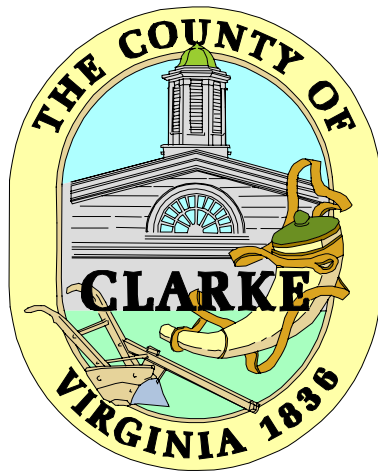


2007 Clarke County Comprehensive Plan



Adopted
2007
March
20

“A plan serves a public body much as a promise serves an individual. If we make a promise, others expect that we will honor it with our actions.”¹

FOREWORD

Comprehensive planning seeks to understand and shape the future effects of current problems and decisions. Rather than being concerned with what may need to be done later, it employs what needs to be done now to affect the concerns and challenges of today. Comprehensive long-range planning and current operations may appear to be separate functions. In actuality, they are fused into a single part of the entire dynamic planning process, and they both begin today.

Clarke County has many cultural, historical, and natural attributes that make it an attractive place in which to live. This Comprehensive Plan is designed to protect and enhance attributes that contribute to the rural and agricultural character of the County, while it accommodates additional people and businesses primarily in the designated growth areas.

The purpose of this plan is to help guide land-use decisions, both public and private, as they relate to the specific goals of the County. The Plan is for the citizens of the County and, for this reason, considers many diverse interests. It cannot satisfy every citizen's particular interest but does provide a mechanism for the protection of the health, safety, and welfare of all County citizens. Most importantly, it provides an outline for future decisions on land use, natural resource protection, capital improvements, and economic growth in a fair and equitable manner.

The laws of the Commonwealth of Virginia require all counties to adopt comprehensive plans and to update those plans at five-year intervals. This enabling legislation is outlined in the Code of Virginia, Title 15.1, Article 4, Section 446.

Clarke County adopted its initial Comprehensive Plan on June 15, 1974. The Plan was updated in August 1974, September 1980, March 1988, August 1994, and March 2001. The guiding principles of the 2001 Plan were managing residential growth, protecting agricultural land, protecting environmental and cultural resources, and encouraging business activity to broaden the tax base, particularly businesses related to agriculture. These principles remain the focus of this updated Plan.

Specific topical issues and geographic areas also require specific study. Plans for such topics and areas are treated as implementing components of this Comprehensive Plan's Goals, Objectives, and Policies. These implementing components are presented in this Plan in the following order: Agricultural Land Plan, Mountain Land Plan, Berryville Area Plan, Business Intersections Area Plans, Water Resources Plan, Historic Resources Plan, and Capital Improvement Plan (all available under separate cover). Effective implementation of the Comprehensive Plan rests on these component plans.

This Comprehensive Plan is a document first and foremost for the citizens of Clarke County. It is designed to protect and enhance the quality of life and sense of community valued by the people who have chosen to live and work here.

¹*Charles Hoch, Linda C. Dalton, and Frank So, eds.*
The Practice of Local Government Planning, 3rd Edition
Washington, DC: International City/County Management Association, 2000, p. 32.

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CHAPTER II

Goals, Objectives, and Policies

CHAPTER II

GOALS, OBJECTIVES, AND POLICIES

The Clarke County Comprehensive Plan is a clear expression of the desires and aspirations of the people of Clark County, in cooperation with the incorporated towns of Berryville and Boyce, for the future use of land in the unincorporated areas of the County. This plan endeavors to shape the future physical development of the County through the adoption of and adherence to goals, objectives, and policies. It is not a series of formulated requirements that map a rigid image of the future.

Goals describe the future of Clarke County in general terms. They are long-term expectations and aims that all subsequent planning activities seek to achieve.

Objectives are the general statements that describe the County's intended planning actions. Somewhat more specific than goals, they help to achieve the goals.

Policies are the most specific statements for each of the planning objectives. They help guide individual future land use decisions. Policies are needed so that decisions pertaining to a specific land area can be made in the context of the system of policies for all land areas. They provide the rationale for land use decisions.

Policies also make the entire land use decision process more visible and understandable to the public. They encourage and facilitate citizen involvement by shifting attention from details and specific proposals to the more essential characteristics of the future community. They help to ensure that decisions affecting the future development of the County will be made from a common reference point.

GOALS

The goals for land use planning in Clarke County are to:

1. Preserve and protect the agricultural, natural, and open-space character of unincorporated areas;
2. Enhance town, village, and commercial areas, thus improving the quality of these communities;
3. Encourage and maintain a diverse and viable local economy compatible with the County's size and character; and
4. Provide for the economical delivery of necessary public services consistent with these goals.

Objectives

Objective 1.

Encourage agricultural operations and productivity and ensure the preservation and availability of agricultural lands for the continued production of crops and livestock through the following policies and the Agricultural Land Plan.

Policies

1. Promote and protect agriculture as the primary use of land in rural areas and inform the public of benefits of this policy.
2. Support a vigorous agricultural development program in the County that emphasizes exploration and development of markets for Clarke County agricultural products, encourages cooperation with individual agricultural interests within the County, and establishes liaisons with counties in the area that have similar development programs.
3. Upon requests for land use changes to nonfarm use, provide a fair and equitable evaluation using the Agricultural Land Evaluation and Site Assessment (LESA) System to assess accurately the suitability of land for continued agricultural use (this system scores the soils and physical conditions of a parcel for agricultural use).
4. Make land use decisions and plans that are consistent with LESA ratings and approve conversion of important farmland to nonfarm use only if an overriding public need exists to change the land use and the existing development areas cannot accommodate the new use.
5. Encourage the use of best management practices as outlined in the Chesapeake Bay Regulations and as determined by federal TMDL program to improve water quality by:
 - a. Making technical assistance available;
 - b. Promoting public awareness on the benefits of, and necessity for, best management practices, erosion and sedimentation controls, storm water management and Chesapeake Bay Preservation Regulations;
 - c. Assisting in the establishment of conservation plans for all farms adjacent to perennial streams;
 - d. Encouraging the participation of all landowners engaged in agricultural activities to use the assistance of the Virginia Cooperative Extension Service, the Natural Resource Conservation Service, the Lord Fairfax Soil and Water Conservation District, and other public agencies.
6. Provide limited, low-density residential opportunities in unincorporated areas in a manner compatible with agricultural activities in the area of the county west of the Shenandoah River. Such residential development:
 - a. Should not be less than an overall average density of 18 acres per dwelling for this area;
 - b. Should not be located on Important Farmland, as determined by the County's Land Evaluation and Site Assessment (LESA) rating system;
 - c. Should be on a minimum area sufficient to provide proper placement of a dwelling, related accessory structures, well, and septic system;

- d. Should be located in or substantially bounded by natural or cultural features, such as wooded areas or other permanent vegetated areas, railroads, public roads, or surface waters that would buffer them from agricultural lands;
 - e. Should be compatible with the environmental features of that land and should not diminish natural and scenic values; and
 - f. Should respect environmental limitations and protect natural features during and after the development process.
7. To the maximum extent possible, separate nonagricultural land uses from agricultural lands and operations. Where nonagricultural operations are adjacent to agricultural operations, the nonagricultural operations should provide buffering in the form of fencing, landscaping, and open space, and by inclusion of the right-to-farm warning notice within the deed of dedication.
 8. Discourage extension of public utilities and other growth-inducing public facilities into agricultural areas and land under permanent conservation easement.
 9. Encourage all government agencies to consider the impacts that their programs and projects may have on maintaining the availability and use of agricultural land and encourage them to eliminate or minimize adverse impacts.
 10. Promote and support the renewal and expansion of the Clarke County Agricultural District, by providing information on its benefits and incentives to associated farmland owners and farm organizations.
 11. Use the Land Evaluation and Site Assessment (LESA) System for the objective and consistent evaluation of applications for additions to the Clarke County Agricultural District.
 12. Encourage and facilitate the donation of open-space and conservation easements on land that meets the criteria of the U.S. Internal Revenue Service for easement donation and that is identified as having important scenic, historic, open-space, conservation, agricultural, or wildlife-habitat qualities.
 13. Support use-value taxation and other fiscal programs that help to alleviate economic burdens on owners of land used for agricultural, horticultural, forest, or open-space purposes (Code of Virginia, Section 58.1-3230, as amended). Continue to use land use planning to protect agricultural land from escalating assessments as a result of development pressures.
 14. Consider the use of innovative land-conserving techniques, such as transfer of development rights.
 15. Encourage and expand support for the Conservation Easement Purchase Program, both philosophically and financially, to retain land essential to agriculture and to encourage its agricultural use.

Objective 2.

Preserve the natural beauty and protect the ecology of forested areas to ensure that development in those areas is in conformance with their environmental limitations through the following policies and the Mountain Land Plan.

Policies

1. Promote multiple uses of forested land that are nonintensive and compatible, such as outdoor recreation, wildlife habitats, watershed protection, and timber harvesting.
2. Ensure that timber harvesting is conducted in accordance with Chesapeake Bay protection standards and an approved forest management plan for each site so that sedimentation of streams and other environmental impacts are minimized.
3. Encourage the use of best management practices as outlined in the Chesapeake Bay Regulations and as determined by federal TMDL program to improve water quality by:
 - a. Making technical assistance available;
 - b. Promoting public awareness on the benefits of, and necessity for, best management practices, erosion and sedimentation controls, stormwater management and Chesapeake Bay Preservation Regulations;
 - c. Assisting in the establishment of conservation plans for all farms adjacent to perennial streams; and
 - d. Encouraging the participation of all landowners engaged in forestal activities to use the assistance of the Virginia Department of Forestry, the Natural Resource Conservation Service, the Lord Fairfax Soil and Water Conservation District, and other public agencies.
4. Provide limited, low-density residential opportunities in unincorporated areas in a manner compatible with forestal activities in the area of the county east of the Shenandoah River. Such residential development:
 - a. Should not be less than an overall average density of 12 acres per dwelling for this area;
 - b. Should be on a minimum area sufficient to provide proper placement of a dwelling, related accessory structures, well, and septic systems;
 - c. Should not be located on steep slopes, slippage soils, or ridgelines;
 - d. Should recognize the fragile nature of the soils and slopes, understanding that trees protect these features from erosion and clearing should be limited;
 - e. Should be compatible with the environmental features of that land and should not diminish natural and scenic values; and
 - f. Should respect environmental limitations and protection of natural features during and after the development process.
5. Promote the placement of conservation easements on lands adjoining or visible from the Appalachian National Scenic Trail and the Shenandoah River and protect the scenic value of those lands when making land use decisions and plans.

6. Encourage and expand support for the Conservation Easement Purchase Program, both philosophically and financially, to protect forested areas for their value as natural habitat and as a buffer to the Appalachian National Scenic Trail.

Objective 3.

Protect natural resources, including soil, water, air, scenery, wildlife habitats, and fragile ecosystems through the following policies, the Water Resources Plan, and other adopted policies.

Policies

1. Prohibit land uses that have significant adverse environmental impacts, recognizing especially the interrelationships among natural resources, especially between ground and surface waters in Karst topography.
2. Ensure that adverse environmental impacts of activities directly or indirectly related to construction are minimized. Require effective mitigation when impacts occur, including removal of vegetation, cutting of trees, altering drainage ways, grading, and filling.
3. Strengthen, implement, and enforce the Erosion and Sedimentation Control Ordinance.
4. Manage and protect floodplains by:
 - a. Allowing only nonstructural open-space uses that are least subject to loss of life and property damage in the 100-year floodplain.
 - b. Enforcing floodplain management regulations so that residents continue to be eligible for flood insurance under the National Flood Insurance Program.
 - c. Prohibiting installation of drain fields in the 10 year floodway
 - d. Limiting use of drain fields within the 100 year floodplain.
5. Recognizing that the Shenandoah River is a state-designated Scenic River and is one of the County's significant environmental resources, provide for its protection by:
 - a. Cooperating with state agencies in developing a river corridor management plan.
 - b. Limiting development within the River's 100-year floodplain.
 - c. Promoting the placement of conservation and scenic easements on lands within view from the River and seeking to protect the scenic value of those lands when land use decisions and plans are made.
 - d. Establishing 'no wake zones' for motorized boats in order to reduce bank erosion, protect canoeists and other recreational users, and minimize noise levels.
 - e. Considering the establishment of a regional or local Shenandoah State Scenic River Advisory Board.
6. Protect local and regional water resources through application of the Chesapeake Bay Management Regulations to environmentally sensitive areas such as perennial streams, floodplains, wetlands, steep slopes, and highly erodible soils.
7. Identify and inventory environmentally significant land suitable for the preservation and conservation of natural resources and implement applicable use-value taxation for such lands as "real estate devoted to open space use" (Code of Virginia, Section 58.1-3230). Such real estate

includes parcels of at least five acres adjacent to designated scenic rivers, designated scenic highways, registered historic structures, as well as under permanent open space easement, and lying within the 100-year floodplain, or wetlands.

