

**LAND USE AND COMMUNITY VALUES  
IN AUGUSTA COUNTY, VIRGINIA**

A study of the relative costs and revenues of different land uses in Augusta County,  
Virginia,

by

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This study is a cooperative project between the Valley Conservation Council, the Augusta County Farm Bureau, and the Augusta County Board of Supervisors. The Valley Conservation Council is a non-profit, membership organization and a land trust serving 11 Virginia counties west of the Blue Ridge, from Frederick in the north to Botetourt in the south. The Council is dedicated to protecting the Valley region's natural, agricultural, and cultural resources through private action and public planning. To date, the Council's 1,000 members have helped private landowners protect more than 10,000 acres of farm and forestland in the region.

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## **I. INTRODUCTION**

### **Goals**

In September 1996, the Valley Conservation Council (VCC) was contracted by the Augusta County Board of Supervisors and the Augusta County Farm Bureau to study the impact of different land uses on the finances of Augusta County. This study is intended to assist county officials and citizens in assessing the relationship between land use and county finances. The goals of the study follow.

1. Determine current land uses in the county by identifying the portion of the land base which is in each of four Study Categories: A. Tax Exempt, B. Commercial/Industrial, C. Residential, and D. Farm/Forest.
2. Estimate the rate of conversion between the different Study Categories by comparing land use data from 1960 to 1996.
3. Assign the county's annual expenditures and revenues to each of the Study Categories.

Detailed methodologies are described in the second section of this report. The appendices provide the full data used to answer these questions for FY 1995.

Appendix #1 shows the division of lands into the Study Categories; Appendix #2 shows the division of revenues into the Study Categories; Appendix #3 shows the division of expenditures into the Study Categories; Appendix #4 summarizes the information on land use, revenues, and expenditures for fiscal years 1991 through 1994 and 1996.

### **Previous Studies of Land Use and Fiscal Impacts**

The VCC completed a similar study on land use and fiscal impacts in Augusta County in 1993 using the tax year ending in June of 1991 for its fiscal analysis. Where possible, the current study uses the same methodologies and base information as was used in the previous study in the interests of making the results of the two studies comparable. In 1993, an advisory committee of planning officials from Augusta County, Staunton, Waynesboro, and the Central Shenandoah Planning District Commission approved the methods of data collection and analysis which are repeated here.

Numerous fiscal impact studies were examined to help design the methodologies used in this study. All, to varying degrees, found similar results. No studies were found in which residential uses exhibited overall positive fiscal impacts. The methods used by the VCC differ from many similar analyses in two primary areas.

1. A portion of the county's expenditures on services to households, largely schools, is attributed to the Farm/Forest Study Category. Other studies have placed all funds related to households, including farm households, in the Residential Category. This change is intended to better reflect the nature of land use in Augusta County and the role of its farm

households. The decision to include these funds in the Farm/Forest Study Category is based on the premise that land neither pays taxes nor requires services, people do. In Augusta County, no services are provided to raw land. Unless the services provided to rural land owners are included in the Farm/Forest Study Category, the conclusion that farm and forest land is revenue positive is pre-determined if this land is assumed to produce revenue independent of its owner. The inclusion of funds related to farm households in the Farm/Forest Study Category virtually guarantees this analysis will yield a very conservative estimate of the deficit created by residential land use when compared to other fiscal impact studies since all possible costs are attributed to the Farm/Forest category.

2. This study provides "snapshots" of the fiscal impact of various land uses in Augusta County for each fiscal year between 1991 and 1996 to show trends that are occurring over time. These snapshots are combined with an historical view of how land use in the county has changed since 1959. Most other studies examined analyzed only government finances at a given point in time.

**Information Sources**

County revenue and expenditure information came from five sources:

1. Augusta County's annual audited financial reports;
2. "1995 Tax Rates in Virginia's Cities, Counties, and Selected Towns," by the Weldon Cooper Center for Public Service at the University of Virginia, an annual publication providing data for each jurisdiction in Virginia;
3. "Comparative Report of Local Government Revenues and Expenditures, Year Ended June 30, 1991," by the Virginia Auditor of Public Accounts which gives data for each jurisdiction in Virginia; and
4. Augusta County's Real Property File and Personal Property File.

Data on population, housing, agriculture, land ownership, and other demographics used to apportion land, revenues, and expenditures is summarized below.

**U.S. Census, 1990 - Augusta County**

Population	54,677	Persons Per Household	2.6829
Households	19,781	Housing Units	21,202
Persons in Households	53,070	Vacant Housing Units	1,421
% of Persons in Households	97.06	% of Housing units vacant	6.7%

**U.S. Department of Agriculture**

George Washington and Jefferson National Forest Lands Office, 1996 195,707 acres of federal forest ownership in county

U.S. Census of Agriculture - Augusta County, Staunton, and Waynesboro Number of Farms 1992 - 1,514

Acres of Land in Farms- Augusta County, Staunton, and Waynesboro							
1959	1964	1969	1974	1978	1982	1987	1992
338,281	316,235	291,785	312,098	303,370	312,906	292,191	287,811

**Weldon Cooper Center for Public Service**  
 Housing Units Authorized in Virginia's Cities, Counties, and Towns,  
 1990 - 1994

Housing Units Authorized - Augusta County				
1990	1991	1992	1993	1994
624	483	556	516	527

**Population Estimates for Virginia Localities, 1995**

	Augusta County	Staunton	Waynesboro
1991	56,200	24,500	18,700
1992	57,100	24,600	18,700
1993	57,900	24,700	18,700
1994	59,400	24,200	18,700
1995	59,800	24,400	18,700
1996	60,800	24,100	18,900

**Virginia Statistical Abstract 1996-1997, 1996**

Registered Vehicles - Augusta County	
1991	56,351
1992	58,254
1993	60,345
1994	62,610
1995	64,292
1996	66,427

*Virginia Statistical Abstract 1992-1993, 1992*  
 1988 Augusta County registered vehicles 51,358  
 1988 Augusta County population 53,358

<b>Augusta County Comprehensive Plan, 1994</b>	
97%	% authorized housing units constructed
2,200	Housing units annexed in 1986 and 1987
6,175	Population annexed in 1986 and 1987
11,274 acres	Area annexed in 1986 and 1987
47,782	Non-annexed population, 1980
284,000	Farm land acres, 1994

U.S. Department of Commerce, Bureau of Labor Statistics <i>Consumer Price Index</i>	
1960	29.6
1990	130.7
1995	151.9

<b>U.S. Department of Interior</b>	
<i>1992 National Resources Inventory, 1992</i>	
9,356 acres	Rural acres used for transportation facilities
<i>Shenandoah National Park Southern District Office, 1996</i>	
12,272	Park ownership in county
<i>Appalachian National Scenic Trail Conference Mid-Atlantic Office, 1996</i>	
738	Park Ownership in county
<i>Blue Ridge Parkway Lands office, 1996</i>	
2,302	Park Ownership in county
Commonwealth of Virginia	
<i>Department of General Services, 1996</i>	
2,598	State ownership in county
<i>Department of Game and Inland Fisheries Lands Office, 1996</i>	
11,706	Department ownership in county

## II. METHODOLOGY

The methodologies used to address each of the three goals covered in the study are described below. Notes are included in the appendices giving the exact calculations used to assign land, revenues, and expenditures to the Study Categories. In some of these calculations, final numbers were rounded.

