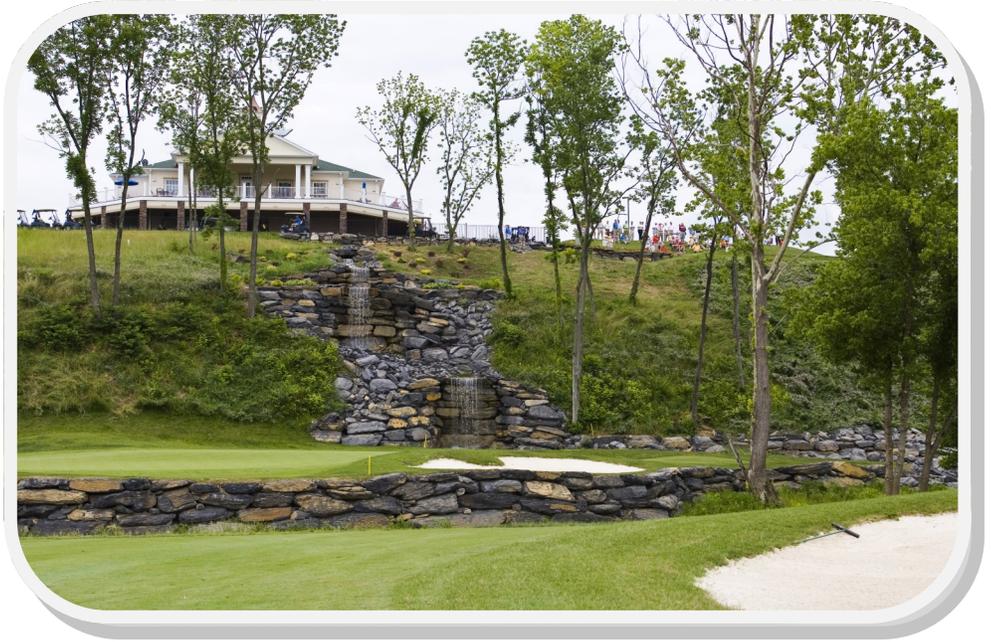


The County is noted for its rural character and natural beauty, its winding rivers and scenic mountains, and its sense of community.



Land Use and Development

Warren County

Introduction

Warren County is characterized by the central Town of Front Royal and a number of compact rural settlements scattered in a landscape of farmlands, woodlands, rivers, and mountains. The County is noted for its rural character and natural beauty, its winding rivers and scenic mountains, and its sense of community.

The increased population growth spreading out from the Washington, D.C., metropolitan area has brought changes, welcomed by many, lamented by others, and recognized by all. The new growth also has brought increased traffic, declines in the natural environment, increasing demands on limited services, and declining agricultural, open, and forestal lands.



Growth Management and Land Use

Introduction

Presently Warren County contains seven main land use categories: National Park, 14,090 acres; National Forest, 6,197 acres; State Park, 1,627 acres; agricultural, 88,331 acres; residential, 11,721 acres; commercial, 846 acres; industrial, 1,753 acres; and rural villages, approximately 110 acres. These figures are, however, somewhat deceiving since many existing uses within zoning categories do not conform to their description. For instance, much of the County's residential development is on two-acre lots zoned as agricultural land (**Map 4.1 Generalized Existing Current Land Use**). New growth management strategies should clarify the zoning categories to prevent incompatible overlaps and to define those areas suitable for specific types of development.



Growth management shall be a coordinated effort by County government to achieve a more efficient pattern for future development, in accordance with a community comprehensive land use plan. A growth management strategy shall guide new residential development to locations where adequate public infrastructure, such as roads, water, sewer, schools, and related facilities, is available or can be provided most efficiently. Commercial and industrial development areas shall be identified. Open space, agricultural areas, and environmentally sensitive areas which require protection and conservation also shall be identified. Environmentally sensitive areas are those areas that are located in a defined flood-plain, areas that are steeply sloped, or areas located in defined wetlands.

Future development shall be directed into areas where major public facilities are in place or proposed. Managed growth will reduce development pressures on natural systems such as wetlands and agricultural lands. In addition, guided growth will help maintain an important and desired distinction between rural and growing areas of the County.

Present Conditions and Future Trends

According to the most recent census, the 2010 population of Warren County was 37,439 people. Approximately 62% of the County's residents live in Warren County's rural area, outside the Town of Front Royal's corporate limits. The Town of Front Royal's population in 2010 was 14,440 people.

Warren County's population grew by 19% between 2000-2010. The rural portions of the County grew 29% during that time, while the population within Front Royal's corporate limits grew by only 6%. The natural beauty, lower housing costs, availability of subdivided lots and convenient access to Interstate 66 and Northern Virginia are some of the reasons new residents are attracted to our area.

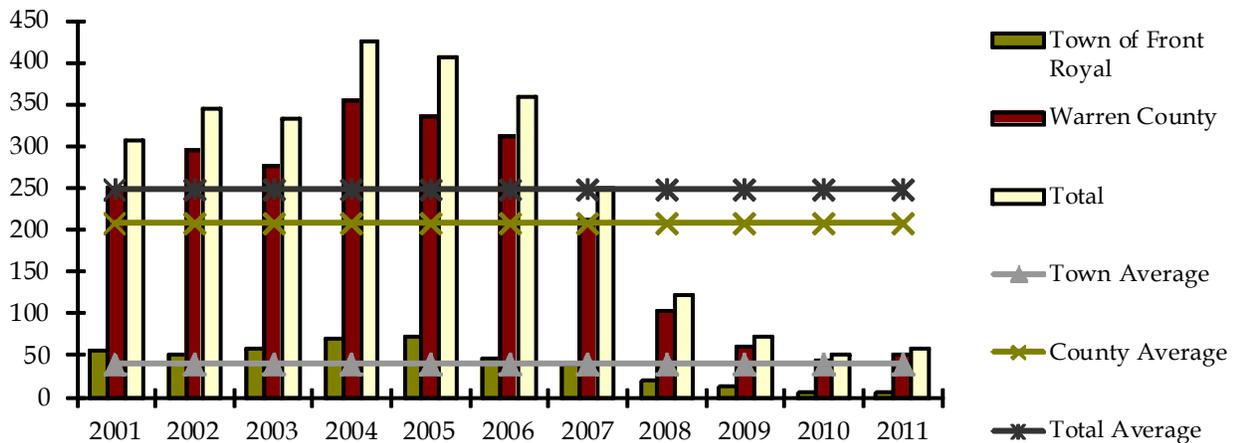
The County's growth trend as a whole is a continuation of the growth pattern established in the 1970s when the County's population increased by 39%. The focus towards the more rural, mountainous portions of the County is however, a more recent phenomenon from the 1980s. Migration into the County is the most significant contributor to the population growth since 1970.

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Between 2000 and 2010, a total of 3,091 additional housing units (Town & County combined) were constructed. This represents an increase in the occupied housing stock of 22.4%. The overall increase in housing units (vacant and occupied) was about 18.5%. The total number of occupied units in 2009 was 13,638. The areas showing the largest amount of housing growth during the past decade were within the Shenandoah and Happy Creek Magisterial District and include High Knob, Shenandoah Farms, Blue Mountain, Apple Mountain subdivisions, and the Rockland area.

The County has trended towards a middle age population group over the past 20 years. The population age group of 35-54 years of age has remained steady over the past 10 years. This age group encompasses 31% of the County's population. From 2000-2010, the percentage of residents 65 and older has remained at 12% of the population.

**Chart 4.1: New Housing Units
2001-2011**



Warren County's job market has not kept pace with the population growth. The 2009 labor force was approximately 19,673 people. Over half of this work force continues to commute outside the County on a daily basis. Approximately 24% work in Fairfax County, 21% in Frederick County, 16% in Prince William County, 12% in Loudoun County and 10% in Fauquier County. When the Front Royal Avtex Fibers' Plant closed in 1989, the number of manufacturing jobs in Warren County declined substantially. During the past 15 years, the County has been able to add approximately 2,400 jobs through aggressive economic development efforts. Currently, the fastest growing business sector is in the service industry, increasing 39% over the past 10 years. The American Community Survey from the U.S. Census supplies updated commuting information. They show that 6.1% of Warren County's labor force work from home. The County issues many home occupation permits each year for a variety of home office businesses such as consulting services, internet sales, and lawn care services.



