

LAND USE

INTRODUCTION

This section describes the history of land use regulation in Shenandoah County, shows how the land area of the County is utilized, and presents recommended policies to guide further land use activities.

Local government management of land use through subdivision and zoning ordinances has been an option in Virginia since the 1940's. In the 1950's, the Division of State Planning and Community Affairs began providing technical assistance to encourage local governments to establish planning commissions, develop local plans, and implement them through land use ordinances. Towns are responsible for land use within their corporate limits with counties responsible for the unincorporated areas.

Shenandoah County first established a planning commission in 1971, adopting its first subdivision ordinance in 1972. The Shenandoah County Comprehensive Plan 1990 was prepared with the Planning Commission by planners from the Division of State Planning and Community Affairs and adopted in 1973. This included a future land use map and recommendation for a zoning ordinance to implement it. The basic premise of zoning is that incompatible land uses should be separated and writing down the rules for land use is a necessary fact of modern life.

After the first plan adoption, a zoning ordinance was developed by the same state planners and presented for local adoption in 1975. A large crowd in a meeting at Woodstock's Central High School convinced the then Board of Supervisors that the citizens were not ready for a zoning ordinance to implement the County Plan. In 1976, the Planning Commission began working with staff from the Lord Fairfax Planning District Commission to develop a more appropriate zoning ordinance. This led to adoption of the current ordinance in 1978.

Actions of the General Assembly in the early 1970's contributed to increases in the level of planning by localities. The problems encountered in Northern Virginia and the Tidewater area, plus recreational home development in the Valley and other rural areas, indicated the need for local regulation. Requirements for establishing local planning commissions by 1976, subdivision ordinances by 1977, and comprehensive plans by 1980 were included in the Code of Virginia. Zoning, however, is still a local option. Since the adoption of the 1973 plan by the county, all towns except Toms Brook have adopted their own plans and zoning ordinances to implement them. All towns have subdivision ordinances.

In order to achieve the goals of this plan, County and Town plans must be coordinated. Since town plans did not exist at the time of the 1973 plan, an administrative goal of the 1991 plan that carries forward to today is to establish an umbrella plan that will address the land use concerns in the rural county in a way that supports the maintenance of viable towns as the primary locations for major growth.

General land use is discussed first, followed by a discussion of the development that took place between 1988 and 2002. An analysis of these land use trends is followed by recommended land use policies which will advance and further define fulfillment of the County's goals of preserving an open rural atmosphere and protecting the environment as first set out in the 1973 Plan.

LAND USE PATTERNS

Since first being surveyed in the 1970's, the general land use patterns of the County have not changed greatly; it is still largely rural, with the predominant land use being agriculture. However, the major types of developed uses--residential, commercial, and industrial--increased considerably over the last several decades.

Land use figures included in the 1991 Shenandoah County Comprehensive Plan that were derived from planimeter measurements of town and county land use maps were used as a base. Geographic Information System (GIS) analysis of recent aerial photography taken in 2002 was used to update the approximate acreages of current land uses.

Using those two methodologies, residential acreage has increased by 166 percent, from an estimated 14,772 acres in 1988 to approximately 39,335 acres by 2002. Commercial acreage increased from about 415 acres to approximately 803 acres, for a 93 percent increase. Land classified as "Industrial" has decreased from 1,420 acres to about 1,220 acres for a 14 percent decrease. Public/Semi-Public and institutional uses were listed as 118 acres as of 1988, and have increased to 1,223 acres by 2002, an increase of 936 percent. Transportation/ Utilities were listed as 4,738 acres as of 1988, and are calculated at approximately 4,937 acres for 2002 using averages for r-o-w widths for interstate, primary and secondary roadways and the mileages listed in the 2001 VDOT mileage tables, plus major utility easements, resulting in a 4 percent increase.

It should be noted that all of these calculations are approximate, and are based on aerial photographs from the two time periods, and subject to interpretations by the staff persons involved at the time. The changes described above are shown in Table 3-A on the next page.