**Goal 1.** *Assess the percentage of the county's land base which is currently in each of four Study Categories: 1) Residential, 2) Commercial/Industrial, 3) Farm/Forest, and 4) Tax Exempt.*

A database on current land use and real property revenues was developed for this study using the county's Real Property File as a foundation. In this computerized reporting system the Commissioner of Revenue divides all land in the county into 34 "Land Use Types," using simple criteria including acreage and existing use. An additional category was added in this study to include rural transportation corridors occupied by state and federal highways.

This file is used by the county for taxing purposes and is considered the most reliable and up-to-date account of land use on taxable land in the county. Several adjustments were made to the Real Property File with the assistance of the Augusta County Commissioner of Revenue. Information from this file on acreage, assessed values, and taxable values on all taxable land in the county was entered into the new data base which appears in Appendix #1 and Appendix #4, Part A. Information drawn from the file in September 1996 was used in calculations for fiscal years 1993 through 1996. Information drawn from the file in June 1992 was used in calculations for fiscal years 1991 and 1992.

While the "Real Property File" is the most up-to-date account of the county's land that divides land and real property tax revenue by land use, it appears to over estimate the total amount of taxable land and under estimate the amount of federal and state public land in the county. A comparison of tax exempt lands identified in the 1996 Real Property File and those identified by agencies responsible for managing them is provided in Table #1 below.

<b>TABLE # 1: TAX EXEMPT LANDS IN AUGUSTA COUNTY</b>		
	Real Prop. File	Appendix 1
71. Local government	1,905	1,905
A. Dept. of Game and Inland Fisheries	Not Listed	11,706
B. Dept. of General Services	Not Listed	2,598
72. Sub-total State	25,458	14,304
A. George Washington National Forest	Not Listed	195,707
B. Blue Ridge Parkway	Not Listed	2,302
C. Appalachian National Scenic Trail	Not Listed	738
D. Shenandoah National Park	Not Listed	12,272
73. Sub-total Federal	56,451	211,109
74. Public utility	432	432
75. Church	953	953
76. Other non-profit	955	955
77. Other exempt	833	833
78. Schools	577	577
79. Not defined	231	231
80. Transportation	Not Listed	9,356
<b>TOTAL TAX EXEMPT LANDS</b>	87,795	240,655

The file lists a total of 488,318 acres of land. The county actually has 619,667 acres. Of this total, 400,530 acres are listed as taxable private land while 87,788 acres are listed as tax exempt. For federal and state owned land in the county, acreages in the Real Property File have been replaced with figures supplied by public land management agencies.

The agencies asserted all their land ownership had been verified through meets and bounds surveys. Adding these figures for federal and state land to Real Property File figures for other tax exempt land and private land results in a total land area of 641,187 acres. An additional adjustment has been made that removed the 9,356 acres of "rural transportation lands," identified in the 1992 National Resources Inventory from the Farm/Forest Study Category, leaving 631,831 acres of private taxable land in the county. This is 12,164 acres, or 2 percent, more land than is actually in the county (619,667 acres). A conversion from the acres identified to the actual number of acres in the county is thus necessary. Since acreages on federal and state ownership has been verified through meets and bounds surveys, the discrepancy is assumed to exist on private land.

Subtracting the total discrepancy (12,164 acres), from the total private acres projected by the Real Property File provide an estimate of 379,012 acres of private taxable land in the county. Acreage is apportioned to the three taxable Study Categories by multiplying the

estimated actual number of private acres (379,012) by the percentages of land found in each Study Category in the Real Property File. The results of this conversion and other data from Appendix 1 are summarized in Table # 2.

		Taxable Value (in thousands of dollars)			
% Land		Acres	Land	Buildings	Total
Residential	9.10%	56,388	\$397,781	\$1,231,120	\$1,628,901
Com./Ind.	3.37%	20,920	\$62,023	\$277,444	\$339,467
Farm/Forest	48.71%	301,920	\$436,558	\$288,191	\$724,749
Tax Exempt	38.82%	240,655	\$0	\$0	\$0
Total	100%	619,883	\$896,362	\$1,796,755	\$2,693,117

Source: Augusta County Real Property File, September 1996

Note: Acreage numbers from the real property file were adjusted to match the county's actual acres.

**Goal 2.** *Determine the rate of conversion between the different land uses from 1959 to 1996.*

### **A. Land in Farms**

The study provides an historical analysis of the decline in land in active agricultural use in the county between 1959 and 1996. Eight editions of the Ag-Census published between 1959 and 1992 were the primary source of historical information on the amount of farm land in the county. For changes which occurred between the last Ag-Census and 1996, an estimate was derived from the Real Property File. It must be noted that the estimate of the amount of land in active agricultural use in 1996 (255,811 acres) is different from the amount of land in the Farm and Forest Study Category in 1996 (301,920 acres).

This difference reflects separate definitions and purposes. The Ag-census measures farm land based on definitions which require some measure of agricultural sales and production. It does not include rural land that is not being actively farmed, or private forested land unless it is 1) physically attached lands which are actively farmed and 2) under the ownership of the operator of land which is actively farmed. The estimate of the amount of land in farms in 1996 (255,811 acres) is derived from the county's Real Property File. To make this figure comparable to the estimates from the Ag-census, only those lands which 1) benefit from land use taxation and 2) are in Land Use Types which the Commissioner of Revenue considers, "active agricultural operations, grazing operations, (and) forest," are included in the 1996 estimate of land in farms. These lands are listed by type in Table # 3 below.

**TABLE # 3: TOTAL PRIVATE FARM AND FOREST ACRES AND ACRES IN THE USE VALUE ASSESSMENT PROGRAM BY LAND USE TYPE 1996**

Land Use Type	Total	In Land-use	Not In Land-use
Forest (20 - 200)	16,587	11,349	5,238
Active operation (20 - 200)	73,207	63,614	9,593
Grazing only (20 - 200)	36,207	30,379	5,828
Nor used	35	19	16
Ag/Forest District (20 - 200)	1,676	1,664	12
Forest (over 200)	14,451	12,363	2,088
Active operation	96,794	92,249	4,545
Grazing (over 200)	42,046	40,679	1,367
Ag/Forest District (over 200)	3,600	3,495	105
<b>TOTAL FARM AND FOREST</b>	<b>284,603</b>	<b>255,811</b>	<b>28,792</b>

Source: Augusta County Real Property File, September 1996

Note: Acreages were adjusted to match actual acres.

This estimate is limited to lands benefiting from land use taxation since the rules for land use taxation require that minimum levels of farm production occur on a parcel for it to qualify, just as the Ag-census requires farm production for land to be counted in its surveys.