In 2000, the Virginia Employment Commission made projections of Warren County's population growth through the year 2030. The population projections are scheduled to be updated again in late 2012. The current projections show that between 2010 and 2020, the overall population is expected to grow by 22.1% to 45,722 people. A smaller percentage increase (16.1%) is projected between 2020 and 2030. The population in 2030 is expected to be 53,092. This represents an overall increase of 41.8% over the course of 20 years. The County

anticipates these projections will decrease once they are re-visited by the Virginia Employment Commission due to population trends in the County over the past five years.

Map 4.1: Generalized Existing Land Use

Section 1: Growth Management and Land Use Issues

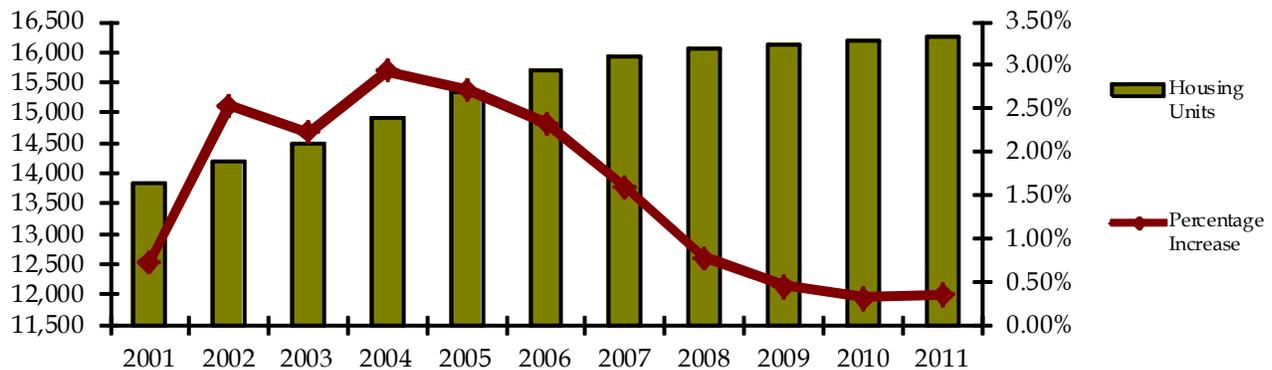
In the planning process, a number of growth and development concerns were identified by County residents through the 2009 Citizen Survey and the Planning Commission. These concerns formed the basis for establishing Warren County's growth management issues.

A summary of the major issues identified includes:

- The need to accommodate residential, commercial, and industrial growth in an orderly fashion relative to location, environmental and economic impacts, and the quality of development.
- The need to preserve Warren County's rural character which includes open space and agricultural lands, forested lands, low taxes, low crime rate, and a strong sense of community.
- The need to provide commercial and industrial opportunities within the County, thereby maintaining a favorable tax base and the need to overcome the trend towards becoming a suburban bedroom community.
- The need to see that new development pays a "fair share" of the costs associated with the additional demand it creates for community facilities.
- The need to plan ahead for future road improvements and possible new road alignments with consideration given to avoiding congestion and enhancing the appearance of future development.
- The need to improve cultural and recreational amenities such as libraries, parks, historic sites and river access that will improve the quality of life for County residents and visitors.
- The need to encourage the provision of a variety of housing opportunities, ranging in type and affordability.
- The need to improve coordination and cooperation between Warren County and the Town of Front Royal, regarding growth management and development issues.
- The need to continue to focus on quality of development activity, including landscaping, signage, storm drainage, and erosion control.

During the County's last Comprehensive Plan update in 2005, the Planning Commission and Board of Supervisors added as an objective of growth management to encourage developments to be phased in so as to not exceed the County's vision of maintaining a maximum 3% annual growth rate. The annual growth rate, measured in new residential building permits, peaked in 2004 at 2.93% as shown on chart 4.2.

**Chart 4.2: Approved Housing Units
2001-2011**



Goals & Objectives

The growth management goal of the County is:

Goal: To direct future development into an efficient and serviceable form that will preserve the County's predominately rural character.

Objectives:

- A. Direct County development to areas contiguous with Front Royal or villages that are served or will be served with adequate public facilities such as roads, sewer, and water.
- B. Limit future suburban sprawl in rural or agricultural areas where adequate public facilities do not exist or where their provision would not be cost-efficient.
- C. Develop incentives to preserve farmland, battlefield land, forested areas, open space, and rural character. Explore the use of conservation easements, purchase and transfer of development rights, and other similar programs for the funding of open space preservation.
- D. Discourage growth in environmentally sensitive areas that have natural development constraints, such as wetlands, steep slopes, floodplains and karst terrain features such as sinkholes and caves.
- E. Discourage strip development along County roads and highways for traffic safety, access management, and aesthetic reasons.
- F. Locate industrial and commercial development in defined areas.

- G. Require that developers pay a fair share of the associated costs for additional public facilities and services generated by the development. In addition, maintain the County's proffer system which shall ensure that adequate public facilities are in place or proposed before development is approved.
- H. Develop a preservation plan that identifies and protects Civil War Battlefield sites, historically significant areas, sites, and properties.
- I. Coordinate the County's and the Town of Front Royal's growth management plans.
- J. Maintain the County's rural character.
- K. All future private access easements serving three or more residential dwelling units should be designed with a slope no greater than 15%.
- L. Develop land use policies and implement land use decisions in such a manner as to limit average residential growth to no more than 3% per year, measured in new residential building permits. Encourage developments to be phased in so as to not exceed the County's vision of maintaining a 2% to 3% annual growth rate.

Implementation

Adequate Public Facilities Standards - A Level of Service Policies (LOS) should be maintained. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. LOS policies, make a clear statement to developers and reflect the public's expectations for County services. Establishing LOS policies and standards for public services ensures that sufficient services are in place or would be provided as development occurs. LOS standards can ensure that service expansion coincides with new development.

Agricultural and Forestal District Expansion - Encourage expansion and addition of voluntary Agricultural and Forestal Districts throughout rural areas.

Capital Improvements Program (CIP) - Maintaining a CIP is important in meeting future needs. The Capital Improvements Plan is intended as a guide to assist the Board of Supervisors in the development of the County's budget. Warren County's Capital Improvements Plan includes major capital projects that are: non-recurring, should have a "useful life" of five years or more; and the estimated cost of the expenditure must exceed \$50,000 for a general government project and \$100,000 for a school project. Projects included in the document address facilities development and/or improvement, infrastructure and large equipment needs.

Citizen Participation - Include County residents on committees and advisory boards that provide additional input and comment to the Planning Commission and or Board of Supervisors.

Fiscal Impact Analysis - The development of a residential per-unit fiscal impact model has been completed. The model provides a rational basis on which to accept developers' proffers. Fiscal impacts are calculated for schools, law enforcement, fire

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and rescue, waste collection and disposal, as well as for other community facility needs. The model has also been updated to include industrial/commercial development.

Generally, court decisions upholding fiscal impact fees or development extraction require that they meet a three-part standard. First, new development must create demand for new services. Secondly, a rational nexus must exist between new development and the need for such facilities. Finally, there must be assurance that sufficient benefit accrues to the development that pays the fees. This test is similar to the standards set forth by the Virginia General Assembly (Section 15.2-2297 and 15.2-2298 of the Code of Virginia) for voluntary proffering. Virginia courts have upheld the use of the proffer system when the above referenced standards are applied.

Public Service Limitation - Limit the extension of water and sewer services to outlying rural areas, thereby preventing sprawling development patterns.

State/Federal Program Participation - Encourage rural property owners and farmers to participate in local, State and Federal Programs designed to foster resource conservation. Such programs could include: Agricultural Cost-Share and Conservation Easements.

Voluntary Proffers - Maintain a proffer system associated with the County's Capital Improvement Plan (CIP).

Zoning Ordinance Revision - Revise the Zoning Ordinance to create a second commercial district. Permitted uses should include hotels, motels, sit-down restaurants, banks and other high-end uses. The district should not allow truck stops or other such uses.

Zoning Provisions - Adopt zoning provisions which will allow for the orderly growth and development of Rural Villages. These areas should retain their traditional character as they develop into service centers for the surrounding rural areas.

