishments.

## **Discussion**

The results presented above provide answers to the two questions posed at the beginning of this report. As regards the public services provided by Chatham County, commercial and industrial land uses emerge as being the largest net contributor to local financial resources. In contrast, the value of public services provided to residential land uses exceed the property taxes and other

revenues that they contribute to the county budget. This finding contrasts with claims that are sometimes made that residential development is a boon to county finances due to its expansion of the property tax base. It would appear that the very large footprint of the education and human services expenditures in the overall county budget plays a dominant role in explaining this phenomenon. Finally, agricultural lands more than pay their own way. This is true despite these properties being taxed on the basis of their current use (as opposed to their potential use were they to be transformed into commercial or residential uses).

These findings for Chatham County are consistent with the findings of nearly every Cost of Community Services study that has been carried out in other communities throughout the U.S. The degree of cross-subsidization of the residential sector – in particular, the extent to which the Chatham County’s commercial sector pays for services provided to its residential sector – is somewhat higher than the median in other studies that have been conducted nationally. Closer to home, the relative balance of revenues and expenditures across land use categories is similar to that which was found in comparable studies conducted in Wake, Orange, and Alamance Counties. Compared to those other nearby counties, the degree of subsidization of residential sector by the commercial and agricultural sectors is somewhat lower.

Finally, it is interesting to compare the findings of this analysis with those of a Cost of Community Services study carried out for Chatham County in 1998. Particularly striking is the fact that agriculture’s net contribution to local fiscal resources (relative to the services that are provided to it) has increased substantially. The same can be said of commercial and industrial land uses. And corresponding to these results, the extent to which these two land use categories subsidize residential land uses has grown.

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

**Table 1. Chatham County Budgeted Expenditures for 2005-2006**

<b>Item</b>	<b>Expenditure</b>	<b>%</b>
Education	\$ 21,032,823	38.6
Human Services	15,248,199	28.0
Public Safety	8,238,261	15.1
Administration	3,977,684	7.3
Natural Resource Management	2,642,903	4.9
General Government	2,006,399	3.7
Culture/Recreation	1,329,887	2.4
<b>Total</b>	<b>\$54,476,156</b>	<b>100</b>

Source: *Chatham County Annual Operating Budget 2006-2007*

**Table 2. Revenues vs. Expenditures in Chatham County**

	<b>Residential</b>	<b>Commercial</b>	<b>Agricultural</b>
<b>Expenditures<sup>a</sup></b>	\$52,783,521 (93.03%)	\$2,910,174 (5.13%)	\$1,045,671 (1.84%)
<b>Revenues</b>	\$46,176,441 (81.38%)	\$8,766,594 (15.45%)	\$1,796,332 (3.17%)
<b>Revenues/Expenditures ratio<sup>b</sup></b>	<b>0.87</b>	<b>3.01</b>	<b>1.72</b>
	<b>Revenue/Expenditure ratios from national studies<sup>c</sup></b>		
Minimum	0.47	0.96	1.01
Median	0.87	3.57	2.78
Maximum	0.99	20.00	50.00
	<b>Revenue/Expenditure ratios from local studies</b>		
Chatham County (1998)	0.90	2.13	1.09
Wake County (2001)	0.65	5.63	2.12
Alamance County (2006)	0.68	4.29	1.69
Orange County (2006)	0.76	4.21	1.38

a. Includes the \$2.26 million budget surplus transferred to the following year's general fund (allocated among land use categories in proportion to other expenditures).

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

c. These figures are derived from 103 Cost of Community Services summarized on the American Farmland Trust website ([http://farmlandinfo.org/documents/27757/FS\\_COCS\\_8-04.pdf](http://farmlandinfo.org/documents/27757/FS_COCS_8-04.pdf)).