While the Ag-census is the best source of historical information on land use, it has some drawbacks. Primary among these are changes in what is counted as farm land which occurred between 1959 and 1992. For counts between 1959 and 1974 farms are defined as, "all places with 10 acres or more and with \$50 or more in agricultural product sales or any place with less than 10 acres but with at least \$250 or more in sales," per annum. For counts after 1974, the definition is, "any place that had or normally has \$1,000 or more in total agricultural product sales during the census year."

The Ag-census also includes two categories of land which are not included in this study's estimate land in farms in 1996. It includes all land in the county-wide region (Staunton, Waynesboro, and Augusta County) which meet its criteria in land in farms. For instance, in 1992, Staunton had 4,000 acres which qualified for land use taxation while Waynesboro had 1,888 acres of the same. Since active agricultural operations were not allowed in Staunton and Waynesboro until after recent annexations, it is assumed all farm land identified was within the county borders at the beginning of the period of analysis. The Ag-census also includes land surrounding farm dwellings in its land in farms. Since this land does not qualify for use-value taxation, it is not included in this study's estimate of actively farmed land in 1996. These factors account for much of the difference in the estimates of land in farms in 1992 and 1996.

## B. Conversion of Farm Land

Additional measures of the rate of conversion of farm land since 1990 are derived from the Real Property File and from demographic information. Calculations performed to arrive at Estimate 3 are provided in the Table # 4.

<b>TABLE # 4: NEW PARCELS 1992 THROUGH 1996</b>				
Range	Year	Acres	Parcels	Average Size (acres)
less than six acres	1992	33,260	23,657	1.41
	1996	36,347	25,556	1.42
	change	3,087	1,899	1.63
six to 9.99 acres	1992	13,947	1,838	7.59
	1996	15,083	1,987	7.59
	change	1,136	149	7.63
10 to 14.99 acres	1992	12,242	1,022	11.98
	1996	13,521	1,132	11.94
	change	1,279	110	11.62
15 to 19.99 acres	1992	10,272	596	17.24
	1996	10,668	620	17.21
	change	396	24	16.49
<b>Total Change</b>		<b>5,897</b>	<b>2,182</b>	<b>2.70</b>

Source: Augusta County Real Property File, 1992 and 1996

**Goal 3.** *Assign the county's revenues and expenditures to each of the Study Categories.*

The study uses population, public land ownership, housing, and other demographic data listed in the Introduction section to measure differences in land use and assign expenditures and revenues to the four study categories. Some of the statistics used to arrive at estimates, using 1995 as an example, are summarized below. Complete calculations used to arrive at the estimates are provided in the appendices.

### 1995 Estimates

**1,514** Farm Households - The number of households that are an integral part of farm operations, and were consequently considered a valid farm land use was taken from the 1992 Census of Agriculture's estimate of farms in Augusta County with off-farm sales of \$1,000 or more annually.

**2,694** Households Under Use-value Taxation - The Augusta County Commissioner of the Revenue provided this number. It was substituted for the number of farms from the Ag-census in calculations placing all use-value related revenue and expenses in the Farm and Forest Study Category.

**23,827** Housing Units - This number builds on the number of households in the county in 1990 from the 1990 census (21,202). The Weldon Cooper Center for Public Service's Housing Units Authorized in Virginia's Cities, Counties, and Towns, an annual publication, found 2,706 new units were authorized between 1990 and 1995. The comprehensive plan estimates 97 percent of the units authorized in the county are built.  $2,706 * 0.97 = 2,625 + 21,202 = 23,827$

**1,597** Vacant Housing Units - The 1990 vacancy rate (0.0670) was applied to the number of housing units (23,287).  $23,287 * 0.670 = 1,597$

**22,230** Households - Vacant housing units (1,597) were subtracted from all housing units (23,827) to determine total households.  $23,827 - 1,597 = 22,230$

**58,042** Persons in Households - The 1990 percentage of persons in households (0.9706) was applied to the 1995 population (59,800).  $59,800 * 0.9706 = 58,042$

**2.6110** Persons per Household - The number of persons in households (58,042) was divided by the number of households (22,230).  $58,042 / 22,230 = 2.6110$

**12.12%** Percentage of Households in Land Use - The number of households in land use (2,694) was divided by the number of households (22,230).  $2,694 / 22,230 = 0.1212$

**7,034** Persons in Land-use Households - The number of households in land use (2,694) was multiplied by the number of persons per household (2.6110).  $2,694 * 2.6110 = 7,034$

**11.76%** Percentage of Population in Land-use Households - The persons in land-use households (7,034) was divided by the total population (59,800).  $7,034 / 59,800 = 0.1176$

## **Revenues**

All county revenue was sorted into the Study Categories. A detailed description of the methods used for FY 1995 appears in Appendix 2. The results of these calculations for fiscal years 1991 through 1994 and 1996 are summarized in Appendix #4.

## **Real Property Taxes**

Apportionment of real property taxes was based on the Real Property File, which lists the assessed value of land and buildings in each Land Use Type, as well as land that benefits from land use tax relief. Using this information it was possible to calculate the actual, annual real property tax owed on land in each Land Use Type in June of 1992 and September of 1996. These figures for the 34 Land Use Types were then merged into the four broad Study Categories of land use. Since these calculations showed the amount of real property tax owed by each Study Category in 1992 and 1996, conversions were necessary to make results comparable to the actual amount of real property tax collected in each fiscal year. These calculations are detailed in Appendix 2, Note 1, Page A2-2. The 1992 Real Property File ratios were used to allocate real property taxes for FY 1991

and FY 1992. The 1996 Real Property File ratios were used to allocate real property taxes for FY 1993 through FY 1996.

**Personal Property Taxes**

Were apportioned in a fashion similar to Real Property Taxes, based on the county's Personal Property File. These calculations are detailed in Appendix 2, Note 3, Page A2-3. Consumer Utility Taxes - Were apportioned in a fashion similar to Real Property Taxes, based on the county's Consumer Utility Tax File. These calculations are detailed in Appendix 2, Note 9, Page A2-5.

**Expenditures**

All county expenditures were sorted into the Study Categories. Detailed descriptions of the methods used appear in Appendix 3. The results of these calculations for fiscal years 1991 through 1994 and 1996 are summarized in Appendix #4.

### III. Analysis

*"Establish a pattern of residential and business uses that causes minimal conversion of agricultural land or disruption to agricultural areas."*

-Goals for the Future 1994 - 2014,  
Augusta County Comprehensive Plan

A primary goal of Augusta County's land use and development policies, affirmed by county citizens through the current comprehensive plan, is to protect agricultural land. Likewise, the 1987 comprehensive plan says, **"the primary goal for agriculture is to preserve and protect the farmlands within the county so that agricultural enterprise can be continued and production improved in the future."**

Since 1977, the county has also made a fiscal commitment towards achieving that goal through the land use tax on real property for rural land. The program reduces taxes on rural lands to discourage their conversion to more intensive uses because **"the preservation of such real estate is a matter vital to the public interest,"** as stated in the Code of Virginia. Although the county's goal has been to **"discourage non-agricultural development in areas of productive farm land,"** for almost two decades, Augusta's farm land has steadily declined since peaking at a high of 338,281 acres in 1959.