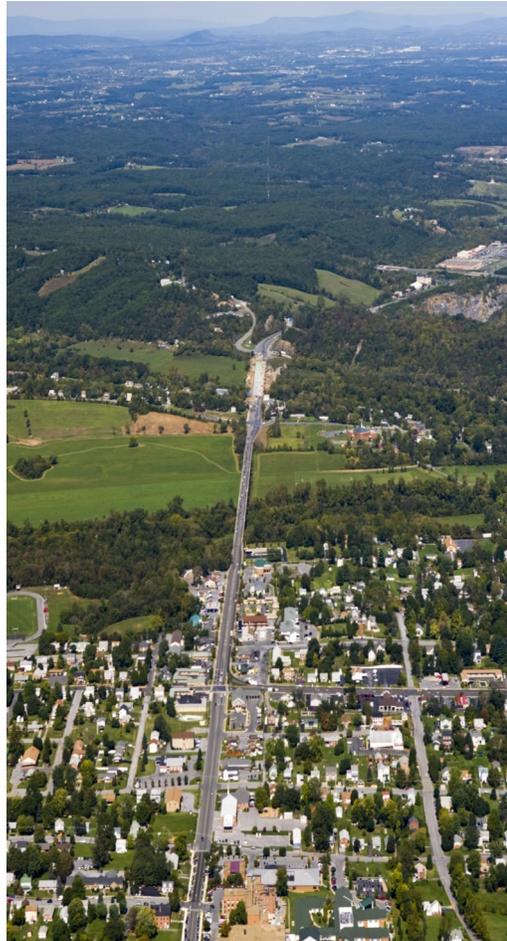
Summary

Rural residential development trends are currently resulting in a loss of County agricultural and forest land. Sprawling rural development results in loss of open space and rural character and is extremely inefficient to provide with public facilities and services. Loss of agricultural and forest land has serious direct and indirect impacts on the local economy. Some of the County's major goals are to preserve agriculture, forest land, open space, and other natural features.

Section 2: Environmental Aspects of Land Use in Warren County

Background

Warren County is under increasing pressure for urbanization/suburbanization. Watershed areas now being developed are subject to erosion and are marginally suited for septic tank systems. A wide belt of karst terrain runs north-south through the center of the County. Natural belts of vegetation along streams are disappearing with the loss of filtering and erosion control. Strip development is contributing to the degradation of views and vistas enjoyed by residents and tourists. In the search for new industry, great care must be taken to avoid activities that would add to air or water pollution. The County should invest in the creation of a watershed management plan to help in identifying these environmentally sensitive areas.



Goals & Objectives

Goal I: Develop Warren County land in accordance with local, state, and federal standards that provide the best possible quality of life.

Objectives:

- A. Develop performance standards applicable to new development activity and the solution of old environmental land use problems.
- B. Protect fragile groundwater and surface water resources.
- C. Encourage and, where possible, enforce architectural and site design standards that blend with, and take advantage of, the natural environment. This should include the retention of natural drainage patterns where they reduce flooding and erosion and the maximum retention of wooded areas, views, and vistas.
- D. Encourage incentives to developers for incorporating greenways in their projects; thereby enhancing appearance, safety, and value.
- E. Identify and seek to retain significant views and vistas along the Skyline Drive, and County roads, and Civil War Battlefields.
- F. Encourage unnecessary reduction of tree cover and other natural vegetation while allowing for reasonable land use.

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- G. Encourage tree planting along public roads to preserve rural character and value.
- H. Encourage cluster development through density incentives. Incentives should increase as developers use smaller percentages of the site for construction, leaving the remainder as park, greenway, or wooded areas.
- I. Develop performance standards for karst and other sensitive areas.
- J. Prevent dumping in sinkholes and provide incentives for cleaning up such areas.
- K. Maintain litter free public highways and other public areas.
- L. Develop a watershed management plan for the County.

Goal II: Develop and maintain a County GIS system containing the following: number, type, and location of housing units, essential fire and police protection, shops and other basic services, development density relative to known problem areas, location, area, condition, and use of agricultural and forest lands (public and private), soil and geologic characteristics by region, air quality by source and season, condition of rivers and streams, wildlife counts and habitats.

Objectives:

- A. Develop an environmental data base drawing on all federal, state, and local agencies, as well as public and private organizations serving Warren County. The data base should define time saving, technical, and economic advantages of the system's use.
- B. Create financial support for development and maintenance of the system among participating agencies and the state, with small user fees for other users.
- C. Provide a central point within County government for computer data storage, its evaluation, cross-reference, and accessibility to all contributors and users.
- D. Ensure timely data update by all concerned.

Implementation

Drainage Preservation Easements - The preservation of natural drainage shall be incorporated into development plans for the proposed land area.

Environmental Hazards - Determine the nature and magnitude of environmental hazards. Explore, adopt, and implement means of reducing these hazards.

Geographic Information System - Update and maintain a County geographic information system. The system would serve as a centralized location for the storage of and management of all County data.

Greenways & Landscaping - Revise development regulations that encourage and provide incentives for the preservation of greenways in development projects. Additionally, continue to provide high landscaping standards associated with development projects.

Land Use & Development Performance Criteria - Follow State standards to minimize the effects of erosion and sedimentation potential, maximize rainwater infiltration, and establish vegetative buffers along perennial streams to protect water quality.

Preservation Performance Criteria - Developers must demonstrate to the County that the use and development of land meets the following aspects:

- Only that land which shall be disturbed is necessary to provide for the desired use.
- Native vegetation shall be preserved to the maximum extent possible consistent with the use and development allowed.
- The establishment of a vegetative buffer around significant sinkholes and karst areas to enhance and protect water quality.
- All State and Federal regulations have been followed for land disturbance and storm water related issues.
- All permanent features/structures have properly been documented as to how any maintenance will be permanently addressed.

Summary

All County residents play a critical role in the balance of Warren County's environmental system. As the County grows, susceptibility to system imbalance and environmental damage increases. Limits exist to the amount of growth and development that the County can absorb without threatening environmental quality and resources. The County has a finite supply of natural resources which can support a limited amount of people. This concept is often referred to as carrying capacity. If the carrying capacity is exceeded, serious environmental degradation can occur and solutions could be costly. Warren County probably will not reach its threshold for many years, but the influence of present activities must be recognized. The cost of preventive measures is far less than that of reclamation. If the consequences of environmentally damaging activities are left unbridled, the loss of resources must be accepted, or the taxpayers collectively pay to correct the problem. As an example, collective federal, state, and local tax dollars are currently being spent to correct the environmental damage associated with the Avtex site which has resulted from decades of neglect and abuse. Efforts to prevent and protect the County's finite resources today will yield long-term dividends in the future.



Old Avtex Building - Now EDA Office and NSVRC Office

Section 3: Housing and Community Development

Background

Real estate values in the Northern Shenandoah Valley have increased in the past thirty years due to land and housing market pressures from retirees, commuters, and investors from the Northern Virginia and the Washington, D.C. area. Local wages have increased in the same period, but not in proportion to housing cost increases. Manufacturing wages, for example, are constrained by product price competition in national and global markets. For many local residents, their home is their major asset without their having gained proportionately on the income scale.

The overall Housing Affordability Index (HAI) is the broadest and most comprehensive measure of affordability provided by measuring the percent of the median household income required to occupy the median dwelling unit including both sold and rented housing. To better reflect housing affordability, the median income is adjusted to 30% of median income or the typically accepted maximum amount of income that can be affordably allocated for housing costs. Although the Housing Price Index (HPI) in Warren County has fallen significantly since the 1st quarter of 2007, housing prices have somewhat stabilized in the past two years while inversely rates for rental units have increased.

Paying over 30% of median income for housing classifies property owners and renters as being “cost burdened” or in “need” of affordable housing. The data for the Low-Income Housing Affordability Index reflecting the median income of the bottom ¼ of households highlights the housing affordability problems generally faced by severely low-income households within the community. In Warren County these numbers have dropped from 80 % in 2007 to an overall HAI of 43 % in the 4th quarter of 2011, which is the lowest percentage of the Counties in the Northern Shenandoah Valley Planning District.



With the onset of the “Baby Boomer” generation, the aging population throughout Virginia is projected to grow exponentially between now and 2030. With this increase come very different needs for housing and transportation choices for this demographic sector. The County may need to adopt more flexible Zoning policies that would help foster a diverse range of housing types including supportive housing, assisted living residences, continuing care retirement communities and congregate housing. Older adults with low and moderate incomes should have access to affordable

choices of housing either through subsidies to supplement their incomes or through the inventory of more compact and higher density housing designed for senior’s physical needs. The County should also explore both public and private transportation options that would allow for the elderly to continue to live independently and provide safe modes of transportation for daily access to goods and services. Planning for this demographic certainty is needed.

An examination of housing with complete plumbing, sanitation, and kitchen facilities reveals that in the 2010 Census, there were 192 dwelling units in Warren County without complete plumbing facilities. There were 73 without complete kitchen facilities. As of 2010, there were 14,413 housing units in Warren County. This means that 1.3% of the units did not have complete plumbing facilities, 0.5% did not have complete kitchen facilities.