8. Ensure that public facilities and utilities are adequate, development impacts are assessed, sufficient buffering is provided for adjacent land uses, and groundwater is completely protected in the review of requests for new or expanded mining, oil, or gas-drilling operations.
9. Promote the placement of scenic easements on lands adjoining or visible from roads designated as Scenic Byways and protect the scenic value of those lands when making land use decisions and plans.
10. Establish specific performance guidelines to include riparian buffers for Chesapeake Bay Resource Protection and Resource Management Areas regarding land use and development related activities.
11. Promote the concept of linear greenways to link natural features, wildlife corridors, cultural and scenic resources, such as designated scenic rivers, designated scenic highways, registered historic properties, permanent open-space easements, and the Appalachian Trail.
12. Encourage and expand support for, the Conservation Easement Purchase Program, both philosophically and financially, to protect natural resources important to preserving soils, water sheds, air and water quality, scenery, and natural habitats.
13. In response to requests for rezoning land for more intensive use, encourage the placement of land use easements on important scenic, historic, open-space, conservation, agricultural, or wildlife-habitat lands as a component of the rezoning actions.
14. Ensure that the natural and/or cultural features of properties held in recorded Conservation Easements and state designated scenic rivers are protected when reviewing land use decisions, such as rezoning, special use site plan, and subdivision requests on adjacent properties.
15. Support Watershed Management Planning for each perennial stream and consider any watershed management plan a factor in making land use decisions.
16. Take all appropriate steps to protect public water sources, such as the Shenandoah River serving the Town of Berryville, and the Prospect Hill Spring serving the Town of Boyce and the communities of Millwood, Waterloo, and White Post.
17. Support Shenandoah Basin Regional Water Planning efforts.
18. Utilize USGS Groundwater Study findings when evaluating proposed changes in land use.
19. Implement the adopted County ordinance requiring five-year pump out of septic systems.
20. Recognize that karst terrain underlies the majority of the Shenandoah Valley and that

groundwater in these areas is highly susceptible to contamination.

Objective 4.

Encourage sustainable development by conserving energy and protecting the environment through sound planning, so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs.

Policies

1. Encourage energy efficiency when making decisions affecting County operations.
2. Encourage the use of active and passive solar systems and develop provisions that protect solar access for owners of existing and new buildings.
3. Encourage reusing and recycling materials, including a recycling program.
4. Encourage a regional reduction in single occupant vehicles (SOVs) through mechanisms such as ridesharing, public transit, and carpools.
5. Encourage and publicize programs to develop siting and design criteria that promote energy conservation for public buildings, schools, and other facilities.
6. Consider environmental impacts when purchasing, recycling, and disposing of products.
7. Conduct periodic audits of County facilities to ensure energy efficiency.
8. Encourage use of Low Impact Development (LID) techniques that help manage stormwater in an environmentally sensitive manner.
9. Establish performance standards that include: retention of vegetation, minimal site disturbance, and reduction of nutrients and sediment in post-development stormwater.

Objective 5.

Conserve the County's historic character and its historical and cultural resources, including historic sites and structures, archaeological features, and man-made landscape features for the aesthetic, social, and educational benefits of present and future citizens through the following policies and the Historic Resources Plan.

Policies

1. Encourage and assist property owners to pursue State and National Register designation, either individually or through thematic nominations.
2. Encourage and assist property owners to place scenic easements voluntarily on lands associated with historic buildings, sites, districts, and archaeological resources representing all historical time periods and cultures present in the County. Particular focus should be given to those resources listed on the National Register of Historic Places.
3. Encourage and assist property owners to find adaptive reuses for their historic structures.
4. Establish and protect state and national historic districts, especially in rural areas, to recognize officially their historical significance and value.

5. Support the establishment of County historic overlay districts to protect recognized properties and areas of historic and archaeological value and to ensure that new nonresidential development along access corridors leading to historic areas will be compatible and harmonious with such historic areas.
6. Ensure that proposed development in County historic overlay districts is compatible with the historic architectural, landscape, or archaeological attributes of nearby or adjoining properties, neighborhoods, and districts, and that it does not disturb archaeological resources on the development site. Encourage proposed development elsewhere to be compatible and not disturb the historic resources described above and not infringe on scenic values of land associated with these resources.
7. Consider historic/archaeological resources that have been surveyed and documented when reviewing land-use decisions, such as rezoning, site plan, and subdivision requests.
8. Review and update the 1994 "Clarke County Archaeological Assessment: Historical Character of the Lower Shenandoah Valley" and include more specific recommendations to ensure protection of archaeological resources, focusing on the sites of pre-historic indigenous peoples.
9. Promote community awareness and public education by developing and presenting video presentations, seminars, slide lectures, and written information regarding tax incentives, designation procedures, design guidelines, and appropriate rehabilitation guidelines. In addition, prepare a book on the historic resources of the County to acquaint the general public with the County's rich cultural heritage. These activities should have the objective of informing property owners and residents of the value historic preservation adds to planning for and using their properties and community.
10. Incorporate historic resources in comprehensive efforts to promote tourism in the County by aiding in the development of a promotional brochure, a local historic-plaque program, and self-guided driving tours.
11. Develop innovative ways to protect and promote the economic and cultural importance of historic and archaeological resources.
12. Continue to map 18th- and 19th-century road traces.
13. Revise the Historic District section of the Zoning Ordinance to address the issue of demolition by neglect.
14. Continue to research and document the history of African-Americans and their contribution to the history of the County.
15. Encourage owners of eligible properties to convey historic preservation easements as a tool for protecting these properties.
16. Encourage and expand support for the Conservation Easement Purchase Program, both

philosophically and financially, to protect historic resources, to maintain community character and identity, and encourage the tourism industry.

Objective 6.

Enhance the quality, identity, and appearance of established villages, such as Millwood, Pine Grove, and White Post.

Policies

1. Protect private and public water sources serving these areas.
2. Protect the cultural and economic identity of these communities.
3. Encourage the preservation, renovation, and restoration of existing structures.
4. Encourage economic development and revitalization of these communities through innovative uses of existing structures.
5. Encourage employment opportunities for residents of these communities through the promotion of businesses consistent with the character of these communities.
6. Encourage upgrading of existing substandard housing in these communities.

Objective 7.

Encourage residential, commercial, and light industrial development in designated growth areas to implement the principles of 1) preserving open space, farmland, natural beauty, cultural features, and critical environmental areas (as stated on objectives 1 through 5), and 2) improving the quality of life and services in existing towns and direct development towards these existing towns. Provide for nonresidential business development at the intersections of two or more federally-designated primary highways (U.S. Routes 50/17 and 340 and U.S. Routes 340 and 522) through the following policies, the Berryville Area Plan, the Waterloo Area Plan, and the Double Tollgate Area Plan.

Policies

1. Continue to designate the Town of Berryville and certain areas adjacent to the Town as the Berryville Growth Area. The boundaries and uses for this growth area are defined by the Berryville Area Plan. The boundaries of the adopted Berryville Area Plan should not be expanded until the land area addressed by the Plan is substantially developed.
 - a. Direct urban and suburban uses that require water and sewer service, including residential, commercial, and light industrial development, to this growth area where they can be served conveniently and economically by available public facilities and services. These uses include schools, parks, water and sanitary sewer, storm-water drainage, roads, police, fire, and emergency services.
 - b. In this growth area, provide for the construction, rehabilitation, and maintenance of affordable housing, meeting the needs of current and future households with incomes at or below the County median.

2. Apply the following land-use and design principles to development in the Berryville Growth Area:
 - a. Provide for a mixture of complimentary land uses;
 - b. Create a range of housing opportunities and choices, including an appropriate level of affordable housing;
 - c. Create walkable neighborhoods;
 - d. Encourage a variety of transportation choices;
 - e. Promote compact, efficient land use and building design that maximizes green space and minimizes road and utility costs; and
 - f. Foster distinctive and attractive communities with a strong sense of place.
3. Continue to coordinate and cooperate with the towns of Berryville and Boyce to implement effective policies to provide for residential and business development compatible with the established character of these towns.
4. Promote business activities at the intersections of two or more federally designated primary highways: Waterloo (U.S. Routes 50/17 and 340) and Double Tollgate (U.S. Routes 340 and 522) through provision of public water and sewer services and provision of additional areas zoned for business uses. An area plan should be prepared before any commercial rezoning action to identify: 1) the specific boundaries and mixes of uses, 2) the way public services are to be provided, and 3) the way proposed activities will be integrated with surrounding uses, especially agricultural, residential, and parcels held in permanent conservation easement. The boundaries of the adopted Waterloo and Double Tollgate Area Plans should not be expanded until the land area addressed by the Plans is substantially developed.
5. Encourage the use of best management practices as outlined in the Chesapeake Bay Regulations and as determined by federal TMDL program to improve water quality and minimize runoff impacts that could be caused by development of the Berryville Growth Area and at primary highway intersections.
6. Ensure that land-use decisions do not allow urban and suburban forms of development to occur in designated growth areas unless and until such time as public facilities and services commensurate with such development either are available or are programmed with a plan for cost recovery.
7. Consider the planning goals, principles, and policies of incorporated towns in designating growth areas, make provisions for public utility services, and, where feasible, undertake joint or coordinated action with town governments, independent county authorities, and other regional entities.
8. Amend the County zoning district map to replace existing industrial, commercial, and residential zoning districts on parcels of land that are not developed with such uses and either are not within designated growth areas or at the intersection of two or more federally-designated

primary highways. Replace the current zoning designations with zoning districts that more closely conform to actual use and are compatible with adjacent zoning and land uses.

9. Consider the use of innovative land-conserving techniques, such as transfer of development rights.

Objective 8.

Encourage economic growth that is compatible with the County's environmental quality, rural character, and residential neighborhoods, and that provides a positive net cash flow for County finances.

Policies

1. Direct the location of nonpolluting business and light industry to designated growth areas as allowed by the adopted plans for those areas.
2. Ensure that high-quality design standards, including well-designed landscaping, are applied to site plans for business and industrial development.
3. Promote types of economic development that are consistent with and build upon the County's existing uses and character, including; but not limited to:
 - a. Tourism and the land uses that would benefit from it;
 - b. Agricultural businesses;
 - c. Agriculturally related businesses; and
 - d. Equine related services.
4. Protect and enhance the environmental resources of the County, recognizing that they can serve as an attraction to business and industry.
5. Encourage the attraction of business activities that promote the vertical and horizontal integration of existing industrial and commercial activities in the County, particularly active farming and forestry operations.
6. Promote the use of existing or new buildings in commercially zoned areas for use as small business incubators.
7. Direct nonneighborhood commercial and nonagricultural business and light industry not dependent on site-specific factors into existing commercial centers or designated growth areas as allowed by the adopted plans for those areas.
8. Ensure that new commercial development and redevelopment of existing agricultural, commercial, and light industrial uses occur according to the following:
 - a. Does not impede traffic flow on roads and/or overload intersections;
 - b. Is not and does not initiate strip development, which creates traffic hazards and inefficient land use, but which can instead be clustered now or in the future with other development served by controlled access and frontage roads;
 - c. Is accessible to public transportation systems, such as roads, railroads, and regional airports;
 - d. Meets all applicable zoning- and building-code regulations and all standards for water, sewage disposal, and waste disposal needs; and;

- e. Does not have a negative impact on adjacent property values.

Objective 9.

Ensure the provision of capital improvements in a manner consistent with the land-use objectives of the County through the following policies, the Transportation Plan, and the Capital Improvements Program.