TABLE 3-A
DEVELOPED LAND USE CATEGORIES - 1988 AND 2002
UNINCORPORATED AREA OF SHENANDOAH COUNTY

<u>Land Use Category</u>	<u>1988 Acres*</u>	<u>2002 Acres**</u>	<u>Percent Increase</u>
Residential	14,772	39,335	166%
Commercial	415	803	93%
Industrial	1,420	1,220	-14%
Public/Semi-Public & Institutional***	118	1,223	936%
Transportation/Utilities	4,738	4,937	4%
TOTAL "DEVELOPED" LAND	21,463	47,518	121%

Notes:

- * Acreages calculated from planimeter measurements of the 1986 land use map as updated through local review in 1988 (for the unincorporated area), and from town plans.
- ** Acreages calculated from photo interpretation of 2002 aerial photography by GIS staff.
- *** There are 117 acres of public schools in the unincorporated area of the County, which indicates that this category was very much under-counted as of 1988 as all the schools existed then. No direct comparison can be made.

Agricultural land includes crop and pasture land, orchards, confined feeding operations, and small tracts of timber. These uses were calculated at 96,623 acres by GIS analysis of the aerial photography. According to the 2002 Census of Agriculture, there are a total of 70,324 acres in total crop land, of which 46,177 acres is harvested crop land.

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The George Washington - Jefferson National Forest contains approximately 77,681 acres of land in Shenandoah County, located along both the western and eastern boundaries in the two mountain ranges. It represents almost 24 percent of the entire land area of the County that will basically be preserved in its natural state and as managed timber land, thereby contributing to the County's air and water quality.

Land committed to residential development accounts for an estimated 39,335 acres, or about 12% of the unincorporated area of the County. This represents a marked increase from the 1988 figure of 16,503 acres, and indicates a shift to larger lot sizes and increased interest in subdividing rural land for residential use.

Transportation and utility uses take up approximately 4,937 acres in existing rights-of-way or easements. This includes the interstate and primary highways, the secondary road system, and electric and gas transmission lines. These uses included 4,738 acres in the 1991 plan.

Industrial activities currently occupy about 1,220 acres, or 0.4 percent of the unincorporated land area. This shows a decrease in acreage devoted to this use (from 1,672 in 1988), much of which may be accounted for through annexations by the towns over the period.

Commercial uses comprise 803 acres of land as of 2002, almost double the acreage in the unincorporated area (415 acres) as of 1988.

Public/Semi-Public and Institutional uses are located on a total of 1,223 acres.

The remainder of the County, approximately 95,006 acres, or 8.5 percent of the land area, is classified as "Woodland/Conservation". Low density development may occur in some of these areas, but many of them are constrained by natural features such as steep slopes, flood plains, or soil conditions which have severe limitations for development. See Figure 3-A, below, and Table 3-B on the next page.

FIGURE 3-A
EXISTING LAND USE - 2002

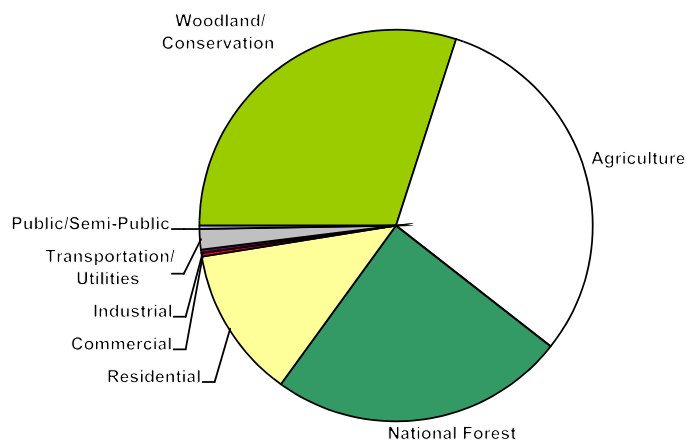


TABLE 3-B
EXISTING LAND USES - 2002
Unincorporated Areas (Acres)

<u>Land Use</u>	<u>County</u>	<u>(%)</u>
Agriculture	96,623	30.5%
Woodland/Conservation	95,006	30.0%
National Forest	77,681	24.5%
Residential	62,440	12.4%
Trans./Utilities	4,937	1.6%
Industrial	1,220	0.5%
Commercial	803	0.3%
Public/Semi-Public and Institutional	1,223	0.3%
TOTAL	316,828	100.0%

Sources: GIS calculations of land uses from 2002 aerial photography,
George Washington-Jefferson National Forest.