Housing affordability is a growing problem for many County residents. In a survey, conducted in December 2009, many people said that the community did not have high quality and affordable apartments and townhouses for young people and the elderly. In the 2010 Census, the age group of 60 and older, comprised 16.7% of Warren County's total population. The issue of affordable housing for retired people and young couples moving into the community should be explored more thoroughly.

The housing affordability issue also affects young families. Those working in lower-paying or entry level jobs are likely to experience difficulty in buying or renting in the County. The gap in affordable housing can affect the ability of employers, including local government, to attract employees crucial to the community's health and safety, as well as to the area's economic growth and prosperity (**Table 4.1**).

The majority of the existing affordable housing is located within the Town of Front Royal. This housing represents a higher density of development, therefore affordable housing should be located where public utilities are located. The continued development of existing subdivisions in the County provides opportunities for affordable housing.

Based on the above data, the following points are important to consider in developing Warren County's overall housing policies:

- The lack of affordable housing within Warren County is most acute for the lowest income households, especially the elderly and young single people.
- In areas that lack adequate plumbing and sanitation systems there is a need for improving housing conditions.
- Existing mobile homes are used to by low and moderate income residents; however, the development of more mobile home sites is not desirable to County residents.
- The Comprehensive Plan survey conducted in 2009 showed that there is a need to provide affordable family housing and housing for senior citizens.

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Table 4.1 Housing Affordability Ratio

County	Warren	Clarke	Frederick	Page	Shenandoah	Winchester City	NSVRC - PDC7	Virginia
Median Income 2010	\$60,522	\$73,244	\$63,331	\$41,617	\$50,171	\$44,873	\$55,626	\$60,674
Median Income for Home Owners, 2010	\$71,929	\$85,056	\$69,665	\$47,891	\$60,607	\$65,443	\$66,765	\$74,846
Median Sales Price 2010	\$140,000	\$258,500	\$170,000	\$130,000	\$145,000	\$147,000	\$165,100	\$236,000
Median Value of Owner Occupied Units- (2006-2010)	\$254,400	\$366,900	\$248,600	\$168,700	\$216,200	\$267,000	\$253,600	\$255,100
Median Monthly Owner Cost	\$823	\$1,482	\$985	\$754	\$839	\$888	\$962	\$1,429
Median Annual Owner Cost	\$9,880	\$17,785	\$11,815	\$9,044	\$10,073	\$10,653	\$11,542	\$17,143
HAI = % of Median Income to Median Housing Cost	16.50%	22.20%	18.70%	20.90%	19.10%	23.40%	20.10%	25.60%
HAI Sold Units	16.30%	24.30%	18.70%	21.70%	20.10%	23.70%	20.80%	28.30%
HAI Rental Units	16.80%	15.60%	18.90%	18.40%	16.70%	23.00%	18.20%	20.20%
30% of Income = Housing Affordability Threshold	\$21,579	\$25,517	\$20,900	\$14,367	\$18,182	\$19,633	\$20,030	\$11,472
Total Number of Cost Burdened Owners - All Incomes	3,063	1,097	6,446	1,867	3,190	1,665	2,888	579,536
Percentage of Cost Burdened Households	30.80%	26.30%	30.10%	26.40%	26.80%	32.30%	28.78%	28.80%
Lowest Quartile HAI=Med Income of lowest 1/4 Hholds	46.00%	62.10%	55.80%	70.20%	56.80%	69.70%	60.10%	89.50%

Source: Housing Virginia & Census ACS Data

Table 4.2 Rental Affordability Ratio

County	Warren	Clarke	Frederick	Page	Shenandoah	Winchester City	NSVRC-PDC7	Virginia
Median Income 2010	\$60,522	\$73,244	\$63,331	\$41,617	\$50,171	\$44,873	\$55,626	\$60,674
Median Income for Renters, 2010	\$36,309	\$40,676	\$45,901	\$26,502	\$31,863	\$33,013	\$35,711	\$38,239
Median Monthly Renter Cost (Gross Rent)	\$849	\$954	\$999	\$637	\$700	\$860	\$833	\$1,019
Median Annual Renter Cost (Gross Rent)	\$10,188	\$11,448	\$11,988	\$7,644	\$8,400	\$10,320	\$9,998	\$12,228
30% of Income = Rental Affordability Threshold	\$10,893	\$12,203	\$13,770	\$7,951	\$9,559	\$9,904	\$10,713	\$11,472
Rental HAI at Median Income of Owners 2010	14.20%	13.50%	17.20%	16.00%	13.90%	15.80%	15.10%	16.30%
Rental HAI at Median Income of Renters 2010	28.10%	28.10%	26.10%	28.80%	26.40%	31.30%	28.10%	32.00%
Total Number of Cost Burdened Renters - All Incomes	2,190	503	2,993	1,069	2,621	2,622	2,000	450,537
Percentage of Cost Burdened Renters	53.00%	46.30%	48.30%	51.70%	53.60%	53.80%	51.10%	50.40%

Source: Housing Virginia & Census ACS Data

Goals & Objectives

Goal: To provide, throughout the County, residential areas that offer quality, residential development that does not deplete County resources and protects rural character.

Objectives:

- A. Provide assistance to local organizations (non-profit and for-profit) to upgrade the existing housing stock that is deficient in plumbing or sanitation facilities.
- B. Discourage all types of residential building in areas that are environmentally sensitive. Develop land use and zoning regulations that are consistent with this purpose.
- C. Encourage current neighborhood stability by providing technical and support services where possible.

Implementation

Accessory Apartment Units - Permit Accessory Apartment units to be utilized with adequate safeguards to protect the character of existing neighborhoods. This strategy will stimulate new, moderate cost rental housing for both young and elderly households while preserving larger, older homes and allowing elderly homeowners to stay in their residence. The original home should have an owner occupied resident and should appear from the outside as a single family dwelling.

Bonus Densities for Affordable Housing - Grant bonus densities to planned development projects thereby encouraging the provision of more affordable housing as authorized by the 1994 General Assembly. An ordinance provision should be written to allow bonus densities in support of more affordable housing.

Building Codes - Adopt and enforce federal and state building codes to remove substandard rental housing conditions.

Commercial Apartments - Permit apartments in conjunction with commercial establishments in village zones.

Flexibility in housing types - Foster land use patterns and provide builder incentives to encourage flexibility in housing types by reducing land costs. This type of program can be achieved by planned residential development and cluster development provisions within the County's zoning ordinances. This strategy can also be implemented by allowing maximum flexibility in configuring lots into clusters rather than relying on minimum size lots to determine the desired density in a neighborhood. The increased flexibility will allow for maximum efficiency in providing infrastructure (water & sewer) to homes. Multi-family housing should be encouraged in areas close to activity and employment centers.

Housing Trust Fund - Consider setting up a local Housing Trust Fund. The Virginia Housing Development Authority (VHDA) and the Virginia Department of Housing and Community Development (VDHCD) administer a State fund to be used as a revolving loan fund to induce the development of low and moderate income housing.

Indoor Plumbing/Adequate Sanitation - Provide technical assistance and create partnerships with non-profit and with for-profit organizations to provide indoor plumbing and to upgrade substandard conditions for all existing low and moderate income residents.

Manufactured Housing - Continue to allow manufactured houses that are constructed off site, transported in one or more sections and placed on a permanent foundation, to be used as dwellings, subject to all federal regulations.

Mobile Homes - Continue to permit mobile homes in designated areas as a means of providing affordable housing. Establish performance standards to ensure their use creates a safe, sanitary living environment. The current zoning regulations regarding mobile homes should be reviewed to determine if ordinances are in place and to ensure that they make a positive contribution to the housing stock and to the community.

Utilize local, state, and federal funds for housing programs - There should be a concerted effort to review the County's history of housing funding source use. In addition, other funding sources should be identified and utilized. A funding development plan should be developed and timetables established for the application for available funds. Encourage partnerships with County government agencies and non-profits to secure and apply for these funds.

Some of the sources to be explored:

- Virginia Housing Partnership Program
- Virginia Housing Production Program
- Community Development Block Grants
- HUD Section 236 Program
- HUD Section 202 Housing for Elderly and Handicapped
- HUD Section 8 Housing Vouchers

Volunteerism - Coordinate local resources, non-profits, local agencies, church groups, and for profit organizations, to rehabilitate, build, and upgrade housing stock within the County.