Policies

1. Prohibit the extension of capital improvements into agricultural areas that would be subjected to increased development pressures by such extensions.
2. Carefully assess the short- and long-range fiscal impacts of necessary capital improvements, such as roads, schools, and water and sewer service, when land-use decisions and plans are made.
3. Provide school facilities that will enable the School Board to achieve its premise that all children will learn at high levels and support its priorities to:
 - a. Obtain, educate, and retain a dedicated staff;
 - b. Provide challenging opportunities for students and support them in pursuing these challenges;
 - c. Vigorously pursue community support and involvement; and
 - d. Foster an innovative environment within the school system.
4. Ensure that the County's administrative, court, and library facilities are located, designed, and constructed in compliance with legal requirements. Facilities should provide access and service in a manner that minimizes the time, effort, and expense to the individual and the County. New construction should, where economically feasible, maximize use of existing facilities. Available technology should be reviewed and, where possible, technological improvements should be used to minimize the need for additional space.
5. Provide wholesome diverse recreational opportunities of good quality for all citizens throughout Clarke County with safe and good quality recreation facilities that meet the changing needs of the community, are designed to be self-sufficient, and foster development of mutually beneficial partnerships. Recreation areas should be included in new development projects. These areas and should be provided by the project developer and designed to meet all county standards and safety regulations.
6. Ensure that public police, fire, and other emergency services provide the highest level of citizen protection within the fiscal resources of the County.
7. Provide or permit Waterworks* and Sewerage System & Treatment Works** only as described in the following policies, to ensure consistency with the land-use policies stated in Objectives 1, 2, 3, 5, 6, and 7.
 - a. Coordinate with the Towns of Berryville and Boyce in their activities to provide

Waterworks and/or Sewerage System & Treatment Works on land within Town limits and areas that the County agrees should be annexed to the Towns;

- b. Provide septage treatment facilities through the Clarke County Sanitary Authority to meet the County's water resource and environmental protection objectives;
- c. Provide Waterworks and/or Sewerage System & Treatment Works, through the Clarke County Sanitary Authority (as specified in Objective 5, Policy 2), at property owner expense, for existing concentrations of residential development where a significant health threat has been identified by the Clarke County Health Department. Any applicable grant or low-interest loan program should be pursued to assist in paying for the construction of such facilities; and
- d. Provide Waterworks and/or Sewerage System & Treatment Works, through the Clarke County Sanitary Authority (as specified in Objective 6, Policy 3), at property owner expense, for business uses at the intersection of two or more federally designated primary highways and/or state designated limited access primary highways, specifically: Waterloo (US Routes 50/17 and 340) and Double Tollgate (US Routes 340 and 522). Any applicable grant or low-interest loan program should be pursued to assist in paying for the construction of Sanitary Authority facilities.

*Waterworks means a system that serves piped water for drinking or domestic use to (a) the public, (b) at least 15 connections, or (c) an average of 25 individuals for at least 60 days out of the year and shall include all structures, equipment, and appurtenances used in the storage, collection, purification, treatment, and distribution of pure water (except the piping and fixtures inside the building where such water is delivered).

**Sewerage System & Treatment Works means 1) Sewerage System: pipelines or conduits, pumping stations and force mains, and all other construction, devices, and appliances appurtenant thereto, used for the collection and conveyance of sewage to a treatment works or point of ultimate disposal, and 2) Treatment Works: any device or system used in the storage, treatment, disposal or reclamation of sewage or combinations of sewage and industrial wastes, including, but not limited to, pumping, power, other equipment and appurtenances, septic tanks, and any works (including land) meeting the definition of a Mass Drainfield, that are or will be (a) an integral part of the treatment process or (b) used for ultimate disposal of residues or effluent resulting from such treatment. This term does not include Subsurface Drainfields not defined as Mass Drainfields.

8. Permit, in cooperation with the Clarke County Sanitary Authority, the construction of septage and sewage treatment facilities, in accord with the three previous policies. These facilities should be financed solely by the fees charged to the users of the facilities and should use innovative, cost-effective technology consistent with environmental protection policies, such as water recycling/land application systems.
9. Prohibit alternative sewage treatment methods for residential development, except for existing dwelling units where septic systems have failed and the Health Department establishes that repair of the existing systems or installation of conventional septic systems is not possible.
10. Maintain the existing primary road system at its present level and upgrade it only for safety purposes or planned traffic increases to the extent funds are provided by the Virginia Department of Transportation. Maintain the existing secondary road system at its present level and upgrade it only for safety purposes to the extent funds are provided by the Virginia Department of Transportation. Additional transportation planning policies may also be established in area plans for the County's designated growth areas.

Objective 10.

Protect and enhance the County's fiscal resources.

Policies

1. Evaluate all private development proposals as they relate to public utility and land-use plans.
2. Develop a means of consistent, objective, and accurate fiscal impact analysis for use in such evaluations.
3. Use the 2000 U.S. Census or more recent federal or state data in making land-use decisions and in planning capital improvements, unless more accurate projections are available and are duly adopted as amendments to this Comprehensive Plan.
4. Improve coordination among County departments in standardizing methods of financial calculation and projection.
5. Seek and consider additional fiscal tools by which the County may enhance its tax base.

Objective 11.

Encourage citizen involvement in the planning process.

Policies

1. Provide opportunity for citizens to participate in all phases of the planning process.
2. Require that all meetings involving preparing, revising, or amending the Comprehensive Plan be publicly posted and open to the public.
3. Meet or exceed all state requirements for public notice for meetings and freedom of information requests.
4. Ensure that information pertaining to the Plan and the planning process is available to citizens in an understandable form, including internet postings, newsletters, mailings, informational brochures, and announcements in newspapers and on radio to stimulate citizen involvement.
5. Encourage educational institutions, agencies, clubs, and special interest groups to review and comment on the Comprehensive Plan and implementing components.
6. Develop uniform interpretation, administration, and enforcement procedures for the implementing ordinances of the Comprehensive Plan.

Objective 12.

Achieve a balance between the property rights of individuals and the protection of the health, safety, and welfare of the public.

Policies

1. Ensure that policy development, implementation, and land-use controls are developed, administered, and enforced by the local government, the government closest to the citizen.

2. Ensure that the application of the Comprehensive Plan and its implementing ordinances does not constitute a taking as defined in the Fifth and Fourteenth Amendments of the U.S. Constitution.
3. Promote the philosophy that:
 - a. Land is a finite resource and not a commodity,
 - b. All citizens are its stewards, and
 - c. Its protection is of primary importance to each present and future citizen.

CHAPTER I

General Information

CHAPTER I

A. County Profile

Clarke County was formed in 1836 from Frederick County and was named for Revolutionary War hero George Rogers Clark. It remains primarily a rural, agricultural county, continuing a tradition begun in colonial times. The County is bounded on the east by Loudoun County and the crest of the Blue Ridge Mountains, on the west by Frederick County and the Opequon Creek, by Warren County to the south, and by Jefferson County, West Virginia, to the north.

Clarke County has an estimated 2005 population of 14,205 (US Census). Nearly three-fourths of the 174 square miles (111,360 acres) of the County is west of the Shenandoah River. The western section of the County contains the two incorporated towns, Berryville and Boyce. Located 10 miles east of Winchester and Interstate 81, Berryville, the county seat, has a population of 3,157 (2005) (Weldon Cooper, UVA). It is situated at the intersection of U.S. Route 340, Lord Fairfax Highway, and Virginia Route 7, Harry Byrd Highway. Boyce, with a population of 453 (2005) (Weldon Cooper, UVA), is located on U.S. Route 340, which runs north-south through the center of the County's agricultural area. U.S. Route 50, John Mosby Highway, runs east-west through the southern half of the County. Clarke County is 40 miles west of Washington Dulles International Airport, which provides easy access to both passenger and freight air service. Washington, D.C. lies 20 miles further to the east.

Clarke County's heritage and natural characteristics, combined with its recreational, cultural, and educational opportunities, make it an attractive place to live, work, and visit. The Shenandoah River runs south to north through the County, dividing the primarily forested and mountainous land in the east from the rolling agricultural lands in the west. Used as a major transportation route during the nineteenth and early twentieth centuries, the Shenandoah has been designated a State Scenic River by the Virginia General Assembly and is one of the state's outstanding rivers. The Appalachian National Scenic Trail runs the length of the County, providing 10 miles of hiking along the Blue Ridge Mountains. The State Arboretum of Virginia is located at the University of Virginia's Blandy Experimental Farm near Boyce. The County's Parks and Recreation Department offers a wide variety of recreational opportunities. More than 14% of the County (approximately 16,000 acres) is under permanent conservation easement, protecting permanently from virtually all development. Historic museums and public buildings include the Burwell-Morgan Mill (1782), the Clarke County Historical Association Museum, the Clarke County District Courthouse (1839), the Long Branch House and Farm Museum (1809), and the Josephine School Community Museum (1881). More than 30% of Clarke County is within five National Register historic districts, and the entire County is in the John Singleton Mosby Heritage Area. Self-guided driving tours of these historic areas are available.

MAPI.1 Regional Setting

MAP I.2 Major County Features

B. Geological Profile

The notable geological features of Clarke County are described below. They include geologic areas, relief, watercourses, soil types, and groundwater. All are to some degree manifestations of the County's geologic foundation, which dictates the nature of the topographic features and relief, the types of soils that occur, and the characteristics and locations of surface and underground water.

1. Geologic Areas

Map 3 shows the general geology of the northern Shenandoah Valley. Clarke County encompasses three geologic areas running south-north. From east to west, these zones are described as Blue Ridge, eastern lowland on carbonate rock, and central lowland on shale and siltstone.

a. Blue Ridge

The Blue Ridge geologic area lies east of the Shenandoah River and along the western slope of the Blue Ridge Mountains. It is composed primarily of metamorphic rock formed from igneous rock, originating as lavas and ash flows from volcanoes that were active some 600 million to 900 million years ago. Greenstone and purple slate from volcanic rock and sandstone from stream-carried sediments from older granitic areas located above the volcanic flows are common rocks of the Blue Ridge. Later, a Cambrian sea, whose marine deposits form the carbonate rock of the eastern lowland, covered the landscape.

b. Eastern Lowland on Carbonate Rock

The eastern lowland geologic area, from the Shenandoah River west to the Opequon Creek, constitutes three-quarters of Clarke County. Its carbonate-rock foundation varies but is primarily limestone and dolomitic limestone. Purest limestone is found on the western part of this area. Dolomitic limestone is found toward the east, along with lesser amounts of chert, sandstone, shale, siltstone, and mudstone. These sedimentary rocks, formed as sediments of mud or sand, were consolidated under shallow seas approximately 600 million years ago. They now constitute a 12,000-foot thick limestone and dolomitic-rock sequence that underlies the Shenandoah Valley. Areas that are underlain by carbonate rocks, such as limestone and gypsum, contain solution-enlarged sinkholes, conduits, and caves. These geologic features characterize what is called karst terrane. The generally high permeability of these rocks facilitates the infiltration and transport of contaminants from the land surface to the groundwater reservoir.

c. Central Lowland on Shale and Siltstone

The far western sliver of Clarke County is in the area described as the central lowland on shale and siltstone, which extends primarily across eastern Frederick and Shenandoah Counties and western Warren County. These are the youngest rocks remaining in Clarke County, deposited during the Ordovician Period over the older limestone of the eastern lowland. Low rounded hills, a large number of surface streams, a thin soil cover, and an abundance of shale chips characterize the central lowland.

MAP I.3 Geology of the Northern Shenandoah Valley

FIGURE I.1 Blue Ridge and Shenandoah Valley Rock Formations and Structures

2. Major Geologic Events

Two major geologic events, occurring after the rocks of the Blue Ridge and the eastern and central lowlands were formed, shaped the topography of Clarke County. The first, called the Appalachian Orogeny, occurred from 450 million through 225 million years ago when lateral pressures from the southeast caused a tremendous movement of the Earth's crust. Besides uplifting the Appalachian Mountains, this episode resulted in extensive folding, faulting, and fracturing of the previously fairly flat layers of rock (Figure 1).

The second and more recent major geologic event is the carving of the landscape by erosion, a process that continues today. Water is considered to be the eroding agent, as there is no evidence indicating glaciers extended into this area. The magnitude of the erosion is striking: rocks representing thousands of feet of sediment have been removed by erosion during the past one million years.

3. Relief

Relief, the difference between the highest and lowest points on the landscape, varies according to the underlying geology. In Clarke County, the granitic and volcanic rocks of the Blue Ridge have been highly resistant to erosion, but softer sedimentary rocks have eroded considerably. Thus, the County's relief ranges from 1,935 feet above sea level on the Blue Ridge to 360 feet at the Shenandoah River. In the eastern and central lowland areas, the average elevation is about 600 feet.