#### Land in Farms

The amount of actively farmed land in the county-wide region (Augusta County, Staunton, and Waynesboro) decreased by 15 percent between 1959 and 1992, from 338,281 to 287,442, according to the U.S. Census of Agriculture. Using the county's Real Property File, the study estimates that the amount of farm land left in the county proper was actually 11 percent, or 31,631 acres, less in 1996. While the county Real Property File and the Census of Agriculture use somewhat different criteria for counting farm land, as discussed in the Methodologies section of this report on page 18, they provide the only historical estimates of changes in farm land in the county. The difference between the land in farms in 1959 and the estimated amount of actively farmed land in the county in 1996 is 82,470 acres or 24 percent. The decrease in agricultural lands since 1959 is shown in Table # 5.

Year	Acres of Land	Acres Lost	Annual Loss	Percent Lost
1959	338,281	NA	NA	NA
1982	312,906	(25,375)	(1,103)	-7.50%
1987	292,191	(20,715)	(4,143)	-6.62%
1992	287,442	(4,749)	(950)	-1.63%
1996	255,811	(31,631)	(7,908)	-11.00%
Total	NA	(82,470)	(2,229)	-24.38%

Source: U.S. Census of agriculture 1959 - 1992, Augusta County Real Property File, September 1996  
 Note: Acreage numbers from the real property file were adjusted to match the county's actual acres. Some numbers may not add due to computer rounding

## Population Growth

During the same three and a half decades, a 38 percent increase in the population of the county-wide region (including Staunton, Waynesboro, and Augusta County) occurred, as shown in Table # 6 below. Almost all this growth occurred within the county, where the population increased by 23,437 people or 63 percent in 36 years.

Year	Staunton	Waynesboro	Cities	Augusta	Region
1960	22,232	15,694	37,926	37,363	75,289
1970	24,504	16,707	41,211	44,220	85,431
1980	21,857	15,329	37,186	53,732	90,918
1990	24,461	18,549	43,010	54,677	97,687
1996	24,100	18,900	43,000	60,800	103,800
Change	1,868	3,206	5,074	23,437	28,511
%Change	8.40%	20.43%	13.38%	62.73%	37.87%

Source: U.S. Census and Weldon Cooper Center for Public Service

The true rate of growth in the county is actually under estimated in the census because of annexations by Waynesboro and Staunton which occurred in 1986 and 1987 respectively. In Table #7 below census numbers are adjusted to gauge the rate of population growth within the county's existing borders. Population figures for 1980 are adjusted to remove people living in annexed areas from the county.

Year	Non-annexed Population	Change	% Change	% Annual Change
1980	47,782	NA	NA	NA
1990	54,677	6,895	14.43%	1.44%
1996	60,800	6,123	11.20%	1.87%
Total	60,800	13,018	27.24%	1.70%

Source: Augusta County Comprehensive Plan 1980 figure, U.S. Census 1990 figure, Weldon Cooper Center for Public Service 1996 figure

When the area and residents recently annexed by Staunton and Waynesboro are excluded from the analysis, it appears the population within the post-annexation county grew by more than 27 percent in 16 years, from 47,782 in 1980 to 60,800 in 1996. It also appears the rate of growth continues to accelerate, from 1.44 percent annually between 1980 and 1989 to 1.87 percent between 1990 and 1996. The 1994 Comprehensive Plan estimated

the county's population will grow at a maximum rate of about 1.32 percent per annum between 1994 and 2014. The plan used this "high-end," estimate to project both residential land demand and facilities use, both of which will affect the future fiscal health of the county. More recent estimates of population growth show a rate of 1.82 percent between 1991 and 1996, 38 percent faster than projected in the plan.

<b>Table #8: Household Population Projections: 1994 – 2014</b>							
Projections 1994 Comprehensive Plan				Projections 1991-1996 Estimates			
	Pop.	Change	% Annual Change		Pop.	Change	% Annual Change
1994	56,200	NA	NA	1994	58,123	NA	NA
1995	56,942	742	1.32%	1995	58,514	391	0.67%
1996	57,694	752	1.32%	1996	59,492	978	1.87%
1997	58,455	762	1.32%	1997	60,607	1,115	1.87%
1998	59,227	772	1.32%	1998	61,743	1,136	1.87%
1999	60,009	782	1.32%	1999	62,900	1,157	1.87%
2000	60,801	792	1.32%	2000	64,078	1,179	1.87%
2001	61,603	803	1.32%	2001	65,279	1,201	1.87%
2002	62,417	813	1.32%	2002	66,502	1,223	1.87%
2003	63,240	824	1.32%	2003	67,748	1,246	1.87%
2004	64,075	835	1.32%	2004	69,018	1,270	1.87%
2005	64,921	846	1.32%	2005	70,311	1,293	1.87%
2006	65,778	857	1.32%	2006	71,629	1,318	1.87%
2007	66,646	868	1.32%	2007	72,971	1,342	1.87%
2008	67,526	880	1.32%	2008	74,339	1,367	1.87%
2009	68,417	891	1.32%	2009	75,732	1,393	1.87%
2010	69,320	903	1.32%	2010	77,151	1,419	1.87%
2011	70,235	915	1.32%	2011	78,596	1,446	1.87%
2012	71,163	927	1.32%	2012	80,069	1,473	1.87%
2013	72,102	939	1.32%	2013	81,570	1,500	1.87%
2014	73,054	952	1.32%	2014	83,098	1,529	1.87%
Total	73,054	16,854	29.99%	Total	83,098	24,975	42.97%

Note: Updated estimates are based on the average annual rate of growth shown in population estimates for 1991, 1992, 1993, 1994, 1995, and 1996 from the Center for Public Service. These estimates have been multiplied by 0.9785, the ratio of population to household population estimated in the 1994 Augusta County Comprehensive Plan.

If recent trends in population growth continue, the county's household population will be 10,045 more in 2014 than projected in the plan, as shown above in Table #8 above. This accelerated rate of growth is important from a fiscal stand point because of the additional services increased growth will require of the county. For instance, at current rates, the county will have about 1,904 more school students in 2014 than projected in the plan. Serving these students will require the county to invest about \$23 million more in school construction by 2014 than projected in the comprehensive plan.

### **Growth in Housing Units**

The impact of residential development on land use in the county is larger than the rise in population because the average household size has steadily decreased throughout the period. According to the U.S. Census, the number of housing units in the county almost doubled from 10,890 in 1960 to 21,202 in 1990, a 95 percent increase. The rate of growth within the post-annexation county borders is even higher since the pre-1990 counts include approximately 2,200 units which were annexed in 1986 and 1987. Since 1990 growth has exceeded 2 percent annually, as shown in Table # 9 below.