Summary

Due to the escalation of real estate values within the last 30 years, many current residents have difficulty finding safe, decent, and affordable housing within Warren County. This problem affects the community's young families and the elderly.

In addition, some homes lack adequate plumbing and sanitation systems. Those homes should be reviewed with the goal of improving their conditions in the fastest, most efficient way. Currently, there are state-wide non-profit organizations that can help to alleviate this particular problem by providing low cost services.

Housing has always been a complex question, because there are so many financial and land use issues that need to be addressed simultaneously. Providing a variety of housing options to County residents that are compatible with the proposed land use plan is a step in the right direction. Enforcement of local ordinances, and state and federal laws can assist in the elimination of unsafe living conditions which currently exist within the County. This section suggests many housing options and non-financial steps that can be taken to improve the quality of living conditions within the County. The real key to community development and housing is local cooperation in forging public and private partnerships that address the goal of housing stock improvement for the total community.

Section 4: Rural Character and Agricultural Preservation

Background

Among the most important features of Warren County are its natural beauty and its rural character. As population pressures from the Washington, D.C. area increase, it will become more and more difficult to preserve this pastoral quality. The rural character is created by our present relative abundance of agricultural, forest, and open land. It is the feeling of being in the country that attracts many people to our County to live, visit, and enjoy our natural beauty and recreational opportunities. The existing County development regulations and programs concentrate on deterring residential sprawl, preserving agricultural and forest lands, and maintaining Warren County's rural character.

During the past decade, the County has taken significant steps to encourage the preservation of farmland and open space in the County. The County continues to encourage new residential growth in and around the Town of Front Royal. In 2009, to further the goals of the Comprehensive Plan and as a means to assist County landowners in protecting and preserving farm and forest land and preserving the County's rural character, the County adopted a Purchase of Development Rights Program, which enables the County to acquire voluntary conservation easements through donation, or through purchase as a means to assure these valuable County resources are protected.



Downtown Limeton

The County continues to encourage the creation and continuation of Agricultural and Forestal Districts. The County currently has three districts, two of which have created in the past ten years. The Districts include a total of 11,538 acres and are an excellent way to preserve farmland and open space.

The County continues to use zoning and subdivision tools to sustain our rural character. The County has in place a cluster development ordinance that encourages the conservation of open space in subdivision design. The County adopted a Rural Residential zoning district in 2002, which allows for the clustering of subdivision lots to protect and preserve the natural beauty of the land.

Rural Character Issues

The following is a list of important rural character, environmental, open space, and preservation issues:

- Strip developments along rural roads and highways creates traffic congestion, access management issues, and adversely affects Warren County's rural character.
- Market conditions encourage rural land subdivision and development, creating a loss of farmland, forest, open space, and rural character.
- Land subdivision and new development activity occurs without adequate roads to meet

traffic demand. The ability of rural roadways to handle traffic safely and efficiently is being diminished as development occurs and numerous access points are constructed along road frontages.

- Providing public services and facilities for suburban sprawl is extremely inefficient.
- Traditional farming and forestry activities are decreasing as the County becomes increasingly suburbanized. Residential development immediately adjacent to farms often causes conflicts that discourage farming activities.
- Warren County's rural character, as well as Skyline Drive's scenic vistas and views attract tourists.
- Mountainside development and deforestation increases erosion and storm drainage problems, thereby causing an adverse effect on the environment.



Old Rockland Schoolhouse

Goals & Objectives

Goal: Preserve the County's rural character by preserving open space, as well as agricultural and forest lands.

Objectives:

- A. Maintain land use classifications in the taxing of agricultural and forestal properties.
- B. Encourage cluster development in rural areas to preserve open space, to increase road safety, and to preserve rural character. The remaining land shall be kept undeveloped. Increases in housing density within the cluster or other incentives should be considered in return for preserving open space.
- C. Develop buffer zones to reduce potential conflicts between cluster developments and non-compatible uses such as farming and large commercial or industrial development.
- D. Access to cluster developments shall be limited to those necessary for safe ingress and egress of residents and emergency vehicles.
- E. Utilize natural topographic features and/or planting screens to shield development from public roads and adjoining properties, thereby preserving scenic vistas and rural character.
- F. Avoid significant modification of the existing terrain and prohibit development of environmentally sensitive areas, such as floodplains and steep slopes.

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- G. Designate some of the most scenic roads in the County as Scenic Highways and Byways, thereby preserving scenic rural views and vistas. The State has designated Route 55 East as a Scenic Highway. Other possible candidates include: Route 340 South, Route 522 South, Browntown Road, Morgan's Ford Road/Milldale Road, Rivermont Road, and Reliance Road.
- H. Provide strict controls to limit access along major highways, such as Routes 55, 340, and 522, to preserve roadway capacity, decrease congestion, and improve safety.
- I. Maintain the Highway Corridor Overlay District to address architectural and aesthetic controls as well as creating interparcel connections, limited access, and buffering requirements along the County's major entrances.

Implementation

Agricultural & Forestal District Expansion - Encourage expansion and addition of voluntary Agricultural and Forestal Districts throughout rural areas.

Public Service Limitation - Limit the extension of water and sewer services into outlying areas to prevent sprawling development patterns.

State/Federal Program Participation - Encourage rural property owners, including farmers, to participate in State/Federal Programs designed to foster conservation of resources. Such programs might include: Agricultural Cost-Share, and Conservation Easements.

Zoning Ordinance Revision - Maintain a Rural Residential (RR) zoning district which corresponds with the future Land Use Map's designated area in the zoning ordinance for parcels of land larger than two acres, but smaller than six acres. This District would provide a transition zone between the traditional residential districts and truly agricultural districts. Residential development in this area shall be of low density, not exceeding one net unit per five acres.



Downtown Browntown

Zoning Provisions - Adopt zoning provisions which will allow for the orderly growth, expansion, and development of Rural Villages. Additionally, allowances must to be made for possible new Villages in the County. These areas should retain their traditional character as they develop into service centers for the surrounding agricultural and rural regions.

Summary

To accomplish these goals, the County's future development must be directed away from the rural and agricultural areas. Development must be directed around the Town and into the Rural Villages. By providing such direction, the County can ensure that conflict, incompatibilities, and competition between agricultural and residential land uses are minimized to the greatest extent possible. The remainder of the County should be developed in a low-density manner, preserving rural character and open space where possible. Alterations to the County's development regulations must be developed to better manage the type, density, and form of development in Warren County's predominantly rural and agricultural areas.

The local County government can do little to directly improve the economy of agricultural activities. However, indirectly the County can assist this industry by ensuring wise conservation and use of the land base supporting this industry.

Section 5: Rural Villages

Background

Traditionally, villages like Bentonville, Browntown, Limeton, Reliance, Rivermont, Linden, Waterlick, Rockland and others were focused around local elementary schools, churches, convenience stores, and the fire hall. The village schools closed over time and a more mobile population has decreased the viability of village stores.

Village Issues

- Increased development of existing rural villages and the development of new ones would reduce the pressure to suburbanize farm land and other open spaces.
- Stricter health regulations and potential pollution problems make additional development difficult in some of the traditional centers.
- Hilly terrain, rivers, parks, and the National Forest, make County-wide sewage treatment and water systems prohibitively expensive. Additionally, spokes from a central water system promote linear strip development that will destroy our rural character.
- The current Zoning Ordinance must provide increased flexibility for land use in Village districts.



Browntown Baptist Church

Goals & Objectives

Goal: Focus rural residential and light commercial growth in and around rural villages.

Objectives:

- A. Allow the construction of small sewage treatment facilities (and water systems where necessary) to serve the rural villages. Possible locations could include Bentonville and/or Limeton which could combine services with the Raymond R. "Andy" Guest, Jr. Shenandoah River State Park; and Browntown.
- B. Allow expansion of dual uses in the rural villages.
- C. Develop Village Center Land Use Plans, as components of the Comprehensive Plan, which will guide development within Village areas.
- D. Develop provisions that will encourage the orderly growth of rural villages. These centers should retain their traditional village character as they develop into convenience/service centers for the surrounding rural area.

Implementation

Public Service Limitation - As the County develops water and sewer service for the Rural Villages, limits on the expansion of these services into outlying rural areas must be developed. Without such limits sprawling development patterns will result.

Zoning Provisions - Adopt zoning provisions which will allow for the orderly growth and development of Rural Villages. These areas should retain their traditional character as they develop into service centers for the surrounding agricultural and rural areas. Additionally, the provision of dual uses on single parcels of land or within an existing building must be included in the ordinance revision.