4. Watercourses and Watersheds

The major watercourses of Clarke County are the Shenandoah River and the Opequon Creek. Both are within the larger Potomac River watershed. The Shenandoah flows generally at the juncture of the Blue Ridge and the carbonate rock area found on the east side of the Shenandoah Valley. The main stem Shenandoah River watershed encompasses 352 square miles, from the confluence of the north and south forks at Front Royal to the confluence with the Potomac River at Harper's Ferry; 40% of this watershed is in Clarke County. The Shenandoah watershed covers 142 square miles (or 80%) of Clarke County. Similarly, the Opequon runs on the edge of the shale area located in the central area of the Valley, where it meets the carbonate rocks. The Opequon Creek originates in Frederick County, Virginia, and extends approximately 54 miles to its confluence with the Potomac River. It has a watershed of 344 square miles, with 10% of this watershed in Clarke County. The Opequon watershed covers 35 square miles (or 20%) of Clarke County.

Flooding of the Shenandoah River prompted the County, in 1960, to establish regulations governing land use within the 100-year floodplain and 10-year floodway. The Zoning Ordinance defines a 100-year flood as a flood that, on the average, is likely to occur once every 100 years (i.e., that has a one (1) percent chance of occurring each year, although the flood may occur in any year). A floodway is defined as the channel of a river, stream, or other watercourse and the adjacent land area required to carry and discharge a flood that, on the average, is likely to occur once every 10 years (i.e., that has a ten percent chance of occurring each year). These regulations restrict building, structure, and drainfield location in floodplains.

5. Soil Types

Climate, plants, and animals act upon parent rock material to turn it into soil. Clarke County

has three major soil areas: upland soils of the Blue Ridge, river terrace and floodplain soils of the Shenandoah Valley, and the upland soils of the Shenandoah Valley. Within these areas, there are 11 major soil groups, which are combinations of the various soil series. They are shown by number on Map 4 and discussed below. Percentages are given for the amount of area covered by each type.

a. Upland Soils of the Shenandoah Valley

The uplands in the Shenandoah Valley encompass most of Clarke County, including nearly all of the major population centers and most of the better farmland. Most of the soils were formed from sedimentary rocks.

Soil groups 2, 3, and 4 all have numerous rock outcrops and sinkholes. Low available water capacity, shallow rooting depth, and outcrops of limestone bedrock limit the use of machinery limit farming. Limitations for residential and community development include outcrops of limestone bedrock and numerous sinkholes and solution channels in the bedrock that may result in contamination of wells and springs by surface runoff and seepage from septic fields.

Soil groups 5 and 6 have numerous rock outcrops and sinkholes but are well suited to farming, mainly row crops, pasture, and apple orchards. Limitations for residential and community development include clayey subsoils with high shrink-swell potential and low strength. Permeability is moderately slow and should be considered when septic tank absorption fields are designed. Sinkholes and bedrock channels make the groundwater very vulnerable to pollution.

1. Berk-Endcav-Weikert (3%) is about 70% gently sloping to rolling and about 30% hilly to steep soils. These are shallow to deep, well-drained soils that have a loamy or clayey subsoil formed from materials weathered from shale or calcareous shale. The area is used mainly for pasture but includes some row crops (70%) and woodlands (30%). The soil has many limitations for farming, very low available water capacity, limited rooting depth, high acidity, low natural fertility, and coarse fragments on the surface. It also has many limitations for residential and community development.
2. Carbo-Opequon-Oaklet (9%) is about 35% nearly level and 65% gently sloping soils. These are shallow to deep, well-drained soils that have a clayey subsoil formed from materials weathered from limestone. This area is 85% cleared and used for pasture and row crops; 15% is wooded and generally too rocky for pasture.
3. Rock Outcrop-Opequon-Swimley (6%) is about 60% nearly level and 40% gently sloping soils. Areas of rock-outcrop that are characterized by shallow and deep, well-drained soils formed from materials weathered from limestone. The area is about 75% cleared for crops or pasture and 25% wooded.
4. Rock Outcrop-Hagerstown-Swimley (14%) is about 20% nearly level and 80% gently sloping soils. Characterized by areas of rock outcrop and deep well-drained soils that have a clayey subsoil formed from materials weathered from limestone. The area is about 65% cleared and 35% wooded.
5. Poplimento-Timberville (20%) is about 70% gently sloping and 30% rolling soils. These are deep, well drained soils formed from materials from interbedded limestone, shale, and colluvium. The area underlain by these soils is well suited to crops, orchards, and pasture.
6. Poplimento-Webbtown-Timberville (19%) is about 40% gently sloping, 45% rolling, and 15% hilly

soils. These are deep and moderately well-drained soils formed from materials from interbedded limestone, shale, and colluvium. These soils are well suited for crops, orchards, and pasture. There are limitations for development based on moderate shrink-swell potential, high clay content, and the presence of sinkholes.

b. River Terrace and Floodplain Soils of the Shenandoah Valley

These areas are mostly along the Shenandoah River and include some of the better farmland (in terms of soils) in the County. The soils here, groups 7 and 8, were formed from alluvium deposited by the Shenandoah River or from residuum weathered from adjacent uplands.

7. Monongahela-Braddock-Webbtown (4%) is about 50% gently sloping, 30% rolling, 10% hilly, and 10% steep soils. Many areas have gravel and cobblestones on the surface. The area is used mostly for woodland but has some areas well suited for farming. About half the gently sloping and rolling soils are cleared and now used for cultivated crops or pasture. The area has many limitations for residential and community development.
8. Chagrin-Udipsamments-Lobdell (2%) is nearly level land that is occasionally flooded and therefore severely limited for residential and community development. The area is well suited for farming. Most is cleared and used for cultivated crops or pasture.

c. Upland Soils of the Blue Ridge Mountains

The Blue Ridge is the roughest and steepest part of the County. It is mostly woodland and contains soil groups 9, 10, 11, formed from sedimentary and metamorphic rocks. These soils have limited potential for agriculture and residential development because of slope.

9. Dekalb-Laidig (10%) is about 10% gently sloping, 30% sloping, 30% hilly, and 30% steep soils. These are moderately deep or deep, well-drained soils formed from materials weathered from sandstone. There is a west, northwest, or north aspect to half of the area. The area is mainly forested, due to steep slopes and rocky substrate.
10. Cardiff-Cataska-Whiteford (5%) is about 15% gently sloping, 40% sloping, 35% hilly, and 10% steep soils. Soils are deep to shallow, well-drained and formed from materials weathered from phyllites and slates. There is a west, northwest, or north aspect to half of the area.
11. Catoctin-Myersville-Lew (8%) is about 25% sloping, 45% moderately steep, and 30% steep and very steep soils. Stones and boulders limit agricultural and residential development.

MAP I.4 General Soils

6. Soil Analysis for Potential Uses

The Clarke County Soil Survey (published 1982) included analyses made of the soils for various potential uses. The results of the analyses for two potential uses, conventional on-site sewage disposal systems (septic tank and drainfield) and agriculture, are discussed below. Included in the analysis were major soil and landscape features such as physical properties, slope, depth to rock, depth to water tables, stones and rock outcrops, soil productivity, and landscape relief.

a. On-site Sewage Disposal Systems

Almost 75 % of the land (83,297 acres) in Clarke County has severe limitations for on-site sewage disposal systems, according to the soil survey. Septic fields in this soil will result in excessively slow absorption of effluent, surfacing of effluent, and hillside seepage. However, due to the limited accuracy of the soil survey, there may be areas within those soils that are suitable for septic systems. Groundwater pollution can result if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if the slope is excessive, or if the water table is near the surface.

In the remainder of the County, about 6 % of the land (6,682 acres) has moderate to severe limitations for on-site sewage disposal systems, 14 % (15,590 acres) has moderate limitations, and 5 % has not been rated.

b. Agriculture

About 40% of the land in Clarke County is suitable for some type of cultivated farm crop. Best suited for agriculture are soil group 5, which forms a strip through the center of the County, and soil group 8, which includes the floodplain of the Shenandoah River. (Chapter III, Article 1, describes the Agricultural Land Plan, which contains a full discussion of agriculture in the County.)

In addition to the general soil classifications, the U.S. Department of Agriculture characterizes soil types in terms of important farmland. This classification recognizes areas important to agricultural production, with responsibility given to governing bodies, in cooperation with the USDA, for classifying farmlands within their jurisdictions.

1. Prime farmland is land that has the best combination of physical characteristics for the production of food, fiber, forage, oilseed, and other agricultural crops, with minimum inputs of fuel, fertilizer, pesticides, and labor and without intolerable soil erosion. Prime farmland includes land that possesses the above characteristics but is currently being used to produce livestock and timber. It does not include land already in or committed to urban development or water storage.
2. Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality or high yields of specific crops economically, when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruit, including grapes and apples, and vegetables.
3. Farmland of statewide importance is land other than prime or unique farmland that is of statewide importance for the production of food, feed, fiber, forage, or oilseed crops.
4. Farmland of local importance is land that is neither prime nor unique but is of local importance for the production of food, feed, fiber, forage, or oilseed crops.
5. Other is land that is usually of little or no importance to agriculture and includes all map units

not assigned to a higher class.

Clarke County further classified farmland types into categories described in Table 1 and shown on Map 5. These categories are used with the Land Evaluation and Site Assessment (LESA) system. The LESA system is a technique developed by the Soil Conservation Service (SCS), USDA, to evaluate the productivity of agricultural land and its suitability or non-suitability for conversion to nonagricultural use. The SCS assisted the County in developing the categories and implementing the system in 1982.

Table 1. Important Farmland Values of Soils*

<u>Group</u>									
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Prime (nonrocky)	Prime	Prime (rocky)	Statewide	Statewide	Local	Local	Local	Local	Other
<u>Acres</u>									
9,395	12,107	6,552	16,189	14,418	4,687	17,052	6,431	18,199	4,643

* Soil Survey of Clarke County, 1982.

7. Erosion & Sediment Control

The County adopted an Erosion and Sediment (E&S) Control Ordinance in 1990. The purpose of the Ordinance is to prevent the erosion of land and the deposit of sediment in waters in order to protect not only the County watersheds, but also the regional Chesapeake Bay watershed. This Ordinance is intended to reduce pollution and sedimentation of waterways so that fish and aquatic life, recreation, and other water related activities would not be adversely affected. Virginia Code Section 10.1-560 et. seq. provides for state standards and enables counties to fortify further the laws governing erosion control. The County amended the Ordinance in 1994 as part of the County Mountain Land Plan. These amendments strengthened the Ordinance by requiring E&S plans for smaller areas of land disturbance and for non-agricultural pond construction.

8. Groundwater

Groundwater may be considered to be any water in the ground, but generally it refers to the water below the level at which the pore spaces in soil or rock materials are fully filled or saturated with water. In most settings, groundwater moves slowly through the small pores and cracks among soil and rock particles. In humid areas, perched water tables occur above the true water table in early spring. Although some wells may obtain water from these temporary water tables, most wells are supplied from deeper, more permanent water sources or aquifers.

Groundwater protection problems are generally greater in areas that are underlain by carbonate rocks, such as limestone and gypsum, than in areas underlain by most other rock types because of the presence of solution-enlarged sinkholes, conduits, and caves. These geologic features characterize what is called karst terrane. The generally high permeability of these rocks facilitates the infiltration and transport of contaminants from the land surface to the groundwater reservoir.

MAP I.5 Important Soils for Agricultural Production

Groundwater aquifers in the eastern United States are continuously replenished or recharged by precipitation. Recharge rate affects groundwater quality and quantity. Only a fraction of all precipitation, however, reaches the deep aquifers used for drinking water, because most of it runs off and flows into streams, is absorbed by plants, or evaporates.

In the steep western slopes of the Blue Ridge, aquifer recharge is slight because water quickly runs down the steep slopes before it can soak into the soil. The ancient lava and granitic rock also has few pores for seepage but does have fractures that allow some water to reach deep aquifers. Although the water quality is generally good, the quantity of water from wells on the Blue Ridge is generally low, even at great depths.

Aquifer recharge is much more rapid in the eastern lowland carbonate area, which encompasses three-quarters of the County. This carbonate area is described as karst topography. The limestone and dolomite rock is highly fractured, allowing water to move quickly through to the aquifer. Moreover, carbonate rocks are usually water soluble, and fractures are eroded to form larger channels. Sinkholes and sinking streams indicate the rapid recharge ability of this area. In areas characterized by karst, pollution of groundwater is more likely because the open channels allow ground-level pollutants quick and easy access to the aquifer. (Groundwater is further discussed in Chapter V.)