The general land use patterns are shown on Figure 3-B "Generalized Existing Land Use" on the following page.

Growth and development has taken place in two distinctive patterns over the past 14 years. There has been concentrated growth in and around the towns and the Bryce Mountain service area where public facilities are available and it was possible to construct several types of housing, including townhouses and apartments, as well as commercial and industrial uses.

Outside of those areas, the growth has been primarily residential on large lots with individual on-site water and septic systems, and has been scattered throughout the County along rural secondary roads. This scattered development, combined with topographic characteristics that isolate certain areas like Fort Valley and Cedar Creek, makes much of the County impractical to economically serve with public water and sewer facilities, and it also impacts the County's natural resources, the secondary road network, and the ability to provide other needed services.

FIGURE 3-B

GENERALIZED EXISTING LAND USE

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The six incorporated towns in the County are located in a linear pattern running northeast and southwest along Old Valley Pike (U.S. Route 11) from south of Cedar Creek, the Frederick County line, to the Rockingham County line at the southern end of New Market.

The population of the towns was 12,338 according to 2000 Census data. Together with an additional 986 persons in the Basye/Bryce Mountain area, and approximately 1,065 additional persons served by the Toms Brook-Maurertown Sanitary District outside of the Toms Brook corporate limits, a total population of about 15,375 is served by public water and sewer facilities, which represents approximately 43.8 percent of the County's population. Therefore, about 56.2 percent is served by individual on-site wells and sewage disposal systems, which depend upon good ground water and proper soil conditions.

Table 3-C, below, shows the population figures and approximate land areas for each of the towns and the Basye area.

TABLE 3-C
POPULATION & LAND AREAS - 2000

<u>Location</u>	<u>1990 Population</u>	<u>2000 Population</u>	<u>Growth 1990-2000</u>	<u>Land Area (Sq. Miles)</u>	<u>Population (Per Sq. Mile)</u>
Basye/Bryce Mtn.	300*	986**	228.7%	2.16	456
Edinburg	860	813	- 5.5%	0.75	1,084
Mt. Jackson	1,583	1,664	5.1%	3.20	520
New Market	1,435	1,637	14.1%	2.05	799
Strasburg	3,762	4,017	6.8%	2.60	1,545
Toms Brook	227	255	12.3%	0.14	1,821
Woodstock	<u>3,182</u>	<u>3,952</u>	<u>24.2%</u>	<u>3.21</u>	<u>1,231</u>
Sub-Total	11,349	13,324	17.4%	14.11	944
Rural County	20,287	21,751	7.2%	492.89	44
Total County	31,636	35,075	10.9%	507.00	69

* (Estimated year-round population)

** (Area designated as a "Census Designated Place" as of 2000.)

Sources: U.S. Census of Population & Housing, 1990 and 2000

The population in the Basye area, a resort community, fluctuates seasonally; at times it is several times the permanent year-round population and may approach 3,000. Public facilities such as water, sewer, and roads must have the capacity to serve the maximum number of residents and commercial establishments, even though this capacity may only be needed for one or two periods in the year.

DEVELOPMENT TRENDS

Population and Housing Units

Table 3-D, below, examines the growth which took place in Shenandoah County between 1980 and 2000. Overall, 48 percent of the population growth and 56 percent of the increase in housing units took place outside of the towns in the rural portions of the County during this time period.

There has been a strong second home/retirement home market in Shenandoah County for the last several decades. The rapid growth and housing pressures of the Northern Virginia area are also being felt here, especially in the northern part of the County in and near Strasburg, and also to a certain extent in the Woodstock area.

The rate of housing growth has increased since the year 2000, and is expected to continue for some time to come, especially in the towns and public service areas where public facilities are available. While the number of housing units constructed between 1980 and 2000 was still greater in the rural areas, the rate of growth in the towns is much higher.

TABLE 3-D
POPULATION AND HOUSING GROWTH 1980-2000

	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u># Increase 1980-2000</u>	<u>% Rural 1980-2000</u>
Population:					
Total County	27,559	31,636	35,075	7,516	
Rural Area	19,106	20,587	22,737	3,631	48.3%
Towns	8,453	11,049	12,338	3,885	
Housing Units:					
Total County	12,000	15,160	16,709	4,709	
Rural Area	8,315	10,184	10,938	2,623	55.7%
Towns	3,685	4,976	5,771	2,086	

Source: Census of Population and Housing U.S. Bureau of the Census; 1980, 1990 and 2000.