Summary

Agriculture and rural character are an important part of Warren County life. The existence of Rural Villages has played a major role in defining this character. Only through preservation and limited expansion of these villages can the rural lifestyle continue.

Section 6: Forest Land Management and Preservation

Background

The Shenandoah River and the Blue Ridge Mountains are important County scenic assets. The land within sight of the river qualifies the river for formal scenic designation by the State. The Blue Ridge Mountain range, in its entirety, is recognized as a uniquely important resource. Because the tourist industry is a major element in the County's economy, views from the Skyline Drive and along County roads are important attractions.

The Shenandoah River and its tributaries, the forest regions, and the variety of wildlife, make Warren County an exceptional area. Development must be chosen carefully to maintain the County's rural character and historic resources.

The surface and groundwater resources are important elements in the natural environment. Protection of the quality and quantity of these resources is essential to ensuring drinking water as well as to maintaining the natural environment's ecology. Habitat preservation is important for wildlife survival.



White Century Farm

Year-round streams and wet weather streams are common throughout Warren County, especially in the mountain areas. Because of their steepness, mountain lands are particularly susceptible to erosion. Improperly cut, or clear-cut forest areas, result in an increase of run off causing erosion, silting of streams, and storm drainage problems. The forest cover adjacent to streams and rivers, is essential to maintaining of Warren County's natural ecosystem.

Increased run-off results in streams' higher peak flows causing channel enlargement. The material removed by streams during channel enlargement is deposited in relatively level reaches downstream. Any enlargement results in out-washes of rock and silt into the Shenandoah River. Such activity substantially diminishes the river's scenic value. Silt and the nutrient it carries is harmful to aquatic life.

Pre-planned forest activity is a key feature to ensuring the ecosystem's continued health. The water quality and forest areas must be maintained with the minimum influence from man. This will ensure that the water's condition, the health of animals and plants that live in and depend on the water, in addition to the natural environment will be maintained.

Goals & Objectives

Goal: To preserve the community's rural character and preserve forest land, and other environmentally sensitive areas, by managing and maintaining forest resources during the development process.

Objectives:

- A. Adopt performance standards and a review process for the commercial and non-commercial forest cutting of any area exceeding one acre.
- B. Develop standards to protect ridgelines.
- C. Provide limited forest cutting in stream, wetland, and river areas.
- D. Support and expand Agricultural and Forestal Districts in the County.

Implementation

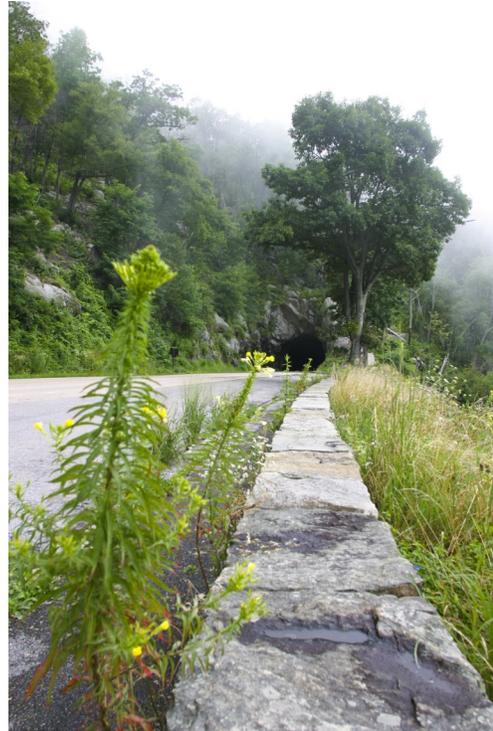
Ordinance Revision - Continue to require as part of the County's Zoning Ordinance that commercial forest activities, including sale of trees, in residential areas be conducted in accordance with the guidelines established in the Virginia Department of Forestry's latest edition of *Logger's Guide*. To prevent clear-cutting, there shall be no cutting of trees with a diameter of eight inches or less (25-inch circumference). No commercial forest cutting in residential areas should occur without County review. A pre-harvest plan and map with the following guidelines should be required:

- 1. Property boundaries
- 2. Streams and drainage
- 3. Critical areas
- 4. Road and trail locations
- 5. Stream and drainage crossings
- 6. Log landings and mill seats
- 7. Stream-side management zones (SMZ's)
- 8. Other environmental concerns

The following should also be included:

- 1. Road and trail specifications
- 2. Harvesting equipment to be used
- 3. Timing of the harvest
- 4. Logging contract specifications
- 5. Special planning for wet areas
- 6. Obstructions, such as rock outcroppings
- 7. When and where best management practices will be used

Stream Buffer Zones - Designate stream buffer zones to protect water quality. Establish buffer zones along streams where commercial logging operations and other development activities are occurring.



Skyline Drive (Mary's Rock Tunnel)

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Timber Resources - Commercial and non-commercial forest cutting should be conducted to ensure long term forest viability and to minimize negative environmental impacts, particularly along streams, rivers, and wetlands. Water resources can be protected by providing buffer zones along these environmental features.

Summary

The timber resources of Warren County are an important aspect of our environment and lifestyle. The unrestricted cutting of timber can lead to serious environmental problems. However, the County recognizes the timber industry's economic value to the local economy. To balance the interests of residents as well as those of the timber industry, the County permits logging operations provided the appropriate conservation measures are used to protect the environment.

Section 7: Public Lands

Background

Warren County has an abundance of outdoor recreational land that is owned and maintained by the federal and state governments. While such public land is removed from the tax rolls, it protects natural resources and is the primary focus of Warren County's tourism industry.

The northern end of the Shenandoah National Park is located within Warren County. About 14,000 acres of the park, representing 10% of the County's land area, are located within Warren County. The park, with its scenic Skyline Drive, attracts about a half-million visitors annually who enter through the northern entrance at Front Royal. There are seven overlooks along the Drive in Warren County and five in other counties from which visitors can glimpse Warren County's landscape. Protection of these vistas will continue to be an important consideration in attracting large numbers of visitors to Warren County.



The Shenandoah National Park has a program called the *Related Lands Study*, which works in cooperation with surrounding counties. The program involves the collection of resource information about the Park and the surrounding Counties. Data is used for future joint planning activities by the Park and the Counties. This program allows the Park and the communities to work together in developing locally based initiatives that manage and conserve the resources that are valued by both entities. To date, this program is being implemented in Albemarle, Rockingham, and Augusta Counties. In addition, the Park Service has recently contracted for the development of a data-base of geographic information for Warren County and other counties adjoining the Park. This information should be part of the County's environmental data-base.



The George Washington National Forest has approximately 6,200 acres located within Warren County's western portion. The forest offers hiking, camping, hunting, fishing, and other recreational activities for residents and visitors. The forest's location ensures the protection of the Massanutten Mountain, the County's western boundary.

The federal government also owns approximately 3,400 acres bordering the Town of Front Royal to the south. This acreage houses the Smithsonian Institution, the National Zoological Park Conservation and

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Research Center, as well as the U.S. Customs Dog Training facility. The Conservation and Research Center is operated by the Smithsonian Institution's National Zoological Park. Activities at the center focus on biodiversity conservation through programs in research, national and international training, and captive breeding of endangered species. The Conservation and Research Center is closed to the public, however, conference facilities are available for use by outside groups on a fee basis.

The Northern Virginia 4-H Educational Center, a regional recreational facility under the auspices of Virginia Polytechnic Institute, is located on 229 acres in Harmony Hollow. It adjoins other federal lands, including the Shenandoah National Park. The 4-H Center, when not being used by a 4-H group, is open to the public. The center offers numerous trails and other facilities that are used by others, including hikers on the nearby Appalachian Trail.

The Commonwealth of Virginia acquired 1,605 acres of land along the South Fork of the Shenandoah River for the establishment of the Raymond R. "Andy" Guest, Jr., Shenandoah River State Park. The park has 5.6 miles of river frontage for recreational use. The Shenandoah River, in Warren County, is a significant natural and scenic resource. The park draws approximately people annually. The development of a park sewage disposal system should work in cooperation with the Bentonville and/or Limeton communities, with the goal of an overall community system to benefit both the park and the area's residents.