**Appendix Table 1. Chatham County Budgeted Revenues by Land Use Category for 2005-2006**

<b>Item</b>	<b>Total</b>	<b>Residential</b>	<b>Commercial</b>	<b>Agricultural</b>	<b>Breakdown<sup>a</sup></b>
<b>Property Taxes</b>	<b>32,953,292</b>	<b>27,680,765</b>	<b>3,657,815</b>	<b>1,614,711</b>	default
<b>Sales Taxes</b>	<b>9,759,504</b>	<b>5,452,577</b>	<b>4,306,928</b>	<b>0</b>	
Article 39	3,415,191	0	3,415,191	0	0-100-0
Article 40	2,286,357	2,286,357	0	0	100-0-0
Article 42	2,274,483	2,274,483	0	0	100-0-0
Article 44	1,783,473	891,737	891,737	0	50-50-0
<b>Intergovernmental</b>	<b>8,211,208</b>	<b>8,123,342</b>	<b>46,093</b>	<b>41,773</b>	98.9-0.6-0.5
<b>Sales &amp; Service</b>	<b>1,721,511</b>	<b>1,547,396</b>	<b>143,639</b>	<b>30,476</b>	89.9-8.3-1.8
<b>Fees &amp; Permits</b>	<b>1,489,019</b>	<b>1,259,443</b>	<b>207,010</b>	<b>22,566</b>	84.6-13.9-1.5
<b>Transfers</b>	<b>1,099,771</b>	<b>992,914</b>	<b>74,132</b>	<b>32,725</b>	
Personnel Savings	194,578	163,446	21,598	9,534	default
Equipment Capital Reserve	473,276	397,552	52,534	23,191	default
School Capital Reserve	181,707	181,707	0	0	100-0-0
Impact Fees	250,210	250,210	0	0	100-0-0
<b>Other Taxes and Licenses</b>	<b>701,619</b>	<b>413,589</b>	<b>263,904</b>	<b>24,126</b>	
Occupancy Tax	91,191	0	91,191	0	0-100-0
Registrar of Deeds Excise Tax	492,368	413,589	54,653	24,126	default
Cable TV Franchise	115,714	0	115,714	0	0-100-0
Rental Vehicles	2,346	0	2,346	0	0-100-0
<b>Interest</b>	<b>477,936</b>	<b>401,466</b>	<b>53,051</b>	<b>23,419</b>	default

**Appendix Table 1. Chatham County Revenues by Land Use Category for 2005-2006 (continued)**

<b>Item</b>	<b>Total</b>	<b>Residential</b>	<b>Commercial</b>	<b>Agricultural</b>	<b>Breakdown<sup>a</sup></b>
<b>Grants/Donations</b>	<b>234,612</b>	<b>228,597</b>	<b>3,934</b>	<b>2,081</b>	97.4-1.7-0.9
<b>Miscellaneous</b>	<b>17,659</b>	<b>14,834</b>	<b>1,960</b>	<b>865</b>	default
<b>Other Financing Sources</b>	<b>73,235</b>	<b>61,517</b>	<b>8,129</b>	<b>3,589</b>	default
<b>Total Revenues</b>	<b>\$56,739,366</b> (100%)	<b>\$46,176,441</b> (81.4%)	<b>\$8,766,594</b> (15.5%)	<b>\$1,796,332</b> (3.2%)	

a. Percentage breakdown by land use category (residential-commercial-agricultural). Default percentages were based on the 2005 assessed property valuation (residential - 84.0%; commercial - 11.1%; agricultural - 4.9%).

**Appendix Table 2. Chatham County Budgeted Expenditures by Land Use Category for 2005-2006**

<b>Item</b>	<b>Total</b>	<b>Residential</b>	<b>Commercial</b>	<b>Agricultural</b>	<b>Breakdown<sup>a</sup></b>
<b>Administration</b>	<b>3,977,684</b>	<b>3,341,255</b>	<b>441,523</b>	<b>194,907</b>	
Buildings & Grounds	940,287	789,841	104,372	46,074	default
County Attorney	62,120	52,181	6,895	3,044	default
County Manager's Office	343,494	288,535	38,128	16,831	default
Court Facilities	54,646	45,903	6,066	2,678	default
Finance Office	568,517	477,554	63,105	27,857	default
Fleet Management	244,491	205,372	27,139	11,980	default
General Services	1,047,372	879,792	116,258	51,321	default
Management Information Services	716,757	602,076	79,560	35,121	default
<b>General Government</b>	<b>2,006,399</b>	<b>1,685,375</b>	<b>222,710</b>	<b>98,314</b>	
Elections Office	277,833	233,380	30,839	13,614	default
Governing Board	307,035	257,909	34,081	15,045	default
Register of Deeds	404,717	339,962	44,924	19,831	default
Tax - Administration	622,708	523,075	69,121	30,513	default
Tax - Land Records	94,203	79,131	10,457	4,616	default
Tax - Revaluation	299,903	251,919	33,289	14,695	default
<b>Education</b>	<b>21,032,823</b>	<b>21,032,823</b>	<b>0</b>	<b>0</b>	
Central Carolina Community College	436,657	436,657	0	0	100-0-0
Chatham County Schools	20,596,166	20,596,166	0	0	100-0-0
<b>Culture/Recreation</b>	<b>1,329,887</b>	<b>1,156,578</b>	<b>12,379</b>	<b>160,930</b>	
Cooperative Extension Service	247,584	74,275	12,379	160,930	30-5-65
Library	711,711	711,711	0	0	100-0-0
Recreation	370,592	370,592	0	0	100-0-0