Subdivisions

Information was compiled on the subdivisions that were recorded in Shenandoah County from January 1998 through August 2004. These subdivisions included 2,096 acres of land. According to a preliminary analysis of the subdivision data, there were a total of 565 individual parcels created for development during that time period, with an average lot size of 3.7 acres. Most occurred in agriculturally-zoned areas.

Residential Building Permits

Figure 3-C, on the next page, shows the distribution of residential building permits issued from 2000 through 2003. The town of Strasburg grew the most with 139 new dwelling units, followed by Woodstock with 63. The Census tracts around the towns of Toms Brook, Woodstock, Mt. Jackson, and New Market, plus the Block Group in the Basye/Bryce Mountain area all gained at least 25 dwelling units. The remainder of the County experienced relatively low levels of building.

Recent Development

In accordance with the Annexation Agreement between the County and the Town of Strasburg that was adopted in 1984, the town has been able to annex developing areas that it serves with public utilities by ordinance. Such areas have included the area along the Route 11 corridor between the downtown area and the I-81 interchange and now include the shopping center, apartment and condominium complexes, planned residential development areas and many commercial areas.

Woodstock has continually been enlarged through a series of boundary adjustment agreements with the County as owners of undeveloped parcels next to the corporate limits requested that their properties be brought into the Town and have utility services extended to them.

As of 2001, Mount Jackson also completed an Annexation Agreement with the County and proceeded to annex a 2.47 square mile area into the Town as of December 31, 2001, allowing ample room for future growth.

A second major industrial park has been developed in the northern end of the County just outside the Strasburg corporate limits. It contains one major distribution industry and plans are proceeding to create additional access into the park for more industries. It is served by rail and all utilities including water, sewer, electric and natural gas.

Development Constraints

Due to soil and rock conditions, not all of the previously subdivided lots in the County will be buildable. In some cases they may have to be combined to obtain sufficient land for a well and a septic system; in other cases, the ground may be too poor for septic systems to be approved or will require more expensive alternative systems.

The topography of the land is another limiting factor. Where steep slopes exist, construction will be limited or not acceptable. The same is true in flood plains, where uses such as parks and recreational areas could be developed, but no permanent buildings should be allowed.

Access by the primary highway and secondary road systems can be another development constraint. There are many locations in the County that do not now have good roads, and some where the potential for creating them is very limited due to excessive grades, limited areas for rights-of-way or poor soils.

There are many other constraints imposed upon the County due to its topography, geology, soils, and water resources. These were discussed in detail in Section 2 "Natural Resources".

LAND USE ANALYSIS BY WATERSHED

A water resources assessment was prepared for the County under a U.S. Environmental Protection Agency water quality planning grant administered by the Virginia Water Control Board. The Shenandoah County Water Resources Assessment is summarized in the Water Resources portion of Section 2. As part of this study, the various watersheds within the County were identified, measured, and their general types of land uses examined.

Twenty-six individual watersheds were identified within the County, from the North Fork of the Shenandoah River to small tributary streams. As can be expected from the previous portions of this section, there is a significant amount of agricultural and forestal land in all of them. Eleven out of the 26 watersheds are at least 50% agricultural, and 14 are at least 50% forested. All together, the land area within 24 of the watersheds contains 80 percent or more agricultural and forestal uses combined, none comprise less than 60 percent of these uses, and six contained only agriculture and forestry.

Because of the amounts of land involved, non-point source pollution potential from agricultural and forestal uses is one major concern for the quality of water in Shenandoah County. This could take the form of erosion and sedimentation, plant nutrients from failed septic systems, animal waste and fertilization, and toxic substances such as herbicides, pesticides, and pathogens. To avoid these problems, it is important that Best Management Practices (BMP's) be utilized for agricultural and forestal activities.