<b>TABLE # 9 : AUGUSTA COUNTY HOUSING GROWTH: 1990 THROUGH 1996</b>			
Year	Units Added	Total Units	% Annual Change
1990	NA	21,202	NA
1991	605	21,807	2.85%
1992	469	22,276	2.15%
1993	539	22,815	2.42%
1994	501	23,316	2.19%
1995	511	23,827	2.19%
1996	522	24,349	2.19%
Total	3,147	24,349	14.84%

Source: U.S. Census 1990, Weldon Cooper Center for Public Service 1991 through 1995

Note: 1996 units were estimated based on the 1995 rate of growth

### **Changes in the County Tax Base**

The increase in population and housing in Augusta County over the last 36 years was accompanied by a rise in both assessed property values and the tax base. The county's financial report for FY 1960 shows the all real property assessed at \$39 million. In 1992, all taxable real property was assessed at \$1.893 billion. By 1996 all taxable real property was assessed at almost \$2.693 billion, an increase of almost \$800 million or 42 percent in

just four years. These values are illustrated in Table # 10 and Table # 11 on the following page.

<b>TABLE # 10: TOTAL ACRES AND ASSESSED VALUES BY STUDY CATEGORY 1992</b>					
		Taxable Value (in thousands of dollars)			
% Land		Acres	Land	Buildings	Total
Residential	8.52%	52,504	\$220,394	\$855,615	\$1,076,009
Com./Ind.	3.49%	21,537	\$49,784	\$229,881	\$279,665
Farm/Forest	50.48%	311,169	\$307,690	\$230,039	\$537,729
Tax Exempt	37.51%	234,458	\$0	\$0	\$0
Total	100%	619,668	\$577,868	\$1,315,535	\$1,893,403

Source: Augusta County Real Property File, September 1992

Note: Acreage numbers from the real property file were adjusted to match the county's actual acres

<b>TABLE # 11: TOTAL ACRES AND ASSESSED VALUES BY STUDY CATEGORY 1996</b>					
		Taxable Value (in thousands of dollars)			
% Land		Acres	Land	Buildings	Total
Residential	9.21%	56,388	\$397,781	\$1,231,120	\$1,628,901
Com./Ind.	3.42%	20,920	\$62,023	\$277,444	\$339,467
Farm/Forest	49.28%	301,704	\$436,558	\$288,191	\$724,749
Tax Exempt	38.09%	240,655	\$0	\$0	\$0
Total	100%	619,667	\$896,362	\$1,796,755	\$2,693,117

Source: Augusta County Real Property File, September 1996 Note: Acreage numbers from the real property file were adjusted to match the county's actual acres.

### **Assessed Residential Values**

The largest portion of this increase came in the area of residential land and buildings, which rose \$591 million or 52 percent. One reason for this rise is the increase in the number of residences in the county. The per-unit assessed value of these residences increased at the lower rate of 35 percent, more slowly than the overall increase of real property assessments in the county (42 percent). These changes are shown below in Table # 12.

**TABLE # 12: AUGUSTA COUNTY RESIDENTIAL LAND AND BUILDING VALUES: 1992 THROUGH 1996**

	1992 Residential Land and Build.	1996	Change	% Change	Annual Change
Units	21,202	23,908	2,706	13%	3%
Ass. \$	\$1,137,826,000	\$1,729,076,000	\$591,250,000	52%	13%
\$ Per Unit	\$53,666	\$72,322	\$18,656	35%	9%

Source: Augusta County Real Property File, 1992 and 1996

### Farm and Forest Land Values

Conversely, the per-acre assessed value of farm and forest land is increasing at a rate faster than the overall rise in real property assessments (42 percent). The per-acre value of farm and forest land rose 45 percent over the four-year period between 1992 and 1996. This increase does not affect the taxes paid on land by many rural property owners because of use-value taxation. However, it does increase the pressure on owners to sell their land to development since increased assessments reflect increases in the fair-market value of property. These changes are illustrated in Table # 13 below.

**TABLE # 13: AUGUSTA COUNTY FARM AND FOREST LAND VALUES: 1992 THROUGH 1996**

	1992	1996	Change	% Change	Annual Change
Acres	294,437	284,603	9,834	3%	1%
Assessed \$	\$280,489,000	\$392,227,000	\$111,738,000	40%	10%
\$ Per Acre	\$953	\$1,378	\$426	45%	11%

Source: Augusta County Real Property File, 1992 and 1996

### Revenue Per-capita and Per-household

Augusta County financial reports also show growth in revenue per capita and per household have out paced both inflation and population growth. Per capita and per household revenue were determined using dollar amounts from the 1960, 1990, and 1995 audited financial reports and population data from the U.S. Census and the Center for Public Service. The numbers were adjusted to take out the effects of inflation using the Consumer Price Index from the U.S. Department of Commerce. This information is given in Table # 14 below.

**TABLE # 14 REVENUE PER-CAPITA AND PER-HOUSEHOLD 1960, 1990 AND 1995 ADJUSTED FOR INFLATION TO 1960 DOLLARS**

	1960	1990	1995
Revenue	\$6,087,834	\$57,488,599	\$74,757,544
Population	37,363	54,677	60,300
Households	9,789	19,781	22,306
Revenue Per Capita	\$163	\$1,051	\$1,240
Revenue Per HH	\$622	\$2,906	\$3,351
Consumer Price Index	30	131	152
Adjusted \$ Per Capita	\$162.94	\$238.12	\$241.72
Adjusted \$ Per HH	\$621.91	\$658.19	\$653.31

Source: Augusta County Audited Financial Reports 1960, 1990, 1995; U.S. Census 1960, 1990, and 1995 estimates; Housing Permits Authorized in Virginia's Cities Counties, and Towns 1990, 1991, 1992, 1993, 1994

The revenue per capita generated by the county grew 48 percent, from \$162.94 in 1960 to \$241.59 in 1995, after being adjusted for inflation, according to the county's annual financial reports. Total county revenues per household grew by 6 percent, from \$621.91 in 1960 to \$653.31 in 1995. Revenue per household declined marginally between 1990 and 1995, from \$658 to \$656.

### **Conversion of Farm and Forest Land**

The comprehensive plan states that a primary objective of the county's land use and development policies is to, "**provide sufficient incentives and protections for agricultural land uses so as to lose no more than five percent of the current total acreage of farm land over the next 20 years.**" The plan estimates the county had 284,000 acres of farm land in 1994. Using this estimate as a starting point, the county's goal is to lose less than 14,200 agricultural acres over 20 years, or 710 acres a year.

Several estimates of the rate of conversion of farm and forest land were made to gauge how well the county is meeting this objective. While the estimates, based on demographic data and the county's Real Property File, provide a range of rates at which open land may be converting to other uses, they all agree on one thing. Farms are disappearing at a rate faster than called for in the comprehensive plan. Each estimate is described below. The long range impact of each estimate is provided in Table # 16.