C. History and Historic Resources

Native Americans inhabited the area of Clarke County for centuries before the first Europeans, with their African slaves, settled the region. Several prehistoric archeological sites have been discovered on the banks of the Shenandoah River in Clarke County, and records indicate that there are potentially thousands of such sites throughout the County. Native Americans passed through the Shenandoah Valley, a major trade route between present-day New York and Georgia. The Shenandoah River (“Daughter of the Stars”) and the Opequon Creek, are Indian-named, reflecting the heritage of the County's indigenous people. Although few Native American groups were resident in the Shenandoah Valley at the time of European settlement, the area remained within the territorial organization of tribes to the north and west.

Europeans first came into the Shenandoah Valley in the early 1700s. Thomas Fairfax, Sixth Baron Fairfax of Cameron (1693-1781), was the proprietor of the Northern Neck of Virginia as heir to the 1688 royal charter to the land between the Rappahannock and Potomac Rivers. Just less than half of Clarke County was part of a 50,212-acre grant given as payment by Lord Fairfax in 1730 to his agent Robert “King” Carter, the wealthiest and most prominent landholder in the Tidewater of Virginia. The remaining area of the County was distributed in smaller grants, either by the Council of Virginia or Lord Fairfax, or retained by him as the Manor of Greenway Court (his home after 1752) and as the Manor of Leeds. Several buildings and structures of the Greenway Court complex remain, including the 1761 Land Office. The village of White Post, near Greenway Court, grew up around the prominent post directing new settlers to Greenway Court. By tradition, the first post was erected in the early 1750s by George Washington, then a surveyor for Lord Fairfax.

Carter’s land in Clarke County was mostly unavailable for settlement until the mid-1700s when it was divided into tenancies and rented out to farmers. With the end of the Revolutionary War in 1783 and the commercial decline of tobacco, settlers from the Tidewater, most of whom were Carter’s descendents, began to move to Carter’s land in greater numbers. The Tidewater families imported their lifestyle, their appreciation of stylish architecture, their wealth, and the slave system, all of which are reflected in the structures they built. One of the Tidewater settlers was “King” Carter’s great-grandson, Nathaniel Burwell, builder of Carter Hall, the leading plantation in the County. The village of Millwood, near Carter Hall, developed around a prominent commercial mill completed in 1786. It was operated by Burwell and Revolutionary War hero, General Daniel Morgan. The establishment of this and several other mills during the late eighteenth and early nineteenth centuries reflects the transition from tobacco planting to wheat farming by Tidewater families.

African slaves brought from the Tidewater made the settlement and production of large plantations possible in Clarke County. In the 1840 census, over 50% of the County’s population was of African descent. By 2005, the percentage of African-Americans in the County had dropped to less than 7%.

Pioneers migrating south from Pennsylvania, New York, New Jersey, and Maryland in search of rich farmlands formed the broad pattern of European settlement of the Lower Shenandoah Valley. These people were, for the most part, Scots-Irish, English Quakers, and Germans, and they settled in the portion of the northern Shenandoah Valley that today is known as Frederick County and, to a lesser extent, in what is now Clarke. Clarke County was part of Orange County until 1738, when Frederick County was established out of Orange, remaining part of

Frederick County until 1836 when it became a separate entity. The socio-economic differences between what is now Clarke and the rest of Frederick County and the considerable distance to the county seat in Winchester contributed to the separation of Clarke County from Frederick.

The Civil War brought an abrupt end to any new construction and growth in Clarke County. The Battle of Cool Spring and several skirmishes took place in the County, and troops were constantly passing through the area. Numerous buildings, including houses, barns, and mills, were destroyed during the period. The Shenandoah Valley provided Confederate troops with food and grain and became known as the "breadbasket of the Confederacy." Reconstruction came slowly, and there was little growth in the County until the 1880s when the Shenandoah Valley Railroad (now Norfolk Southern) was constructed and provided improved access to larger markets.

Clarke County was a highly productive agricultural county throughout the nineteenth century. According to 1860 census data, although Clarke was the smallest county in the Shenandoah Valley, it had the largest percentage of land in farms and ranked second in wheat production in the Valley. Wheat was the largest cash crop in the County until the early 20th century, when it was replaced by apple production. Clarke County's abundance of bluegrass has long made it a desirable location for horse breeding. The Tidewater families brought their thoroughbreds with them and began a tradition of horse breeding that has continued to the present. By the beginning of the 21st century, apple production declined, while beef and dairy cattle and horses were the mainstays of the local agricultural economy.

Berryville, incorporated in 1798, is the largest town in the County. It was first settled in 1775 and was originally known as Battletown, due to its rowdy taverns. Its location at the intersection of major roads leading to Alexandria, Baltimore, and Winchester made it the commercial center of the County and insured its selection as the seat of County government. Boyce, the second town of the County, was incorporated in 1910. It was originally settled in 1880 at the crossing of the Millwood-Winchester Turnpike (now Route 723) and the newly built Shenandoah Valley Railroad (now Norfolk Southern).

Today, Clarke County remains primarily rural, and agriculture is still one of its main sources of income. Berryville is still the commercial, governmental, and manufacturing center of the County. In the late 20th century, people increasingly moved to the County to construct new homes in rural settings, as well as to restore older residences. In order to preserve the agricultural economy of the County and its rural character, the County enacted innovative land-use regulations in 1980. These regulations limited residential growth in rural areas and focused new housing in the Berryville area.

The large number and diversity of historic structures and buildings accentuate Clarke County's rural and agricultural environment. A Countywide archeological assessment was completed in 1993 to survey the Native American presence. Possible sites of several palisade villages were located, as well as thousands of individual dwelling sites. All pre-World War II structures were also documented with reconnaissance-level surveys. A total of 962 historic properties were identified (each of which may include several structures), dating from the early 1700s through 1941 in the rural portion of the County. From approximately the same period, 236 historic structures and buildings were identified in Berryville, 100 in Boyce, 58 in Millwood, and 28 in White Post.

As a follow-up to the general identification of historic properties, more than 30% of the County has been placed on the Virginia Landmarks Register and the National Register of Historic Places, including the historic districts of: Greenway (30 square miles), Long Marsh (16 square miles), Cool Spring Civil War Battlefield (6 square miles), Berryville (150 acres), Boyce (102 acres), White Post (30 acres), and 28 individually listed structures. In addition, Greenway Court (the 1750 home of Lord Fairfax) and Saratoga (the 1780 home of Daniel Morgan) have been designated National Historic Landmarks, the highest level of national recognition for an historic property. The County is also part of the John Singleton Mosby Heritage Area, the first heritage area designated in Virginia. This Area approximates “Mosby’s Confederacy,” to encompass parts of six counties, of which Clarke is the only county included in its entirety.

D. Population Profile

1. Population Growth and Density

Changes in population have extensive implications for planning because they affect the need for community facilities and services, land uses, and housing demand. Planning for population growth must be proactive to help guide growth as it occurs, rather than react to it after it is in place. The 2001 Comprehensive Plan provided a partial update of overall population trends based on provisional estimates from the Center for Public Service at the University of Virginia and projections from the Virginia Employment Commission (VEC). Data from the 2000 Census was not available until 2002. This 2005 Comprehensive Plan incorporates the 2000 Census as well as 2005 estimates and projections.

Based on Census information, Clarke County's population increased to 12,652 in 2000 an increase of 4.5 % for the 1990s. This is slower than the increase of 21% for the 1980s and the 23% increase in the 1970s. The U.S. Census estimated 2005 population of 14,205 represents a 12.3% increase in just five years from 2000. The Weldon Cooper Center at the University of Virginia estimates the County's 2005 population as 13,900, a 9.5% increase over the 2000 Census. This growth was lower than all surrounding counties. Virginia's growth rate was 14.4% in the 1990s and 6.9% in the first five years of this decade.

Population density within Clarke County (persons per square mile) increased from 57 in 1980 to 70 in 1990 to 72 in 2000, and is estimated as 82 in 2005. This level of density remains considerably lower than in all surrounding counties, being half that of the next most dense jurisdiction, Warren County. Most of the growth continues to occur in the northern portions of the County, with 56% of the population in Census Tract 101 (the northern half of the County west of the Shenandoah River, including the Town of Berryville). Census Tract 102 (the southern half of the County west of the River) has 24% of the population. Census Tract 103 (east of the River) has 20% of the population.

POPULATION													
COUNTY	1950	% Change	1960	% Change	1970	% Change	1980	% Change	1990	% Change	2000	% Change from 2000	2005
Clarke	7,074	12	7,942	2	8,102	23	9,965	21.4	12,101	4.5	12,652	12.3	14,205
												WC 9.5	<u>13,900</u>
Loudoun	21,147	16	24,549	51	37,150	55	57,427	50	86,129	96.9	169,599	50.7	255,518
												WC 48.8	<u>252,300</u>
Fauquier	21,248	13	24,066	10	26,375	36	35,889	36.1	48,860	12.9	55,139	17.9	64,997
												WC 14.1	<u>62,900</u>
Warren	14,801	-1	14,655	4	15,301	39	21,200	23.3	26,142	20.8	31,584	12.6	35,556
												WC 8.5	<u>34,300</u>
Frederick & Winchester	31,378	18	37,051	30	48,322	13	54,367	24.5	67,686	22.3	82,794	13.8	94,242
												WC 12.7	<u>93,300</u>
Jefferson (WV)	17,184	9	18,665	14	21,280	42	30,302	18.6	35,926	17.4	42,190	16.6	49,506
Berkeley (WV)	30,359	11	33,791	8	36,356	29	46,775	26.7	59,253	28.1	75,905	23.0	93,394
Fairfax	98,557	179	275,002	65	454,275	32	598,901	36.7	818,584	18.4	969,749	3.8	1,006,529
												WC 5.4	<u>1,022,100</u>

Source: US Census and UVA
Weldon Cooper where noted as WC

The U.S. Census does not make projections. The Virginia Employment Commission (VEC) establishes the official population projections for the state. The VEC projected population for Clarke in 2010 is 15,421, a 21.9 percent increase from 2000. Clarke County's neighboring counties continued to experience significant growth. Loudoun's growth of almost 100% in the 1990s is expected to be repeated in the first decade of this century. Fauquier's growth of 13% is expected to more than double in the current decade. The combined population of Frederick and Winchester grew by 22% in the 1990s, and is expected to be almost as high in this decade. The 21% Warren County growth rate in the 1990s is expected to slow only slightly by 2010. The 17% rate of growth in Jefferson County is also expected to slow to 9% in this decade. Similarly, the 28% Berkeley County growth rate is expected to decrease to 13%. Growth pressures continue to be felt on all sides of the County. As a point of reference, the Code of Virginia establishes a decadal growth rate of 10% or more as 'high growth'.

POPULATION PROJECTIONS							
COUNTY	2000	% Increase from 2000	2005	% Increase from 2000	2010	% Increase from 2010	2020
Clarke	12,652	12.3	14,205				
		WC 9.5	<u>13,900</u>	VEC 22.4	<u>15,488</u>	VEC 17.1	<u>18,129</u>
Loudoun	169,599	50.7	255,518				
		WC 48.8	<u>252,300</u>	VEC 89.6	<u>321,628</u>	VEC 43.6	<u>461,910</u>
Fauquier	55,139	17.9	64,997				
		WC 14.1	<u>62,900</u>	VEC 31.3	<u>72,416</u>	VEC 22.1	<u>88,413</u>
Warren	31,584	12.6	35,556				
		WC 8.5	<u>34,300</u>	VEC 22.1	<u>38,565</u>	VEC 17.3	<u>45,243</u>
Frederick & Winchester	82,794	13.8	94,242				
		WC 12.7	<u>93,300</u>	VEC 25.6	<u>103,988</u>	VEC 18.9	<u>123,681</u>
Jefferson(WV)	42,190	16.6	49,506				
				WVRRRI 9.2	<u>46,087</u>	WVRRRI 5.4	<u>48,572</u>
Berkeley(WV)	75,905	23.0	93,394				
				WVRRRI 12.9	<u>85,728</u>	WVRRRI 7.9	<u>92,478</u>
Fairfax	969,749	3.8	1,006,529				
		WC 5.4	<u>1,022,100</u>	VEC 5.3	<u>1,020,775</u>	VEC 4.2	<u>1,064,096</u>

2000 population: US Census
 2005 estimate: US Census and UVA Weldon Cooper Center [WC]
 2010 – 2020 projections for VA counties: Virginia Employment Commission [VEC]
 2010 – 2020 projections for WV counties: West Virginia Regional Research Institute [WVRRRI]

The 60 miles to Washington, D.C. and the buffer afforded by the Blue Ridge along the County's eastern border have in the past shielded Clarke County somewhat from urban development pressures. However, Fairfax County is now heavily urbanized with 1,006,529 residents (2,548 people per sq. mi.), and Loudoun County is the fastest growing jurisdictions in the nation. In addition, major employment centers are continuing to be developed in Loudoun and Prince William Counties. Because of this continued growth in surrounding counties, it can be expected that Clarke County's desirability for residential and economic growth will continue to increase. It thus becomes increasingly important to provide Clarke County's residents with land-use planning in an efficient and equitable manner.