BMP's are practices or combinations of practices which will prevent or reduce the amount of pollution from non-point sources. BMP Handbooks were prepared by the Virginia Water Control Board in conjunction with other agencies such as the Soil & Water Conservation District, the Department of Agriculture & Consumer Services, and the Division of Forestry. There are individual handbooks for Agriculture, Forestry, Sources Affecting Groundwater, Urban, and others.

Urbanized land uses include mixed built-up areas (such as the towns), and residential, industrial, and commercial uses. There were only a few watersheds with a significant portion of their land areas devoted to such uses. Ten had less than one percent, four had between one and two percent, six had between two and five percent, and four had from 5 to 10 percent. Of the remaining two, the Narrow Passage Creek watershed had 23.4 percent of these uses and the Spring Hollow Run watershed had the most urbanized uses, occupying approximately 39.3 percent of its area. The six most urbanized watersheds are shown below in Table 3-E below and mapped on Figure 3-D on the next page.

The County as a whole, which is a part of the North Fork Shenandoah River watershed, has 6.3 percent of its land area in urbanized uses.

TABLE 3-E
PERCENT OF URBANIZED LAND USES
SHENANDOAH COUNTY - 1989

<u>Watershed Name</u>	<u>Watershed Number</u>	<u>Total Acres</u>	<u>Percent Urbanized</u>
Spring Hollow	06-08	6,104	39.3%
Narrow Passage Creek	06-07	13,045	23.4%
North Fork Shenandoah (Main Stem Only)	02070006	59,854	6.8%
Toms Brook	06-10	10,479	6.6%
Smith Creek	06-05	13,744	6.0%
Stoney Creek	06-03	39,530	5.0%
County Total	02070006	324,480	6.3%

Source: Shenandoah County Water Resources Assessment

[INSERT FIGURE 3-D HERE - URBANIZED LAND USES BY WATERSHED]

Potential non-point pollution from urban and urbanizing areas include bacteria, fertilizers and pesticides, traffic-generated pollutants, chlorides from roadway deicing, and erosion and sedimentation from construction projects. Again, BMP's for urban areas should be followed. Other specifications, such as curbing and guttering, drainage systems, and retention ponds will assist in reducing some of these pollutants.

Smith Creek, Mill Creek, Holman's Creek and Toms Brook are listed as "impaired" as of 2004 by the Virginia Department of Environmental Quality.

Because of its underlying geology and many surface waters, it is of the utmost importance to follow good practices in all development activities to prevent any degradation of the county's water supply.

ZONING

The County and all of the incorporated towns except for Toms Brook have enacted zoning ordinances to implement their land use plans. These ordinances control the types of uses permitted on the land, the density of development, and contain requirements for minimum lot sizes, lot widths, and building set-backs. In Toms Brook, such dimensional requirements are included within the subdivision ordinance.

Each zoning ordinance within the County has districts designated for residential, commercial, and industrial uses. Other districts which are found in some ordinances are agricultural and conservation. In addition, there are "overlay" districts or additional regulations that govern such things as uses in flood plains.

In the unincorporated areas of the County which are subject to the Shenandoah County Zoning Ordinance, there are nine different zoning districts; three are for residential uses, two are for commercial uses, and two are for industrial uses. The other two districts are a conservation district and the agricultural district. The zoning districts and the acreages which are covered by each are shown in Table 3-F on page 3-15.

The residential districts range from low-density areas which require a 30,000 square foot lot size for a single-family house (R-1) to an area which will allow a density of 20,000 square foot lots that could contain duplex units if public water and services are provided (R-3). The lower density residential areas are located near several towns, in some rural "villages", and in several recreational subdivisions. Moderate-density districts are located near towns and in the Basye/Bryce Mountain area. New subdivisions being created in all of the residential districts require urban type services, including water, sewer, roads, curbs, gutters, sidewalks, underground utilities and street lights. The "high-density" designations are located within the Toms Brook-Maurertown Sanitary District and the Stoney Creek Sanitary District.

The two business districts are designed to provide for neighborhood convenience type shopping and services (B-1), and more general business operations and services which require frequent access from a major roadway (B-2). Local Business B-1 districts are located in the rural village areas, while General Business B-2 districts are located primarily at interchanges of I-81 and along the Old Valley Pike (U.S. Route 11).