#### **Estimate 1**

4,042 acres lost a year

This estimate is based on the Census of Agriculture and the 1996 estimate of land in farms, as shown in Table #5. The table shows a declining rate of farm land loss between 1987 and 1992 followed by an accelerating rate of loss between 1992 and 1996. This is probably because the Ag-census includes land in Staunton and Waynesboro which meets its criteria. Some farms in areas annexed by the cities were counted by the census in

1992. For instance Waynesboro and Staunton had 1,888 acres and 4,000 acres respectively under use-value taxation. Much of this land was probably included in the 1992 estimate of land in farms from the Ag-census. This study's estimate of land in farms in 1996 only counts land in the county, using the Real Property File. Cumulatively, the two estimates show an annual loss of 4,042 acres over the nine year period. This rate is roughly commensurate with the rate of loss experienced prior to annexation in the early eighties, 4,143 acres per annum.

**Estimate 2**

1,770 acres lost a year

Building permit records show approximately 2,625 new housing units were built in the county during the five-year period between 1990 and 1995. The average non-farm housing unit occupies 3.27 acres of land, according to the Real Property File. At this land-to-residence ratio, 2,625 new housing units would require 8,849 new acres of residential land over five years, or 1,770 acres of land per year.

<b>TABLE # 15: NEW PARCELS 1992 THROUGH 1996</b>				
Range	Year	Acres	Parcels	Average Size (acres)
less than 6 acres	change	3,087	1,899	1.63
6 to 9.99 acres	change	1,136	149	7.62
10 to 14.99 acres	change	1,279	110	11.63
15 to 19.99 acres	change	396	24	16.50
<b>Total Change</b>		<b>5,898</b>	<b>2,182</b>	<b>2.70</b>

Source: Augusta County Real Property File, 1992 and 1996

**Estimate 3**

1,474 acres lost a year

The Real Property File shows that 2,182 new parcels of less than 20 acres each were created in the county between 1992 and 1996. These new parcels occupy 5,897 acres of land, or 2.7 acres on average, as shown in Table # 15 above. The subdivision of land into smaller parcels facilitates development and insinuates the owners intend to develop them to more intensive uses. If these subdivided parcels were converted to non-farm uses, they account for the loss of 1,474 acres of farm land per year.

**Estimate 4**

1,480 acres lost a year

The Real Property File shows a 5,921-acre increase in the amount of land in residential Land Use Types between July of 1992 and September of 1996. This increase would require the conversion of 1,480 acres of farm land per year since Commercial and Industrial lands remained virtually stable of the four-year period.

**TABLE # 16: PROJECTED CONVERSION OF FARM LAND 1994 THROUGH 2014**

	Acres of Land	Annual Acres Lost	Acres lost 1994 - 2014	% Lost by 2014
Comp Plan Goal	284,000	710	14,200	5.00%
Estimate 1	284,000	4,042	80,840	28.46%
Estimate 2	284,000	1,770	35,400	12.46%
Estimate 3	284,000	1,474	29,480	10.38%
Estimate 4	284,000	1,480	29,600	10.42%
Average of 1 - 4	284,000	2,192	43,830	15.43%

These projections suggest the actual rate of farm land conversion is between 104 percent (1,474 acres per year) and 469 percent (4,032 acres per year) faster than the rate projected in the comprehensive plan (710 acres per year). They suggest existing county policies implemented to limit the amount of farm land loss are may not be meeting the community's goals for protecting those lands.

### **The Land Use Tax Program**

Since 1977, the primary incentive the county has offered land owners to deter them from converting farm land to more intensive uses is the land use tax on real property for rural land. In 1995, the county provided about \$1.3 million in property tax benefits to discourage farm and forest land owners from converting their land to more intensive uses. The county shifted responsibility for about one percent of the county's total revenues away from these lands through the program. The county provides use-value taxation to the owners of agricultural, forestal, horticultural, and open space lands. The Commonwealth allows localities to tax such lands at their use-value, as opposed to a generally higher fair market value, "**to encourage the preservation and proper use,**" of rural land and "**to promote a balanced economy and ameliorate the pressures which force the conversion of such real estate to more intensive uses.**"

Use-values are determined on the basis of land's productive earning power under agricultural, forestal, horticultural, or open-space uses as determined by the local commissioner of the revenue. The commissioner determines a range of values for land with varying soil capabilities after considering values recommended by the state.

The program reduces taxes on rural lands to discourage their conversion to more intensive uses because "**the preservation of such real estate is a matter vital to the public interest,**" as stated in the Code of Virginia. Public benefits cited in the code include the provision of farm and forest products, preventing erosion, and protecting safe water supplies, scenic natural beauty, and open spaces. The goal of the program is "**to promote land-use planning and the orderly development of real estate for the accommodation of an expanding population ... ultimately for the public benefit,**" not for the benefit of eligible land owners.

### Changes In Land Use Tax Rates

In 1992, 286,084 acres of land were enrolled in Augusta County's land use assessment program, according to the Real Property File. These lands, which would have been assessed at \$266 million without special land use assessments, were valued at only \$120 million under the special assessment program. At the 1992 rate of \$0.58 per \$100 in value, owners of lands enrolled in the special land use assessment program were eligible for total annual real property tax reduction in the amount of \$843,423. With the tax reduction, they still paid \$697,874 in real property taxes on land and \$1,170,263 on buildings or a total tax of \$1,868,137.

In 1993, Augusta County's land use tax assessments were increased by the commissioner of the revenue by an average of 25 percent. The new levels were roughly those recommended by the state. The 1993 increase, by soil class, is shown in Table # 18. The effect this increase had on tax rates in the Middle River Agricultural Forestal District is shown in Table # 17. Taxes on property in the district which was enrolled in the use-value program increased by more than a third as a result of the change in use value assessments enacted in 1993. These values are still in effect in the 1996 tax year.

	acres in LU	Assessed Value	Land Use Value	Tax at Assessed value	Tax at Land Use Value	Tax Benefit
1992	5,319	\$5,114,100	\$2,484,050	\$29,662	\$14,407	\$15,254
1992 Per acre		\$961	\$467	\$5.58	\$2.71	\$2.87
1996	5,494	\$8,195,100	\$3,425,460	\$47,532	\$19,868	\$27,664
1996 Per acre		\$1,492	\$623	\$8.65	\$3.62	\$5.04
Change 92-96	175	\$3,081,000	\$941,410	\$17,870	\$5,460	\$12,410
Change/acre		\$530	\$157	\$3.08	\$0.91	\$2.17
%Change/ac.		55.16%	33.52%	55.16%	33.52%	21.64%

Source: Augusta County Real Property File, September 1996

In 1996, 290,079 acres of land were enrolled in land use, according to the Real Property File. These lands, which would have been assessed at \$392 million without special land use assessments, were valued at only \$166 million under the special assessment program. At the 1996 rate of \$0.58 per \$100 in value, owners of lands enrolled in the special land use assessment program were eligible for total annual real property tax reduction in the amount of \$1,312,788. With the tax reduction, they still paid \$961,566 in real property taxes on land and \$1,519,040 on buildings or a total tax of \$2,480,606.