2. Mobility and In-Migration

The 2000 Census revealed that 28.5% of Clarke County's residents over five years of age moved into the County between 1995 and 2000. Of this percentage, 19.8% came from elsewhere in Virginia, and 8.7 came from out of state. According to the Weldon Cooper Center, between 2000 and 2005 Clarke had a net positive migration with no natural increase (births equaled deaths). This exceeded the net migration rate for Virginia but the state had a natural increase. Migration and natural rates of increase were greater for surrounding jurisdictions.

	<u>Migration Increase</u>	<u>Natural Increase</u>
Virginia	3.7 %	3.2 %
Clarke	9.5 %	0 %
Loudoun	37.9 %	10.9 %
Fauquier	11.4 %	2.7 %
Warren	6.0 %	2.5 %
Frederick	10.6 %	3.5 %
Winchester	9.3 %	3.4 %

3. Commuting Patterns

The 2000 census revealed that a larger percentage of County residents worked outside the County (64%) than within the County (36%), compared with 61% and 39%, respectively, in 1990. As shown in the following chart, mean travel times continue to increase, as well as the percentage of those driving alone, while the percent in carpools has declined.

	<u>1980</u>	<u>1990</u>	<u>2000</u>
Mean Travel Times in minutes	27.6	29.3	32.4
Drove Alone (%)	64.0	70.8	77.3
Carpool (%)	25.0	18.0	10.8

a. Out-Commuting

According to the 2000 Census, 4,142 residents of Clarke County worked outside the County, representing 64% of the labor force. Most of these residents commute to Loudoun County (1,270), Fairfax County (789), and the City of Winchester (728), with Frederick County (630) as fourth. Of the jobs in the top 10 destinations, 94% were in Virginia. In 1990 the top three destinations for commuters were Loudoun County (1,138), Frederick County (922), and Fairfax County (674).

b. In-Commuting

Most of the commuters living outside the County but working within Clarke County commute from Frederick County (995, 1990: 895); the City of Winchester (510, 1990: 316), Jefferson County, West Virginia (386, 1990: 313); and Berkeley County, West Virginia (347, 1990: 187). A total of 2,893 (1990: 2,207) people commute into Clarke County, representing a net in-commuting of 1,249 (1990: 1,522). In other words, 30% (1990: 25%) fewer workers commute into the County than commute out of the County. Of the top 10 places of residence for in-commuters, 71% came from within the state.

4. Employment and Wages

In the first quarter of 2006, the top 10 employers in the County were: Berryville Graphics, Clarke County Schools, American Woodmark, Grafton School, Clarke County Government, Project Hope, Beverly Home Care, Bank of Clarke County, L'esprit de Campagne, and Powhatan School.

	1990	2000	2005
Employed County Residents ¹	6084	6,712	
Unemployment Rate ²			
Clarke County	3.5%	1.6%	2.4%
Virginia	4.2%	2.3%	3.5%

Employment and Wages ⁴	1990			2000			2005		
	Number of Businesses	Jobs	Weekly Wages	#	Jobs	Wages	#	Jobs	Wages
Agriculture, Forestry, Fishing & Hunting	nondisclosable			20	132	\$ 401	23	134	\$ 521
Construction	71	285	\$379	71	319	\$ 562	95	442	\$ 749
Manufacturing	11	1,001	\$440	17	1,191	\$ 611	20	1,153	\$ 701
Wholesale Trade	7	21	\$574	13	37	\$1,562	16	95	\$1,258
Retail Trade	48	310	\$272	39	309	\$ 294	38	293	\$ 347
Transportation and Warehousing	6	57	\$364	8	56	\$ 496	11	49	\$ 617
Information	8	90	\$520	7	26	\$ 832	4	21	\$1,306
Finance and Insurance	5	76	\$335	nondisclosable			16	216	\$ 758
Real Estate and Rental/Leasing	12	32	\$258	10	35	\$ 378	18	48	\$ 451
Professional and Technical Services	19	50	\$286	34	89	\$ 898	40	136	\$ 892
Admin./Waste Services	8	28	\$248	14	53	\$ 250	13	59	\$ 406
Educational Services	5	710	\$343	8	1,157	\$ 482	6	719	\$ 592
Health Care and Social Assistance	11	171	\$231	15	221	\$ 351	13	220	\$ 414
Arts, Entertainment, and Recreation	6	24	\$145	12	84	\$ 332	10	75	\$ 303
Accommodation and Food Services	13	98	\$141	18	143	\$ 210	19	176	\$ 299
Public Administration	13	168	\$428	19	267	\$ 483	16	271	\$ 602
Other Services	47	134	\$238	70	168	\$ 425	62	156	\$ 616
All Industries	307	3,692	\$362	383	4,555	\$ 512	421	4,405	\$ 641

Weekly Wage Comparison

	Average Weekly Wage for the Third Quarter			
	1980	1990	2000	2005
	All Job Types			
Clarke County	\$ 189	\$ 351	\$ 508	\$ 642
Northern Shenandoah Valley Rgnl Cmsn	\$ 206	\$ 350	\$ 491	\$ 630
Virginia	\$ 242	\$ 428	\$ 664	\$ 815
	Manufacturing			
Clarke County	\$ 196	\$ 435	\$ 668	\$ 744
Northern Shenandoah Valley Rgnl Cmsn	\$ 232	\$ 427	\$ 603	\$ 752
Virginia	\$ 272	\$ 472	\$ 682	\$ 853
	Wholesale and Retail Trade		Wholesale	
Clarke County	\$ 165	\$ 313	\$ 863	\$ 932
Northern Shenandoah Valley Rgnl Cmsn	\$ 169	\$ 425	\$ 596	\$ 785
Virginia	\$ 197	\$ 578	\$ 957	\$1117
		Retail Trade		
Clarke County		\$ 270	\$ 303	\$ 367
Northern Shenandoah Valley Rgnl Cmsn		\$ 259	\$ 345	\$ 454
Virginia		\$ 283	\$ 398	\$ 478

¹ U.S. Census

² Virginia Employment Commission

⁴ VEC, average of all four quarters

5. Income

a. Median Family Income

Median family income is the middle income in a distribution of all family incomes. It is determined by the decennial census and recalculated for every jurisdiction annually by the U.S. Department of Housing and Urban Development (HUD). The median income of families living in Clarke County as determined by the 2000 Census (for 1999) was \$59,750. This is 10.3% higher than the state median of \$54,169 and 61.8% higher than the 1990 median, which was \$36,922. In addition, the median family income was higher than that in all surrounding counties, except for Loudoun, which was significantly higher.

b. Per Capita Income

Per capita income is the average income per person in a defined area. In Clarke County, the per capita income was \$24,844 in the 2000 Census, which was slightly below the state average of \$23,975. Per capita income in 1990 was \$19,098. Per capita income was also higher than that in all surrounding counties, with the exception of Loudoun County.

c. Poverty Status

A total of 148 (1990 = 213) families, or 4.2% (1990 = 6.6%) of Clarke County families, were reported below the poverty level in 2000. Poverty is defined by HUD as an income level of 30% or less of median income and varies by household size. A family of four was determined to be below poverty level if its 1999 income was \$16,000 (1989 = \$12,674). Of the families below poverty level, 42% or 62 families (1989 = 21% or 44 families) were headed by women with no husband present. Of the total population, 6.4% (1989 = 8.7%) were below the poverty level. More significantly, 10.4% (1989 = 15.8%) of all persons age 65 and over were below the poverty level. The poverty levels in 2000 represent slight declines from the 1990 and 1980 levels. Of all Virginia residents, 9.3% (1989 = 10.2%) were below the poverty level. Although poverty level determination describes minimal resources, a more accurate determination of income status uses low-income limits. Low-income limits are used to determine eligibility for many federal and state assistance programs. Low-income is defined by HUD as 80% or less of median income and varies by family size. The low-income limit for a family of four in Clarke County in 2001 was \$46,650 (1991 = \$28,650).

6. Ethnic Composition

The ethnic composition of a community is a key element of its character. Change in the relative size of ethnic groups can be a challenge and an opportunity for a community. Currently, the County is relatively homogenous, but this has not always been the case. The first census of Clarke County, in 1840, showed 55% of population to be African-American (52% slaves and 3% free colored), but this gradually changed over time. The trend in the Washington Metropolitan Area, in Virginia, and nationally, is of increased ethnic diversity. This trend may become apparent in the County in the future.

<u>Percent of Population</u>	<u>1850</u>	<u>1900</u>	<u>1950</u>	<u>2000</u>
African ('colored', 1950 & before) descent	51	28	17	6.7
European descent	49	72	83	91.1
Other (included in 'colored', 1950 & before)	NA	NA	NA	2.2
Hispanic (of any descent)	NA	NA	NA	1.5

U.S. Census

7. Age Distribution

Population age distribution is very important from a planning perspective for several reasons. People under age 18 and over age 65 years are generally more dependent on family or public resources than those of prime working ages. Therefore, a large population in these age brackets can dramatically influence per capita income and buying power.

Percent of Population	1970 ¹	1980 ¹	1990 ¹	2000 ¹	2010 ²
≤ 17	32.4	27.0	22.8	23.4	19.6
< 5		8.0	6.0	6.4	5.2
5-17		24.4	21.0	16.4	14.4
18-64	56.0	59.5	63.2	62.0	62.5
65 ≥	11.6	13.5	14.0	14.6	17.9

¹ Actual, U.S. Census

² Projection, Virginia Employment Commission

8. Educational Attainment

The 2000 Census reported that 82.1 % of persons over 25 years of age in Clarke County were high school graduates. This figure is slightly higher than the state average of 81.5%. More important, it represents a significant increase over the percentage of high school graduates in 1990 (75%) and 1980 (57.3%). Of those persons over 25, Clarke County had a lower percentage of persons completing four or more years of college (23.5 %) than the state average (29.5 %). This figure showed an increase from the 1990 level of 18.6% and 1980 level of 15.7%.

E. Housing Patterns

1. Housing Growth

	1980	1990	2000	2005	2010
Population	9,965 ¹	12,101 ²	12,652 ³	14,205 ⁴	15,488 ⁵
Percentage increase		21.4%	4.5%	22.4% (to 2010)	
# of dwelling units	3,961 ¹	4,531 ²	5,388 ³	6,236 ⁷	
Percentage increase		14.4%	18.9%	15.7%	
Persons per dwelling unit	2.58 ¹	2.67 ²	2.55 ⁵ 2.50 ³		
		<u>1970-1979</u>	<u>1980-1989</u>	<u>1990-1999</u>	<u>2000-2005</u>
# of resid. lots created in Berryville		not available	not available	407	371
# of houses built in Berryville (includes annexation area)		not available	14	224	363
# of resid. lots created in Boyce		not available	not available	not available	131
# of houses built in Boyce		not available	not available	not available	23
# of resid. lots created outside B'ville and east of the Shenandoah River		456	350	305	228
and west of the Shenandoah River				[65]	[59]
# of houses built outside B'ville (includes Boyce before 2000)		not available	665	[240]	[169]
# of resid. lots created County-wide		not available	not available	712	730
# of houses built County-wide		777	679	780	848

The most significant change from the 1980s through the 2000s is the increased percentage of new units being built in Berryville and Boyce. In the 1980s, 98% of new units were built outside of Berryville, compared with 71% of new units in the 1990s, and 54% of new units were built outside of Berryville and Boyce in the first half of the 2000s. It is the intent of this document and previous comprehensive plans to limit residential growth in the rural areas of the County and focus such development in Berryville. These statistics indicate that this objective is beginning to be achieved.