The General Industrial District (M-1) is designed to permit limited industrial uses in order to encourage the development of the local economy. This classification is found in several areas of the County, with large parcels located in the County industrial park and in the Strasburg area.

A Limited Industrial District (M-2) is designed to permit “high tech” research and development type industries and other light industrial uses that generally assemble or process goods from parts that have previously been manufactured.

The Conservation District (C-1) covers parts of the County which contain various open uses such as forests, recreation areas, the George Washington National Forest, and farms. It is designed to promote the protection of such open lands and to protect the natural resources.

The Agriculture District (A-1) is designed to preserve the character of those areas where the major uses are agriculture and related uses, and is located primarily in a wide belt running northeast-southwest through the center of the County. Residential uses are allowed in the conservation and agricultural districts as well as the residential districts. The required minimum lot size was raised to 3.5 acres in 2003 to reduce the number of lots that could be developed on agricultural land. Individual manufactured homes (single-wide or double-wide) are also allowed by right, and manufactured home parks are allowed by Special Use Permit.

Two new districts were enacted in 2004: the Rural Residential - Conservation District (RR-C) and the Rural Residential - Agriculture District (RR-A). The purpose of these districts is to provide opportunities for low-density residential lots in areas of the county where there are primarily open uses, such as forests, recreation areas, lakes or streams, agricultural and other low-intensity uses predominate. Uses not consistent with the existing character of the districts are not permitted.

TABLE 3-F
ZONING CLASSIFICATIONS & ACREAGES

<u>Zoning District</u>	<u>Acreage</u>
Conservation	144,220
Agriculture	159,896
Low-Density Residential	4,202
Medium-Density Residential	4,112
High-Density Residential	628
Local Business	79
General Business	545
General Industrial	2,336
Limited Industrial	<u>201</u>
Total	316,219

(No land is currently zoned RR-C or RR-A)
Source: GIS analysis and calculations of mapping data.

(Insert Figure 3-E HERE)
Generalized Zoning Map

LAND USE CONCERNS

Despite the low-density designations of conservation and agricultural zoning districts in the unincorporated areas, a large portion of development still took place in the rural areas of the County between the time the 1973 plan was adopted and the 1991 plan was developed. This ran counter to the goal of preserving the open rural atmosphere of Shenandoah County by having most development located within the six towns and in the areas that are served by public utilities.

While the rate of development has increased in the towns and the two sanitary districts, there was still a greater increase in the number of dwelling units in the unincorporated area of the County between 1990 and 2000 (2,623 units) than in the incorporated towns (2,086 units). The recent trends seem to point toward more major subdivisions being located in the public service areas where water and sewer services are provided either by a town or sanitary district.

Allowing a virtually unlimited number of residential lots by right in the rural area also was a major concern. That directly opposes the primary goal of keeping the unincorporated area of the County rural and promoting agriculture. A limitation on the number of subdivisions permitted in the C-1 and A-1 districts was recently developed and enacted, and any further subdivision of land beyond one lot every 36 months will require rezoning to a residential type of district.

A further serious concern for the county is the loss of prime forest land to development. Many of the most productive sites, which grow some of the finest hardwoods on the world market, are presently being subdivided for development, rendering the included wooded acres as “unmanageable”. These subdivided forests are deemed “unmanageable” due to several factors including: the economies-of-scale of forest harvesting operations, the lack of significant acreage on which forest management techniques can be practiced, and the changing attitudes of landowners who now own these smaller parcels of forest land. Quite often owners of small plots of forest land manage them solely for the purpose of beauty and passive outdoor recreation. The objectives of small-acreage landowners differ significantly from those folks who own larger parcels of land where traditional forest management and outdoor recreation activities are practiced and openly accepted.

Protection of the rural, scenic, historic and natural resource areas of Shenandoah County continue to be primary land use objectives. The Shenandoah Valley Battlefields National Historic District has been designated to help preserve the four Civil War battlefields that are located in the County as well as others in adjacent localities. Implementation of the management plan that was developed for the District will be important, and will take place through the Shenandoah Valley Battlefields Foundation. In addition, several roadways in the County have been recognized as “Scenic Byways” under that State program.