Warren County contains almost 30 miles of the Appalachian Trail. The Board of Supervisors were early supporters of the Appalachian Trail, authorizing the acquisition of county land for the trail. The trail corridor helps the County maintain its rural landscape which is valued by residents and visitors. In 2012, Front Royal and Warren County were designated as an Appalachian Trail Community by the Appalachian Trail Conservancy. The designation recognizes communities for their part in promoting awareness of the Appalachian Trail as an important local and national asset. Designation as an Appalachian Trail Community and participation in the program is intended to engage community residents, trail visitors, and stewards; thank communities for their decades of service to hikers and trail visitors; catalyze sustainable economic development around outdoor recreation and tourism; aid municipalities and regions with conservation asset mapping and planning; and to promote the trail as a community resource and asset.

The Virginia Department of Conservation and Recreation's *2007 Virginia Outdoors Plan*, notes several scenic resources located within Warren County, including Route 55 east-west through the County and both forks of the Shenandoah River. The Plan recommends the designation of Route 55 into the Virginia Byway Network and the scenic river designation for the North Fork of the Shenandoah to Riverton and the South Fork of the Shenandoah, from Overall to Front Royal. There also are a number of other scenic roadways in Warren County that are worthy of rural scenic byways' designation.

Approximately 17.5% of Warren County's rural land is owned by either the federal or the state government. The national park and the national forest include the mountain sides and ridge lines of the Massanutten Mountains on the west and the Blue Ridge Mountains on the east. The scenic vistas and the protected open spaces help to maintain the County's rural character, which in turn promotes tourism. These areas generate large amounts of revenue for local business.

Goals & Objectives

Goal: Utilize public lands as a resource in maintaining the County's rural character.

Objectives:

- A. Work with the National Park Service to ensure an equal partnership in the use and management of common resources and common concerns.
- B. Utilize Shenandoah National Park's view-shed analysis to develop land use recommendations to ensure development compatible with the County's rural character.
- C. Monitor State and Federal agencies development plans and work with those agencies to ensure activities consistent with the County's rural character.
- D. Maintain the Shenandoah River's scenic nature by minimizing development within the floodplain. Designate the river as a greenway for recreational and flood control purposes.
- E. Maintain the Appalachian Trail's scenic nature by adequately buffering development from the Trail.

Implementation

Increased Agency and Locality Cooperation—Work with the Shenandoah National Park and other jurisdictions surrounding the park to promote the presence of the Park in our jurisdictions. This could include the establishment of an overlay district that would help enhance the gateway to the Skyline Drive and the Shenandoah National Park.

Summary

Shenandoah National Park and George Washington National Forest assist Warren County in providing resource management providing the County with open space and aid in maintaining the community's rural character. These areas also serve as an economic development tool of the tourist industry. Each year, thousands of people visit these federal lands and many contribute to the local economy during their visit. Continued cooperation between the County and the federal agencies overseeing these lands is crucial in meeting many of this plan's goals.

Section 8: Commercial & Industrial

Background

Warren County is traversed by I-66 (east/west) and U.S. Routes 340/522 (north/south). The Norfolk Southern Railway System provides rail freight service north, east, and south. Warren County is home to the Virginia Inland Port.

Two sections of the County, located north along U.S. Routes 340/522 and near the overpass of Route 606 and I-66 in the east, have been designated as commercial/industrial zones. The former Avtex Fibers site could provide additional space for industrial development. An interchange on I-66, at or near Route 606, would promote further industrial development in the Happy Creek Industrial Park area.

The area along the eastern side of U.S. Route 340/522 North has been designated as the Cedarville Enterprise Zone. The Cedarville Enterprise Zone is composed of approximately 1,200 acres. The zone is bounded by Route 658 to the south, the Norfolk & Western railroad tracks to the east, just beyond Fairground Road to the north, and U.S. Route 340/522 to the west. This area is intended to be used for industrial development.

There are already several commercial and industrial uses located near the interchange of I-66 and U.S. Route 55, near the Village of Linden. Continued light commercial and industrial uses should continue to be permitted in this area, within the environment's limits to support such uses.

Increased cooperation between the Town of Front Royal and Warren County would enhance the prospect of attracting services viable to the industrial development area. Land that is most suitable for agricultural uses is also land that is most desirable for industrial development. As a result, there is competition between these land uses.



Goals & Objectives

Goal: Encourage orderly growth of commercial and industrial development relative to environmental and economic impacts along the Rt. 340/522 Corridor and at Rt. 55 East (Linden).

Objectives:

- A. Provide Rt. 340/522 and Rt. 55 East (Linden) with adequate services in place or planned for balanced future commercial and industrial development.
- B. Encourage the location of clean industry and commercial activities through the development of performance standards that ensure the activity would be compatible with the community's goals.

- C. Encourage industrial and commercial growth to achieve 30-35% of the tax base.
- D. Encourage industrial and commercial development that provides competitive wages and benefits.
- E. Encourage the establishment of research technology zones, as well as technology zoning overlay districts to ensure harmonious development within these zones.

Implementation

Economic Development - Continue providing ample sites with adequate infrastructure, thereby developing a diverse economic base for the County.

Performance Standards - The creation of performance standards relating to site design, infrastructure, and environmental issues must be incorporated in the County's development regulations.

Research and Technology Zones—Encourage the establishment of one or more research and technology zones in the County to encourage growth in these targeted industries.

Summary

By providing for industrial and commercial development within the County and by limiting the areas where this type of development can occur, the costs associated with the infrastructure needed to support this development can be minimized. Adequate site development standards must be included in the County Zoning Ordinance to ensure new industrial and commercial development will be compatible with the County's natural beauty.

Section 9: Residential

Background

Residential uses in the County can be broken down into the following categories and zoning districts: high density residential, medium density residential, low density residential, and planned residential development. They are defined as follows:

- High Density Residential (Suburban Residential (SR)) - Average density of up to four dwelling units per acre requiring central water & sewer that include a full range of housing types and are contiguous with the Town of Front Royal or town utilities. (Single-family attached, single-family detached, two-family, and multi-family units (townhouses and apartments). This category includes the County's designated Urban Development Areas within the Town of Front Royal limits.
- Medium Density (Residential One (R-1), Residential Two (R-2) and Village Residential (VR)) - One to two dwelling units per acre. There are two types of developments in this category. One is the older recreational and retirement subdivisions such as Skyland Estates and High Knob. The other type is communities and areas that require a concentration of development but were not planned as subdivisions such as Bentonville, Browntown, Reliance, and other areas of concentrated development along the County's secondary road system.
- Low Density (Agricultural (A) and Rural Residential (RR)) - From two to ten acres per unit. This includes planned subdivisions such as Thunderbird Farms, River Ridge on the Shenandoah, Freezeland Manor and general areas of development along highways and surrounding medium density areas such as Shenandoah Valley Golf Course and the Rockland area. It also includes large numbers of divisions of farmland into smaller subdivisions (less than five), which can be approved administratively.
- Planned Residential Development (PRD) (Suburban Residential (SR)) - A mixture of residential types with a density from four to ten dwelling units per acre. While the density recommended for PRD is higher than currently permitted in the County, the encouragement of this concept would result in a wide range of housing choices for residents who cannot afford single family, detached housing on larger lots. This concept would encourage developers to take full advantage of the characteristics of a site and would allow them maximum flexibility.

Goals & Objectives

Goal: Provide residential areas that offer a variety of housing densities, types, sizes, costs, and locations to accommodate existing and future needs.

Objectives:

- A. Encourage all new subdivision development to be centered around existing village centers and to be developed as planned residential developments which create a neighborhood or community atmosphere and identity.

- B. Discourage residential development in areas of environmentally sensitive lands and agricultural operations.

Implementation

Focused Development - Traditionally, villages like Bentonville, Browntown, Limeton, Reliance, Rivermont, Rockland, and Waterlick were focused around elementary schools, churches, convenience stores, and the fire hall. With school consolidation, the local village schools are gone and a more mobile population has decreased the importance and viability of village stores. Stricter health regulations and potential pollution problems make additional development difficult in some of the traditional centers. As a way to refocus rural residential growth at these existing centers, the County should consider small scale sewage treatment plants and water systems to serve these villages. Much of Warren County is divided by hilly terrain, rivers, parks, and the National Forest. These conditions make future centralized sewage treatment and water systems prohibitively expensive. Additionally the spokes from a central system promote linear, strip development which would destroy our rural character.

Cluster Development - This type of development aids in preserving open space and in reducing contractor development costs. This type of development can provide a wide variety of housing types and creative site design.

Rural Character - Allow the construction of small sewage treatment facilities in rural villages such as, Browntown, Bentonville, and /or Limeton which could combine services with the Raymond R. "Andy" Guest, Jr., Shenandoah River State Park.