Another dimension of these figures is the split in lot creation between the unincorporated portions of the County on the west slope of the Blue Ridge east of the Shenandoah River and the valley portions of the County west of the Shenandoah. The 30% of the County east of the Shenandoah River, closest to the center of Washington metropolitan area, had 21% of the rural lots platted in the 1990s and 26% of the rural lots platted in the first half of the current decade. However, the use of dwelling unit rights (with Building Permits) in the FOC (east) and AOC (west) Zoning Districts has occurred at a faster pace east of the river, since they were first assigned in 1980; 44% have been used in FOC (963 houses), and 33% in AOC (1,451 houses).

1 U.S. Census 1980 2 U.S. Census 1990 3 U.S. Census 2000 4 U.S. Census 2005 estimate
5 Virginia Employment Commission, projection
6 4531 + 687 (# of building permits form 4/1/90 to 4/1/00)
7 Northern Shenandoah Valley Regional Commission

2. Distribution of Housing

Distribution of the housing stock influences the County's ability to provide public services, affects the amount of land available for agriculture, and affects the rural and scenic character of the County. For these reasons, the County has designated Berryville as the most appropriate area for growth to occur. However, from 1980 to 1992, fewer than 4% of the permits issued for new dwelling units were within the designated growth area. With the adoption of the Berryville Area Plan and the approval of subdivisions within that area, the County has begun to provide for future growth within the designated area. Preliminary subdivision plats for 407 single-family residential lots were approved in the annexation area and vacant acres in the Town during the 1990s and 371 lots in the first half of the current decade. Over 170 additional lots are provided for in the Berryville Area Plan (with proffers); without proffers, the number of additional lots drops to about 85. The planned full build-out of the Berryville Area Plan and vacant land in the Town was approximately 1600 lots. Thus, about 10% of the planned number of lots remains to be platted, assuming property owners are willing to pay a rezoning proffer. If property owners are not willing to go through the rezoning process, only 5% of the planned number of lots remains unplatted.

3. Housing Condition

The predominant dwelling unit type in Clarke County is single-family detached, which represents 87% of all housing units (essentially unchanged from the 86% in 1990). Of the 5,388 dwelling units in 2000 (1990: 4,585), there was a vacancy rate of 8.3%. The census considers two factors when measuring the condition of housing: lack of complete plumbing and overcrowding (more than one occupant per room). The number of dwelling units lacking complete plumbing in Clarke County declined by 56% from 1980 to 1990 (334 to 147) and by 76% from 1990 to 2000 (147 to 35 or 0.7% of the total houses). Housing units considered overcrowded (one or more persons per room) declined substantially from previous censuses

(101 units in 1980, 115:1990, 29:2000) or, 0.6% of the total number of houses).

4. Housing Affordability

Housing affordability is measured by the percentage household costs of monthly income. Housing is considered affordable if the household costs are not more than 30% of monthly income. The 2000 Census states that 20% of county households in owner occupied dwellings spend more than 30% of their monthly income on household costs (including mortgage). The median monthly mortgage amount was \$1,075. The 2000 Census also states that 24.8% of households in rental units spend more than 30% of their monthly income on rent. The median monthly rent was \$625.

For owner occupied housing, another measure of affordability is a purchase price of not more than 3 times a household's annual income. According to the 2000 Census, the median family income was \$59,750 and the median value of a house was \$139,500 (house value 2.3 times annual income). The US Department of Housing and Urban Development estimates the 2005 median family income as \$71,850. The median value of a house as of the first of January 2006, according to this most recent county-wide reassessment was \$367,550. This would make house value 5.1 times annual income.

January 2006 Assessed Values

<u>Area of County</u>	<u>Urban</u>		<u>Rural</u>				<u>Total</u>
	<u>Berryville</u>	<u>Boyce</u>	<u>East</u>		<u>West</u>		
			< 6 acre parcels	6 to < 20 acre parcels	< 6 acre parcels	6 to < 20 acre parcels	
Median value	\$308,850	\$260,750	\$291,800	\$451,600	\$330,350	\$487,900	\$367,550
Mean value	\$345,741	\$265,027	\$313,727	\$478,204	\$356,941	\$529,446	\$462,718

F. Land Use

Land use in Clarke County is predominantly agricultural, forested, and open space. Commercial intersections, village and town centers, and rural subdivisions are lightly dispersed throughout the County. The Town of Berryville, the predominant area of nonrural land use, includes industrial land, a central business district, and relatively dense residential development. Forest covers much of the rugged land east of the Shenandoah River. Rural subdivisions consume a significant portion of this land, 10.4 % as opposed to 5.3 % on land west of the river. The land west of the Shenandoah River is the agricultural heartland of Clarke County. Almost 70% of this land is used for agriculture-related operations, and almost 85% is in parcels of 20 acres or more.

Land Cover

<u>Type of Land Cover</u>	<u>East</u>		<u>West</u>		<u>Total</u>	
	<u>acres</u>	<u>%</u>	<u>Acres</u>	<u>%</u>	<u>acres</u>	<u>%</u>
Agriculture (cropland/pasture)	1,423	4.8	54,660	68.5	56,083	51.3
Forest	24,649	83.8	21,441	26.9	46,090	42.2
Managed Nature ¹ (tree farms, orchards, golf course)	134	0.5	2,347	2.9	2,481	2.3
Water ²	--	--	1,218	1.5	1,218	1.1
Barren	--	--	<u>136</u>	0.2	136	0.1
Total	29,425	100.0	79,802	100.0	109,227	100.0

¹ Data Source: 2002 Aerial Imagery Commonwealth of Virginia, Interpreted by: Smithsonian Institution

² Shenandoah River

³ Federal Appalachian Trail

⁴ Quarries and gravel pits

* Note: Total acreage for the County differs among several sources.

In the preceding and following charts, and elsewhere in this Plan, there are four distinct references to agricultural land:

1. Agricultural - Open Space - Conservation (AOC) Zoning District

This district provides zoning regulations to control land use. It was established by the County Board of Supervisors in 1980 and was applied to most of the Valley portion of the County.

2. Clarke County Agricultural District

Agricultural Districts are a designation established by the Virginia General Assembly (Code of Virginia, §§ 15.2-4300 through 4314 as amended) to protect and enhance agricultural land as an economic and environmental resource. Landowners voluntarily apply for inclusion in a district, but their property must meet specific criteria as agricultural land. By being in a district, the property is automatically eligible for taxation based solely on its agricultural value. The Clarke County Agricultural District was first established by the Board of Supervisors in 1986 and is subject to renewal every six years.

3. Agricultural Land (parcels between 20 and 99 acres)

Agricultural Land (parcels over 99 acres)

The Clarke County Commissioner of Revenue classifies land for the purpose of taxation based on actual use, following criteria established by the Virginia Department of Taxation. Two of these classifications are applied to agricultural land and are differentiated based on acreage.

4. Agriculture (cropland/pasture) Land Cover

Aerial photography, when read by experts, provides the most accurate accounting for actual land use. The Smithsonian Institution, as part of an effort to identify wildlife habitats, also identified agricultural activities.

These four designations have significant overlap. It is possible for a parcel to be in one category but not in the other three, depending on site-specific circumstances.

County Land Use

Type of Land Use	Berryville*		Boyce*		East		<u>Rural</u> West		Total	
	acres	%	acres	%	acres	%	acres	%	acres	%
Single Family Residential										
Urban										
With dwellings**	438	0.4	96	0.1					534	0.5
Without dwellings	67	0.1	46	<0.1					113	0.2
Suburban										
<6 acre parcels***										
With dwellings**					1,819	6.6	3,536	4.2	5,355	4.8
Without dwellings**					1,053	3.8	904	1.1	1,957	1.8
6 to <20 acre parcels										

With dwellings**					2,720	9.9	4,542	5.4	7,262	6.5
Without dwellings**					1,382	5.0	1,466	1.8	2,848	2.5
Commercial**					617	2.2	322	0.4	939	0.8
Agriculture***										
(20 to < 100 acre parcels)					8,941	32.4	26,508	31.7	35,449	31.7
Agriculture***										
(100 acre + parcels)					6,847	24.8	43,277	51.8	50,124	44.8
Exempt*					957	3.5	2192	2.6	3149	2.8
(recreation open space)					3,219	11.7	812	1.0	4,031	3.6
Total Acreage					27,555	100.0	83,559	100.0	111,761	100.0

Data Sources: *Commissioner of the Revenue (class1,7) **Assessor (occupancy codes) *** GIS acreage values

County Zoning Districts

	<u>acres</u>	<u>%</u>
Agricultural Open-Space Conservation	82,924	72.0
Forestal Open-Space Conservation	27,054	24.0
Rural Residential	801	0.7
Neighborhood Commercial	27	<0.1
Highway Commercial	131	0.1
Light Industrial	0	0
Boyce	239	0.2
Residential	209	
Commercial	30	
Berryville*	1,486	1.3
Residential	1,041	
Commercial	280	
Industrial	165	
Berryville Annexation Area	241	0.2
Residential	152	
Commercial	6	
Institutional/Open Space	83	
Industrial	0	
Total Acreage	114,039	100.0

Source: Clarke County Geographic Information System (GIS). * Includes portions of annexation area annexed by 1/1/07

Note: Total acreage for the County differs among several sources.

Zoning and Subdivision

In 1980, Clarke County adopted a method of rural land preservation known as sliding-scale zoning. The primary purpose of sliding-scale zoning is to preserve agricultural land and the rural character of the County. This is accomplished by limiting the number of parcels that may be created, limiting the size of new parcels, and keeping residual parcels as large as possible. Sliding-scale zoning allocates dwelling unit rights (DURs) for parcels of land and a maximum number of dwelling units that may be built in the Agricultural/Open Space/Conservation (AOC) Zoning District and Forestal/Open Space/Conservation (FOC) Zoning District. That number cannot be increased unless parcels are rezoned but is decreased as landowners build houses or place their property under permanent open-space easement. Approximately 14,000 acres of the County have been placed in permanent open-space easement. An additional 4,000 acres is recreational open space, primarily the Appalachian Trail.

In 1980, 6,646 DURs were allocated. By the end of 2005, a total of 4,232 DURs, or 63.7%, remain unused (2,982 or 67.3% in AOC and 1,250 or 56.5% in FOC). When compared with the 3,961 existing dwelling units identified in the 1980 census, the original allocation of dwelling unit rights allowed an increase of dwellings by 170%. Current rural zoning regulations would allow the number of houses in the entire County to increase by another 4,200 in addition to the existing 6,200 dwellings with a parallel impact on County population. When all DURs have been used, the number of dwelling units in the rural portion of the County is intended to remain stable in perpetuity.

Analysis of subdivision records from 1970 to 2005 shows two important trends. The population of Clarke County, (outside the Berryville Area) and the number of households, continued to grow albeit at a slower rate in the 1990s, compared with the 1980s and the first half of the current decade. However, parcel creation occurred more slowly when compared to the number of new houses. There were 2.0 new houses built for every lot created in this

decade compared to 1.8 houses for every new lot in the 1990s. In addition, the average number of new lots created per subdivision decreased significantly, along with the acreage involved in subdivisions. These trends continued into the current decade, showing the impact of the County's policies to direct residential growth. These trends are very significant when compared with the rates of growth in Loudoun and Frederick Counties.

	<u>1970-1979</u>	<u>1980-1989</u>	<u>1990-1999</u>	<u>2000-2005</u>
Lots created outside Berryville	456	350	305	228
Houses built outside Berryville	777	665	556	462

The corollary to sliding-scale zoning, which limits rural residential activity, is the Berryville Area Plan (BAP) adopted in 1992, which provides for residential activity in the most developed area of the County. The BAP allows 1,000 dwellings to be developed and annexed to the Town of Berryville, in addition to approximately 600 units on vacant land in pre-BAP town limits, estimated in 1992. However, the BAP called for the application of half the zoning density (about 500 dwellings) with the additional 500 dwellings achieved through the rezoning process and the paying of proffers for all units (the initial half and additional half). To date, there have been no rezoning applications. Therefore, the total number of new dwellings should not exceed 1,100 (500 + 600). Of these 1,100 dwellings, some 780 have an approved preliminary plat, and 600 building permits have been issued. There were 1,100 existing houses in the Town counted in the 1990 census. The grand total of housing expected in the Berryville area at full build-out is about 2,200 (1,100 existing + 600 new in pre-1989 town limits + 500 new in annexation area). Based on adopted policies and zoning regulations, the Town population would increase from 3,100 in 1990 to about 5,500 at full build-out (assuming 2.5 people per household, county average in the 2000 Census).