Density in the Unincorporated Area

One way of measuring how well future growth is being directed is by tracking density in the various areas of the County. Higher rural densities are found adjacent to the towns. To meet the goal of keeping the unincorporated area of the County rural in character, the densities outside of the proposed public service areas should not increase significantly.

A density scale that is appropriate to a rural county has been defined. (See Table 3-G, below). Unlike urban areas where densities are expressed in terms of so many units per acre, the rural densities have been expressed as how many acres there are for each dwelling unit.

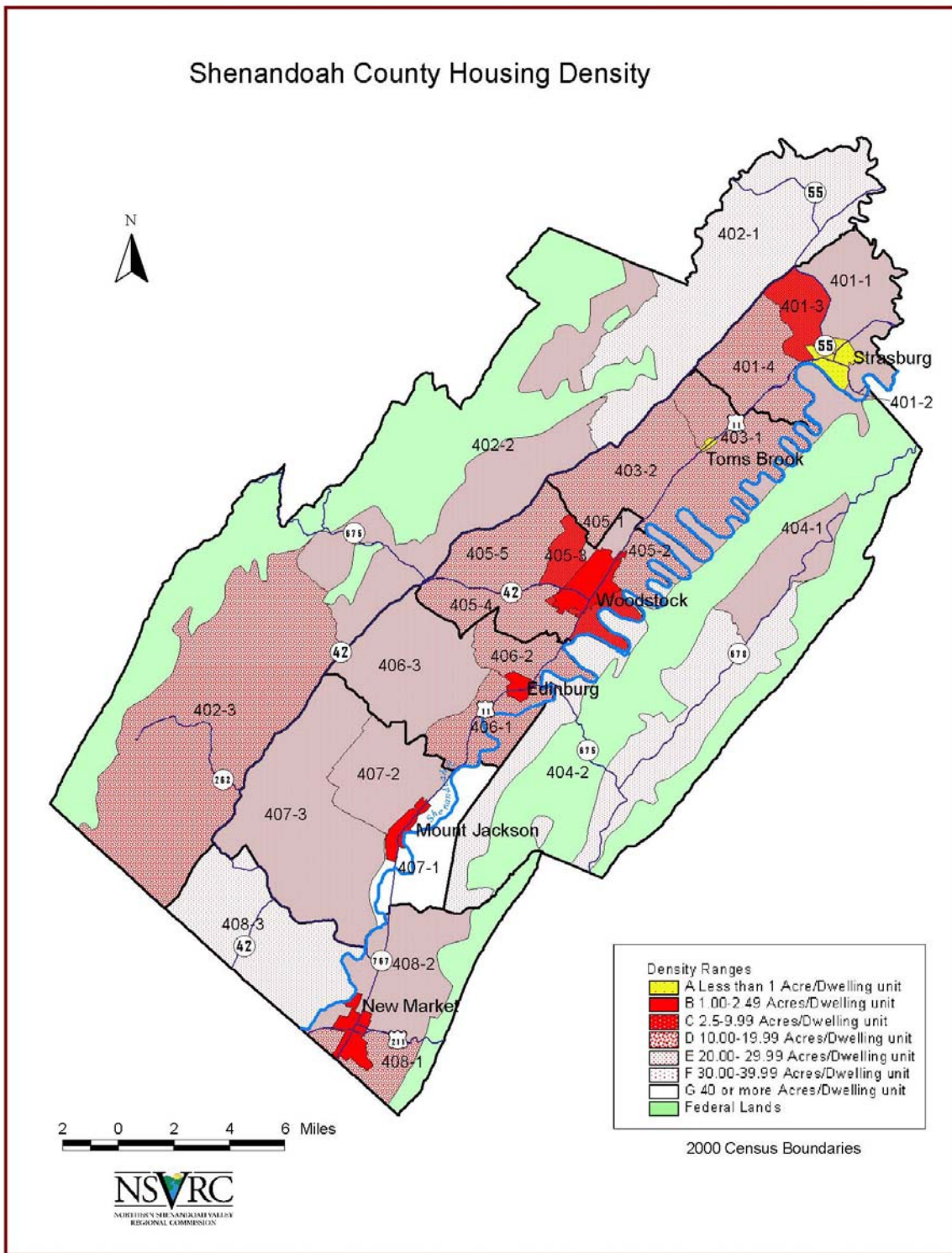
TABLE 3-G
RURAL DENSITY SCALE

<u>Acres Per Dwelling Unit</u>	<u>Density Range</u>
Less than 1	A
1.00 to 2.49	B
2.50 to 9.99	C
10.00 to 19.99	D
20.00 to 29.99	E
30.00 to 39.99	F
40.00 to 49.99	G

Figure 3-F on the following page provides a summary and visual picture of what the densities are in Shenandoah County, for both the incorporated towns and for the Block Groups designated by the Census Bureau. It was produced by the Northern Shenandoah Valley Regional Commission as part of its Annual Housing Report for 2004.