The commissioner of the revenue is again considering raising use-value assessments for the 1997 tax year. Table # 18 below shows the effect of increasing use-values to the levels recommended by the state for 1997. On average, adopting the recommended levels would increase taxes on land in the program by 45 percent above current levels. Coupled with the 1993 increase, taxes would rise 81 percent on average in five years.

<b>TABLE # 18: CHANGES IN LAND USE TAX RATES 1992, 1996, AND 1997 (PROPOSED)</b>								
	1992	1996	Change 92-96	% Change 92-96	1997 prop.	Change 96-97	% Change 96-97	% Change 92-97
I	\$640	\$800	\$160	25%	\$1,170	\$370	46%	83%
II	\$570	\$720	\$150	26%	\$1,060	\$340	47%	86%
III	\$430	\$540	\$110	26%	\$780	\$240	44%	81%
IV	\$320	\$430	\$110	34%	\$630	\$200	47%	97%
VI	\$210	\$270	\$60	29%	\$390	\$120	44%	86%
VII	\$150	\$160	\$10	7%	\$230	\$70	44%	53%
Forest	\$220	\$260	\$40	18%	\$350	\$90	35%	59%
Avg.	\$363	\$454	\$91	25%	\$659	\$204	45%	81%

### **Gross Annual Fund Revenues by Study Category**

As shown below in Table # 19, Farm/Forest lands covered the largest area of the three taxable Study Categories in 1996, 80 percent of the county's taxable land. On the surface, it might appear that these farm and forest lands would have to produce an equally large portion of the county's revenues in order to have a positive, overall impact on the county finances.

<b>TABLE # 19: TAXABLE LAND (1996)</b>				
	Residential	Comm/Indust	Farm/Forest	Total
TAXED LAND	56,388	20,920	301,704	379,012
PERCENT	14.88%	5.52%	79.60%	100.00%

An examination of the total revenue produced by each Study Category showed that Farm/Forest lands provided much less revenue than either Residential or Commercial/Industrial lands. A summary of the gross annual fund revenues by Study Category, as calculated in Appendix 2, appears in Table # 20 below.

**TABLE #20: GROSS ANNUAL FUND REVENUES BY STUDY CATEGORY (FY 1996)**

REVENUES	Residential	Comm/Indust	Farm/Forest	Total
	\$54,820,864	\$13,725,435	\$9,500,178	\$78,046,477
PERCENT	70.24%	17.59%	12.17%	100.00%

Tax Exempt land was removed from this analysis because the county realizes only nominal revenues from the state and federal governments to compensate for these mostly public lands each year. The Farm/Forest Study Category is the smallest in terms of gross revenue, while the Residential Study Category is the single biggest revenue source for the county, bringing in \$54.8 million 1996.

### **Gross Annual Fund Expenditures by Study Category**

The Residential Study Category also caused the county to incur most of its expenditures. Out of roughly \$75.6 million that was spent through the annual fund by the county government in FY 1996, \$63.6 million was used to provide services to non-farm residences. A summary of annual fund expenditures by Study Category, as calculated in Appendix 2, appears in Table # 21.

**TABLE # 21: GROSS ANNUAL FUND EXPENDITURES BY STUDY CATEGORY (FY 1996)**

EXPENDITURE	Residential	Comm/Indust	Farm/Forest	Total
	\$63,553,772	\$3,765,129	\$8,261,557	\$75,580,458
PERCENT	84.09%	4.98%	10.93%	100.00%

### **Net Annual Fund Revenues and Expenditures by Study Category**

As shown in Table # 22, this accounting leaves for FY 1996:

- a net annual fund deficit of \$8.73 million from residential land uses;
- a net annual fund contribution of \$9.96 million from commercial and industrial land uses;
- a net annual fund contribution of \$1.24 million from farm and forest land uses.

**TABLE # 22: NET ANNUAL FUND REVENUE BY STUDY CATEGORY (FY 1996)**

Residential	Comm/Indust	Farm/Forest
(\$8,732,908)	\$9,960,306	\$1,238,621

### **Services Provided Versus Revenue**

In FY 1996, the county spent \$1.16 through the annual fund providing services to residential lands for every \$1.00 in revenue it collected from the Residential Study

Category, creating a \$8.73 million deficit in the county's resources. On the other hand, the Farm/Forest and Commercial/Industrial Study Categories were both revenue positive for the county. For every \$1.00 in revenue collected from Commercial/Industrial lands, the county only spent about \$0.27 through the annual fund providing services. Likewise, the county only spent \$0.87 through the annual fund providing services to Farm/Forest lands for every \$1.00 collected in revenue from these lands. These ratio's are presented in Table # 23 below.

<b>TABLE # 23: SERVICES PROVIDED FOR EACH DOLLAR IN ANNUAL FUND REVENUE (FY 1996)</b>			
EXPENDITURE	Residential	Comm/Indust	Farm/Forest
REVENUE	\$1.16	\$0.27	\$0.87

### **Revenue Returned Versus Services Provided**

In FY 1996, the county received \$0.86 in revenue from residential lands for every \$1.00 in services provided through the annual fund to lands in the Residential Study Category. For every \$1.00 in services provided to Commercial/Industrial lands, the county collected about \$3.65 in revenue through the annual fund . Likewise, the county collected \$1.15 in revenue for every \$1.00 it spent providing services through the annual fund to Farm/Forest lands. These ratio's are presented below in Table # 24.

<b>TABLE #24: ANNUAL FUND REVENUE RETURNED FOR EACH DOLLAR OF SERVICES (FY 1996)</b>			
REVENUE	Residential	Comm/Indust	Farm/Forest
EXPENDITURE	\$0.86	\$3.65	\$1.15

### **Net Annual Fund Revenues per Acre**

On average each acre in the county which was in residential use in FY 1996 required 154.87 more in services through the annual fund than it provided in revenue. On the other hand, each Commercial/Industrial acre provided \$476.11 more in revenue than it required in services. Farm/Forest land provided a net gain of \$4.11 an acre.

<b>TABLE # 25: NET ANNUAL FUND REVENUE PER ACRE BY STUDY CATEGORY (FY 1996)</b>		
Residential	Comm/Indust	Farm/Forest
(\$154.87)	\$476.11	\$4.11

## Net Annual Fund Revenues per Household

On average, each of the 2,694 households in the land-use taxation program in the county produced about \$459.77 more revenue through the annual fund than it required in services. Each of the 20,028 non-land use households required about \$436.04 more in services through the annual fund than it produced in revenue, as shown below in Table # 26.

<b>TABLE #26: NET ANNUAL FUND REVENUE PER HOUSEHOLD (FY 1996)</b>		
	FARM	NON-FARM
NUMBER OF HOUSEHOLDS	2,694	20,028
NET REVENUE PER HOUSEHOLD	\$459.77	(\$436.04)

## Net Annual Fund Revenues per Household

On average, each of the 2,694 households in the land-use taxation program in the county produced about \$459.77 more revenue through the annual fund than it required in services. Each of the 20,028 non-land use households required about \$436.04 more in services through the annual fund than it produced in revenue, as shown below in Table # 26.