Summary

The use of planned developments is the best way to cluster future residential development and to preserve Warren County's rural character. By using such development techniques, the costs of development are lessened and open space is preserved. Additionally, when development is to be located in the more rural areas, it should be centered around the County's existing Rural Villages. This will provide a sense of community and further enhance existing small scale commercial ventures.

Section 10: Highway Corridor Plan

Background

The Highway Corridor Plan is intended to address architectural and aesthetic controls as well as special access and buffering requirements along the County's major entrances and roadways. The purpose of the Highway Corridor Plan is to protect and improve the visual quality along these corridors and to provide guidelines for ensuring that buffering, landscaping, lighting, signage, and proposed structures are consistent with and of a quality that contributes to Warren County's character. The County currently has Route 340/522 North designated as a highway overlay district, as well as Route 55 East. Future land development within the Highway Corridor Plan areas should be approved by the Planning Commission.



Riverton Commons Shopping Center

Other routes may be established in the future as necessary. The County's Highway Corridor standards were developed to:

- Increase landscaping requirements to provide for a mix of plantings and screening of buildings and parking areas from view.
- Establish special standards for signage height, design, size, materials, and lights to maintain and enhance visual qualities.
- Establish special standards for building materials to maintain and enhance visual qualities and reflect the history of the area in new development.
- Preserve existing trees, wooded areas, and natural features, except as necessary for location of improvements.
- Utilize landscaping to soften lighting and signage impacts and to create distinct site entrances.
- Encourage the use of service roads and interparcel connections to minimize access points onto major roadways.

Designate scenic easements along corridors with significant natural views or vistas. The Highway Corridor Plan is intended to implement the comprehensive plan's goal of protecting Warren County's natural beauty and rural character as well as to preserve and protect its corridors.

Goals & Objectives

Goal: To maintain a highway corridor overlay Plan for Route 340/522 North and Route 55 East and to develop a highway corridor plan for Route 55 West, Route 340 South, and Route 619.

Objective:

- A. Maintain our County's highway overlay district ordinance, which includes landscaping regulations, protection of significant views and vistas, minimum architectural guidelines, and controlled access points along these roads.
- B. Ensure the maintenance of buildings and landscaping in the highway overlay districts.
- C. Coordinate corridor transportation plans.

Implementation

Agency Participation - Work with the Virginia Department of Transportation and transportation consultants on corridor plans to develop the overall framework.

Summary

There are major highways and roadways throughout Warren County that the Plan has designated as important corridors where access and aesthetics should be controlled in order to either avoid unappealing forms of commercial strip development and resultant traffic congestion, or to preserve scenic rural views. Both of these objectives have great merit for the maintenance and improvement of Warren County's rural character.

Section 11: Urban Development Areas

Background

Every locality that has had a population growth of 15% or more from the next-to-latest to the latest decennial census year is required to designate at least one Urban Development Area (UDA) in the Comprehensive Plan by July 1, 2011. The requirements for Urban Development Areas are found in Section 15.2-2223.1 of the Code of Virginia. A UDA is an area designated by a locality that is appropriate for higher density development due to its proximity to transportation facilities, the availability of a public or community water and sewer system, or a developed area. The UDA is required to provide for residential development at a minimum density of at least four single-family residences per acre and to provide for commercial development at an authorized floor area ratio of at least 0.4 per acre.

According to the U.S. Census, the County had a population of 31,584 in the year 2000. By 2010, the County's population was 37,439, which represents a population increase of 18.54% and therefore does meet the growth threshold required to designate an Urban Development Area in the Comprehensive Plan.

The calculations below establish the minimum area required for UDA designations in Warren County to accommodate projected development for the ten year period from 2010-2020.

Residential Calculations

Utilizing projections from the Virginia Employment Commission, 2.57 persons per household, and a projected population increase of 6,931 over the next ten years, Warren County must accommodate 2,696 new dwellings in UDA's. At a minimum density of 4 units per acre, there is a need for 674 acres to be designated. It is important to note that new population projections from the 2010 Census numbers should be released by the Virginia Employment Commission in late 2011.

Table 4.3 Minimum Area Required for UDA Designations (Residential)

Year	Population Projections*	Housing Units needed to accommodate population growth	Acreage needed to accommodate housing units (4 units per acre)
2000	31,584		
2010	38,791	2,804 units (2000-2010)	
2020	45,722	2,696 units (2010-2020)	674

*Source: 2000 data from US Census, 2010 and 2020 data from Virginia Employment Commission

Commercial Calculations

Based on a ratio of the County’s projected 2010 population to existing commercial/office space square footage in 2010, the following is assumed:

4,762,708 sq. ft. - 4,003,773 sq. ft. = 758,935 sq. ft. of commercial required

Floor Area Ratio (FAR) of 0.4 = 17,424 sq. ft. per acre

758,935 sq. ft. / 17,424 sq. ft. per acre = 43.6 acres

Based upon the calculations above, 43.6 acres of commercial development at a FAR of 0.4 would accommodate projected commercial growth for the next ten years.

Table 4.4 Minimum Area Required for UDA Designations (Commercial)

Year	Population Projections*	Current Commercial Square Footage Existing in the County**
2010	38,791	4,003,773
2020	45,722	4,762,708

*Source: 2010 and 2020 data from Virginia Employment Commission

**2020 projected from comparison of current ratio of commercial square footage to population

UDA Criteria

The specific criteria to be considered when designating a UDA includes:

- Proximity to a city, town, or other developed area.
- Proximity to transportation facilities.
- Availability of a public or community water and sewer system.

The Urban Development Area is required to incorporate principles of new urbanism and traditional neighborhood design. The following concepts should be included in the design of the UDA where determined as appropriate by the locality:

- Connectivity of road networks, including connectivity of new local streets with existing local streets.
- Connectivity of pedestrian and trail networks.
- Pedestrian and bicycle friendly road design.

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- Mixed-use neighborhoods, including mixed housing types.
- Parks and open space.
- Clear edges between the rural areas and the built environment.
- Site planning that respects terrain.

Urban Development Areas located within the Town of Front Royal

The Code of Virginia, Section 15.2-2223.1(F) states that, “any county that amends its comprehensive plan pursuant to this section may designate one or more urban development areas in any incorporated town within such county, if the governing body of the town has also amended its comprehensive plan to designate the same areas as urban development areas with at least the same density designated by the County”.

The Town of Front Royal has worked with the County to allow areas within the Town limits to be designated as urban development areas. All proposed urban development areas are located within the Town limits. These areas are shown on the following map and are identified in the Town of Front Royal’s Comprehensive Plan as well. UDA’s must be shown in each Comprehensive Plan. The Plans shall act as a guideline, but zoning decisions shall remain at the discretion of the Town of Front Royal Town Council for land within the Town boundaries and the Warren County Board of Supervisors for land outside of the Town limits.

Goals & Objectives

Goal: Comply with the State’s requirement for the designation of urban development area’s while ensuring that the County and Town’s unique sense of community is maintained and continues to prosper.

Objectives:

- A. Incorporate neighborhood concepts into proposed developments within the urban development areas which includes, but is not limited to, walking and bicycle trails and parks and open space.
- B. Development in these areas shall address fiscal impacts to the Town and County in order to not hinder services or result in a negative fiscal impact to the community.
- C. Direct new development to the urban development areas.

Summary

To accomplish the State requirement for certain localities to designate urban development areas, the County has worked with the Town of Front Royal to identify the required acreage sufficient to satisfy projected growth of ten years. The required future residential acreage of 674 acres and future commercial of 43.6 acres is located within the Town of Front Royal limits. The commercial areas are identified as two of the Town’s existing shopping centers, which could qualify for re-development through this UDA

designation. As shown from the calculations, the growth which could be accommodated within the UDA's is sufficient to absorb a projected ten years worth of development.

Chapter Summary

The Land Use and Growth Management section of the Plan represents an attempt by the County to channel most of its future residential, commercial, and industrial development into and around existing Village Centers and should help to preserve Agricultural lands from development pressures. Existing neighborhoods should be recognized and protected by the creation of Neighborhood Protection Districts. The aesthetic and functional characteristics of County roads should be preserved within the Highway Corridor Districts. The location of the districts would be the basis for County zoning classification structuring. The intent being to frame land use controls and development performance standards consistent with each district.

The Future Land Use Plan (**Map 4.2**) proposes to guide development to those undeveloped areas where public facilities are in place or planned, while reducing developmental pressures in those areas where facilities cannot be provided as efficiently. The Plan channels future anticipated growth into a more harmonious and efficient pattern consistent with community goals and objectives.