The average density for the block groups shown on Figure 3-F should be monitored as each succeeding report is released to determine whether or not most major growth is being channeled towards the towns and public service areas, which will help to prevent the suburbanizing of the unincorporated area.

Shenandoah County Housing Density



The coordination of zoning and subdivision regulations in areas just outside of the corporate limits of some of the towns has been a concern. There are places where the County allows higher density and requires less improvements to the road system than the town that is immediately adjacent to a proposed subdivision.

Commercial and industrial uses should also be concentrated in areas where public services are available, and need to be adequately buffered from adjacent uses.

There is no zoning in the Town of Toms Brook. Dimensional requirements had to be incorporated into the Town's Subdivision Ordinance, and there are very few restrictions on allowed uses.

There is a need to track the status of agricultural and forestal districts, and of land that is placed in use-value taxation. With over half of the districts due for renewal in 2005, there is also a need to review the requirements for such districts and how they affect land use decisions in the County.

Access to parts of Shenandoah County is not easy, and there are many roads throughout the County which need to be upgraded. Alignments for future expansions and upgrades need to be protected.

The first comprehensive examinations of water resources show that they must be protected by taking active measures; density of development, the amount and types of wastewater treatment systems, and the control of non-point pollution must be considered carefully in all areas.

LAND USE POLICY RECOMMENDATIONS

The purpose of this plan is to provide guidance for the continued orderly growth of the County while maintaining the quality of its environment.

In order to preserve agricultural land and to prevent hazards to the ground and surface waters in the County, the County's future growth should be tied to the availability of public facilities, with moderate density allowed where utilities and services are available. Where individual water and sewage disposal systems must be used and rural secondary roads exist only very low density can be permitted. In order for the goals of the plan to be met, the average densities in the rural areas should not increase significantly during its time frame.

Places where public utilities can be extended economically have been identified primarily in and around each town, in conjunction with the town governments, to determine their ultimate service areas. Such areas are referred to as "public service areas" or PSAs in this plan. These PSAs are shown in Figure 3-G Future Land Use on page 3-22. Within those areas, the development ordinances of the County should be "urban" type of regulations, which include the subdivision, zoning, and site plan regulations that specify requirements for such things as minimum lot sizes; roadways; curbs, gutters and sidewalks; underground utilities and drainage facilities.

On the other hand, certain areas of the County have already been identified as having great potential for ground water contamination and/or having severe limitations for septic systems. Such locations should be designated for conservation, agriculture, and limited to very low density development.

Additional provisions that allow for flexible development and encourage the developer to provide needed facilities should be explored and incorporated into the zoning and subdivision ordinances within the County where feasible in order to channel growth to the public service areas.

Zoning techniques can also be tied into a land evaluation and site assessment (LESA) system which rates the land according to its value for agriculture, and encourages the use of only non-prime lands for uses other than agriculture.

Due to changes in the Code of Virginia regarding requirements for “Open Space” subdivisions, the sections dealing with open space subdivisions in the Shenandoah County Zoning Ordinance had to be deleted. It is important that new regulations allowing for open space developments that will comply with the revised Code are developed and implemented quickly.

Perhaps even more effective than conventional land use regulations and ordinances in a rural county like Shenandoah are standards for the placement, construction, and maintenance of well, septic, and alternative waste treatment systems, and the use of private easements and restrictions. Together with capital improvements that are placed to guide growth to specific areas, these can form a firm foundation for the future development of the County. Specific policy recommendations are shown in Chapter 9 - Growth Management, and specific implementation recommendations are shown in Chapter 10 - Implementation.

FIGURE 3-G
FUTURE LAND USE