**Appendix Table 2. Chatham County Budgeted Expenditures by Land Use Category for 2005-2006 (continued)**

<b>Item</b>	<b>Total</b>	<b>Residential</b>	<b>Commercial</b>	<b>Agricultural</b>	<b>Breakdown<sup>a</sup></b>
<b>Human Services</b>	<b>15,248,199</b>	<b>15,248,199</b>	<b>0</b>	<b>0</b>	
Council on Aging	593,450	593,450	0	0	100-0-0
Family Resource Center	61,088	61,088	0	0	100-0-0
<i>Health:</i>					
Administration	273,167	273,167	0	0	100-0-0
Community Health Promotion &	670,743	670,743	0	0	100-0-0
Family Outreach Support Services	698,686	698,686	0	0	100-0-0
Preparedness & Surveillance	367,676	367,676	0	0	100-0-0
Preventive Health Care	1,788,916	1,788,916	0	0	100-0-0
Human Service Agencies	251,559	251,559	0	0	100-0-0
Pass Through Grants	1,017,049	1,017,049	0	0	100-0-0
O-P-C Mental Health	523,003	523,003	0	0	100-0-0
Social Services	9,002,862	9,002,862	0	0	100-0-0
<b>Natural Resource Management</b>	<b>2,642,903</b>	<b>1,884,611</b>	<b>564,323</b>	<b>193,969</b>	
Central Permitting - Administration	167,686	142,533	25,153	0	81-19-0
Central Permitting - Inspections	502,981	427,534	75,447	0	81-19-0
Economic Development	174,860	0	174,860	0	0-100-0
Health - Environmental	731,910	658,719	58,553	14,638	90-8-2
Health - Sedimentation & Erosion	5,645	5,097	548	0	90.3-9.7-0
Pittsboro-Siler City Visitors' Bureau	83,360	0	70,856	12,504	0-85-15
Planning	300,019	195,612	99,906	4,500	65.2-33.3-1.5
Soil & Water	176,442	14,115	0	162,327	8-0-92
Utility Fund - Transfers	500,000	441,000	59,000	0	88.2-11.8-0

**Appendix Table 2. Chatham County Budgeted Expenditures by Land Use Category for 2005-2006 (continued)**

<b>Item</b>	<b>Total</b>	<b>Residential</b>	<b>Commercial</b>	<b>Agricultural</b>	<b>Breakdown<sup>a</sup></b>
<b>Public Safety</b>	<b>8,238,261</b>	<b>6,329,260</b>	<b>1,553,158</b>	<b>355,843</b>	
Central Permitting - Fire Marshall	242,454	53,825	188,629	0	22.2-77.8-0
Court-related Programs	472,643	397,020	52,463	23,160	default
Emergency Medical Services	1,394,826	1,171,654	154,826	68,346	default
Emergency Operations	581,913	488,807	64,592	28,514	default
Telecommunications	694,698	612,724	71,554	10,420	88.2-10.3-1.5
Health - Animal Control	327,867	327,867	0	0	100-0-0
Sheriff's Office - Law Enforcement	3,733,418	2,613,393	933,355	186,671	70-25-5
Sheriff's Office - Jail	790,442	663,971	87,739	38,732	default
<b>Transfer of surplus</b>	<b>2,263,210</b>	<b>2,105,420</b>	<b>116,081</b>	<b>41,710</b>	<b>93.0-5.1-1.8</b>
<b>Total Expenditures</b>	<b>\$56,739,366</b>	<b>\$52,783,521</b>	<b>\$2,910,174</b>	<b>\$1,045,671</b>	
	(100%)	(93.0%)	(5.1%)	(1.8%)	

a. Percentage breakdown by land use category (residential-commercial-agricultural). Default percentages were based on the 2005 assessed property valuation (residential - 84.0%; commercial - 11.1%; agricultural - 4.9%).