<b>TABLE #26: NET ANNUAL FUND REVENUE PER HOUSEHOLD (FY 1996)</b>		
	FARM	NON-FARM
NUMBER OF HOUSEHOLDS	2,694	20,028
NET REVENUE PER HOUSEHOLD	\$459.77	(\$436.04)

## Net Annual Fund Revenue from All Developed Land

Increased commercial and industrial activity has often been advocated as a way to improve a jurisdiction's overall financial health. For instance the 1988 Augusta County Comprehensive Plan said, "Tax revenues from business enterprise generally are greater than the cost of direct governmental services rendered, thus better enabling the government to meet the service needs of the population in general." Yet new businesses also encourage new residential growth. The fiscal analysis done in this study indicates that the county must be careful in balancing the positive fiscal impact of commercial, industrial, and open space land uses with the negative fiscal impact that can result from too much residential development.

**TABLE#27: NET ANNUAL FUND REVENUE BY LAND USE:  
FY 1991 - FY 1996**

FISCAL YEAR	RESIDENTIAL DEFICIT	COMM./INDUST. SURPLUS	FARM LAND SURPLUS	All Developed Land
1991	(\$8,606,753)	\$8,294,540	\$1,018,720	(\$312,213)
1992	(\$6,899,497)	\$6,739,167	\$571,367	(\$160,330)
1993	(\$5,282,472)	\$7,856,387	\$771,794	\$2,573,915
1994	(\$7,309,568)	\$9,739,669	\$899,568	\$2,430,101
1995	(\$8,776,084)	\$9,726,903	\$1,152,013	\$950,819
1996	(\$8,732,908)	\$9,960,306	\$1,238,621	\$1,227,398
Total	(\$45,607,282)	\$52,316,972	\$5,652,083	\$6,709,690

As shown in Table #27 above, the large net contribution in revenue from Commercial/Industrial land made up for the deficit created by residential land through the annual fund in four of the fiscal years studied, (FY 1993 through FY 1996). In two of the years studied, (FY 1991 and FY 1992) the Residential and Commercial/Industrial Study Categories showed a combined negative fiscal impact.

The county also incurred net expenditures of \$37.49 million through new, long-term bonded debt over the six-year period between FY 1991 and FY 1996. This debt was incurred to provide schools largely required by increases in the county's population and residential land uses. The portion of this debt which was paid off during the study period, \$2.61 million, is included in the annual fund analysis of this study. But \$34.88 million in debt, which must be paid along with \$18.76 million in interest in Fiscal Years 1997 through 2016, was not.

**TABLE # 28: NEW BONDED DEBT: FY 1991 - FY 1996**

FY INCURRED	AMOUNT BORROWED	PRINCIPAL RETIRED	NET DEBT JUNE 1996
1992	\$679,262	\$108,474	\$570,788
1993	\$2,330,000	\$460,000	\$1,870,000
1993	\$3,000,000	\$510,000	\$2,490,000
1994	\$3,000,000	\$475,000	\$2,525,000
1994	\$12,000,000	\$1,055,000	\$10,945,000
1996	\$6,000,000	\$0	\$6,000,000
1996	\$10,481,721	\$0	\$10,481,721
Total	\$37,490,983	\$2,608,474	\$34,882,509

Source: Augusta County Comprehensive Annual Financial Report, 1996

On average the county financed expenditures that required net new bonded debt of \$5.81 million each year from FY 1991 and FY 1996. The combined positive fiscal impact all developed land had on the county's annual finances between FY 1991 and FY 1996 must be viewed in light of these long-term capital fund expenditures.

Over the six-year period, each acre of developed land (77,308 acres) generated a cumulative net annual fund surplus of \$6.71 million, or \$86.79 per acre. It also generated a net long-term capital deficit of approximately \$451.21 per acre.

## **In Summary**

As Augusta County's population has increased over the last three and a half decades, the average amount of revenue generated by the county has also risen on both a per capita and a per household basis. Taken at face value, this trend of increased tax base and increased revenue might point to improved fiscal health. The popular perception is that development pays and leads to reduced tax burdens for citizens of the area.

Increasingly, suburbanizing localities like Augusta County have found themselves under greater, rather than less, financial stress. Fiscal impact studies of land use are one of the ways local governments can attempt to quantify these forces. Like fiscal impact studies conducted in other jurisdictions in the Commonwealth and other parts of the country, this study shows that not all development enriches the hosting locality.

The first portion of this study addresses land use trends. It shows that Augusta County experienced considerable gains in population and housing in recent decades. This growth was accompanied by new land uses which have also contributed to the loss of farm land. The analysis of U.S. Census of Agriculture statistics from 1959 to 1992 shows a 50,839 acre (15 percent) decline in the land actively being farmed in the county-wide region (Staunton, Waynesboro, and Augusta County). This study estimates the amount of actively farmed land in the county proper in 1996 was approximately 31,631 acres (11 percent) less than the amount documented by the 1992 Census of Agriculture.

The second part of the study, a fiscal analysis for fiscal years 1991 through 1996, shows that these land use trends may have considerable long-term impact on the county's finances. Agricultural uses, which in this study included farm residences, were revenue positive, adding a net gain of \$5.65 million to the county's coffers over six years.

Commercial and industrial uses of land generated significant surpluses of revenue over expenditures, \$52.32 million over six years. These uses also helped attract new residents to the county that helped generate a six-year annual fund deficit of \$45.61. Between FY 1991 and FY 1996, the surplus from commercial and industrial land was large enough to make up for the annual deficit created by residential development. Developed land, (taking residential, commercial, and industrial land together) created a net surplus in the county's annual budget of \$6.71 million over the six-year period. However, they also caused the county to enter into \$34.88 million in net new debt, which must be paid along with \$18.76 million in interest in Fiscal Years 1997 through 2016.

Trends in the Ratio of Services to Revenue FY 1991 through FY 1996 A study of the fiscal impact of different land uses over time is a much more broad and time consuming endeavor than the one the VCC was contracted by the county and the farm bureau to conduct. However, in the interest of resolving concerns about the use of FY 1995 as a base year, an analysis of four additional years, FY 1992, FY 1993, FY 1994, and FY 1996, has been conducted. The results are provided below and in the annual summary tables on pages ix through xiv.

**TABLE # 29: Services Provided for each Dollar in Revenue (FY 1991 THROUGH FY 1996)**

	1991	1992	1993	1994	1995	1996
Residential	\$1.21	\$1.16	\$1.11	\$1.15	\$1.17	\$1.16
Comm/Indust	\$0.21	\$0.30	\$0.27	\$0.23	\$0.25	\$0.27
Farm/Forest	\$0.89	\$0.93	\$0.90	\$0.90	\$0.88	\$0.87