In addition to Berryville, residential development is anticipated elsewhere in the County. Currently, residential zoning and vacant lots in the Town of Boyce would allow about 125 more dwellings. Currently, residential zoning in the unincorporated areas of Shenandoah Retreat, Millwood, and White Post is likely to generate another 100 houses.

The availability of lots in the rural portion of the County will decrease as vacant lots platted before 1980 are improved and dwelling unit rights are used in new subdivisions. However, the provision for additional growth in the Berryville area and elsewhere provides ample opportunity for new housing. The 4,200 remaining dwelling unit rights in the AOC and FOC zoning districts, 500 dwellings planned in the Berryville area, and 225 houses allowed elsewhere provide the zoning potential for almost 5,000 new dwellings in the County. Soil conditions that limit the availability of septic drainfields make it unlikely that all remaining 4,200 rural dwelling unit rights can be used. However, if two-thirds of these dwelling unit rights are realized, when combined with houses permitted by Town and County residential zoning, the County population can reasonably be expected to increase by more than 60% to about 23,000 at full build-out.

Currently, there are 280 acres of commercially zoned land in Berryville, 6 acres to be annexed by Berryville, 30 acres in the Town of Boyce, and 158 acres elsewhere in the County (Double Tollgate, Waterloo, etc.), for a total of 474 acres of land in the County zoned commercial. This does not include the 248 acres of light industrial or business park zoning. The Urban Land Institute defines a neighborhood commercial center as ranging from 3 to 10 acres, with a minimum resident population ranging from 3,000 to 40,000. A community commercial center

ranges from 10 to 30 acres, with a minimum resident population ranging from 40,000 to 150,000.

Comparing anticipated population growth against the area currently zoned commercial suggests that additional commercial zoning will not be necessary. However, the location of some of the current commercially zoned property may not meet market needs, and some, because of location and other factors, is unlikely to be developed. The rezoning of such properties to more usable zoning districts or to districts consistent with current use should be considered. Additional commercial zoning should be considered, if warranted by market research.

Analysis of subdivision growth has shown favorable results since the adoption of sliding scale zoning in 1980. If sliding scale zoning, in conjunction with the goals expressed in the Comprehensive Plan, continues to prove successful, significant population changes will result in the future. Based upon current projections, the population of Clarke County could reach 15,500 residents by the year 2020. Total population growth may not be significantly altered by the current policies, but growth will shift from the rural areas of the County to the Berryville Area as outlined in the Comprehensive Plan. This effect will become more pronounced as dwelling unit rights are used up in the rural portions of the County.

Source: *Shopping Center Development Handbook*. Third Edition. Washington, DC: ULI-the Urban Land Institute, 1999, page 13.
(The Urban Land Institute is the research organization of private sector land developers.)

G. Comprehensive Planning

Clarke County adopted its initial Comprehensive Plan on June 15, 1974. The Plan was updated in August 1974, September 1980, March 1988, August 1994, and March 2001. Managing economic growth, focusing residential development on specific areas, and protecting agricultural and other rural land uses have been, and continue to be, the three guiding principles of the planning process. The 1994 Comprehensive Plan was an extension of the 1988 Plan that included more extensive implementing components. The 2001 Comprehensive Plan was substantially similar to the previous document but identified more policies to continue to protect the character of the County. The 2004 Plan reaffirms the land use policies of the County that have been in place for 25 years and adds policies to improve the protection of the environment.

The Comprehensive Plan combines long-range planning with guidelines for making today's decisions. It is for the citizens of the County and thus considers many diverse interests. Most important, it provides an outline for future land-use decisions that are fair and equitable and based upon the goals, objectives, and policies of the County.

1. Goals, Objectives, and Policies

Goals of the Comprehensive Plan describe the future of Clarke County in general terms and are the long-term expectations of this Plan. The goals for land-use planning in Clarke County are to:

1. Preserve and protect the agricultural, natural, and open-space character of unincorporated areas;
2. Enhance town, village, and commercial areas, thus improving the quality of these communities;
3. Encourage and maintain a diverse and viable local economy compatible with the County's size and character; and
4. Provide for the economical delivery of necessary public services consistent with these goals.

Objectives are more specific expressions of these goals. They describe the County's intended planning

actions. Policies are specific statements for each planning objective. They provide the rationales for land-use decisions and help to guide them. The 12 objectives and 117 policies can be found in Chapter II.

2. Implementing Components of the Comprehensive Plan

To achieve these Goals, Objectives, and Policies, implementation of the Clarke County Comprehensive Plan has been divided into seven components pertaining to specific geographic and policy areas. It is through these implementing components that the aspirations of the citizens are achieved and the elements of the Plan are realized. These components can be found in Chapter III of the Comprehensive Plan and are briefly described below.

a. Agricultural Land Plan

Clarke County has been, and continues to be, a predominantly rural and agricultural environment. Agriculture is the defining characteristic of the County. It is Clarke County's most significant economic, cultural, and historic feature. The preservation of agricultural lands is promoted and encouraged by the Agricultural Land Plan as it seeks to:

1. Minimize the impact of nonagricultural residential development;
2. Minimize the size of parcels created for residential purposes in rural areas;
3. Keep residual tracts as large, and therefore as agriculturally viable, as possible; and
4. Provide for residential growth within the designated growth area.

b. Mountain Land Plan

The mountain lands of Clarke County to the east of the Shenandoah River constitute nearly one-fourth of the County. The steep slopes and predominantly forested areas create special land-use concerns that require specific land use planning. The Mountain Land Plan is designed to protect the scenic values, forest resources, surface water and groundwater quality, and wildlife habitats of the area, while allowing well-sited development compatible with these concerns.

c. Berryville Area Plan

The Berryville area has been identified in the Comprehensive Plan as the designated growth area of the County. Because Berryville contains the highest concentration of available public facilities and infrastructure, it is the most appropriate place for growth. The Berryville Area Plan provides a guide for the physical growth of that area. The overriding purpose of this Plan is to encourage development of a safe, healthful, and distinctive small town environment, while maintaining the unique historical character of the community.

d. Business Intersections Area Plans

There is two intersections in the County of major arterial highways that are federally designated routes: Waterloo (U.S. Routes 50/17 and 340), and Double Tollgate (U.S. Routes 340 and 522). These intersections are uniquely suited for business activities that require auto or truck access. Area plans are necessary to help ensure that appropriate land is provided for such development, that the necessary utilities are available, and that the character of the development enhances the character of County.

e. Water Resources Plan

1) Groundwater Resources:

Three-fourths of the people in Clarke County depend on groundwater as their source of drinking water. Protection of groundwater from pollution is, and has been, of primary importance. The urgent need for protection was vividly demonstrated in 1981, when, because of pollution, the Town of Berryville had to abandon the wells that provided its public water

supply. In the early 1990s wells were polluted by benzene in the White Post area. Both of these events underscored the need for protection of groundwater. The Groundwater Resources section addresses related issues, including minimizing contamination from non-point sources, protecting the Prospect Hill Spring water supply (the public water supply

serving the businesses and 300 residents in Boyce, Millwood, Waterloo, and White Post), and increasing public understanding of the sensitive nature of limestone geology.

2) Surface Water Resources:

Surface waters include secondary streams or tributaries, such as the Shenandoah River, the Opequon Creek, and Spout Run (a state-designated trout stream). The Surface Water Resources section addresses related issues. They include surface water contamination from both point and nonpoint sources, off-stream water use, such as domestic supply and irrigation, and recreational uses. Point-source pollution comes from specific, identifiable sources. Nonpoint-source pollution is caused by many diffuse sources, such as runoff, precipitation, or percolation.

f. Historic Resources Plan

Clarke County's extensive historic resources play a large part both in attracting tourism and influencing land use decisions. The County encourages historic preservation through state and national programs and has conducted four area surveys to provide documentation of historic properties.

g. Capital Improvements Program

Public facilities are the infrastructure for Clarke County's essential services, including education, police and fire protection, social services, parks and recreation, and library services. Because the provision of public facilities can influence when and where development will take place, they are very important growth management tools. The intent of the Capital Improvements Program is to provide an outline of potential public facility and services needs so the County can review these provisions and maintain adequate levels of services in a timely fashion. Most important, it promotes the efficient and equitable provision of capital improvements consistent with the goals of the Comprehensive Plan.

3. Comprehensive Plan Amendment Application

A Clarke County property owner may request the Board of Supervisors to approve a resolution agreeing to consider a proposal to amend the Comprehensive Plan or any of the Implementing Components of the Comprehensive Plan. If the Board approves such resolution, the property owner requesting consideration of the amendment shall pay the applicable fee. Upon approval of such resolution and payment of fees, the matter shall be referred to the Planning Commission. The Commission shall hold public hearing(s) and make a recommendation to the Board of Supervisors within 100 days after receiving the Board resolution, unless the property owner requesting the amendment agrees to allow the Commission further time for review. After receiving the Planning Commission recommendation, the Board shall hold public hearing(s) and take action within 100 days after receiving the Planning Commission resolution, unless the property owner requesting the amendment agrees to allow the Board further time for review.

A Comprehensive Plan amendment should promote the objectives of: a) preserving open space, farmland, natural beauty, and critical environmental areas, and/or b) improving the quality of life and services in existing towns and directing development toward these existing towns.

A Plan Amendment must meet one of the following criteria:

1. The goals, objectives, or policies of the Comprehensive Plan or an implementing element of the Comprehensive Plan would be more effectively met or implemented, particularly by a concept of land development that was not foreseen by the Plan, if the Plan Amendment were approved; or
2. The area surrounding the property in question has changed substantially since the review of the Comprehensive Plan or the applicable element of the Comprehensive Plan.

The request shall be submitted to the Zoning Administrator using forms provided by the Administrator and including any additional explanatory information. Twenty copies of the request are required for distribution to the Board of Supervisors, Planning Commission, and staff. The request shall be submitted during the month that is 30 months after the month in which the Plan was approved. This provides for consideration of amendments half way in the five-year review cycle specified by the Code of Virginia for comprehensive plans.

The request should include a "Statement of Justification," which should explain how the proposed policy change better promotes County planning goals and good planning practice. The justification should include the land-use implications of the proposed policy change on surrounding properties. The justification should address the amendment criteria. Before an application is officially submitted, the applicant should informally discuss planning concepts of a proposed amendment with Planning Department staff.

Written information concerning a specific property that is the subject of a Comprehensive Plan Amendment should include:

1. The existing Comprehensive Plan policy relevant to the property and the existing zoning;
2. The availability of public facilities, including water and sewer service, schools, emergency services, and stormwater facilities;
3. The impact of the change on major environmental features, including slopes at 15% or more, ground water resources, sinkholes, water courses, drainage ways, ponds, wetlands, lakes, floodplains, soils (particularly shrink/swell and slippage), and karst geology;
4. The impact on existing transportation conditions and a Transportation Impact Analysis;
5. The impact of the change on historical/cultural features; and
6. The proposed text and map amendments with references to the pages or maps in the Comprehensive Plan or Implementing Components.

CHAPTER III

Implementing Components

CHAPTER III

A. AGRICULTURAL LAND PLAN

The Board of Supervisors adopted Agricultural Land Plan in September 1997. The following is an excerpt of the Policies and Programs established by this Plan. A copy of the Plan may be obtained from the County Planning Department. The next federal Agricultural Census will occur in 2007 with data available in 2008. An update of the Agricultural Land Plan should occur in 2008 based on this most recent information.

Clarke County's Farmland Conservation Policies and Programs:

1. Summary

In the last fifteen years, Clarke County, using powers delegated to it by the Virginia General Assembly, has developed a sophisticated and comprehensive set of policies and associated methods of implementation for protecting its highly-valued farmland. In addition, the County has either completed or retained consultants to assemble the background studies needed to undergird its strategies. It has established a GIS capability that permits sophisticated data assembly, analysis, presentation, and retrieval.

The major components of this state/county farmland protection program are as follows:

1. Land Use Taxation.
2. Virginia Estate Tax.
3. State right-to-farm protection against private nuisance lawsuits.
4. The agricultural and forestal districts authorized by state law.
5. Virginia Outdoors Foundation and private conservation easements.
6. Effective sliding-scale area-based allowance agricultural zoning.
7. Review of subdivision lots up to 100 acres in the AOC district by Section 3-D-6 of the Zoning Ordinance.
8. The three committees that participate in various ways in efforts to maintain a strong agricultural economy:
 - a. The Agricultural District Committee that advises the Board of Supervisors on matters affecting the Clarke County Agricultural District created through the Code of Virginia;
 - b. The County Planning Commission's Agricultural Committee that focuses on issues of land use policy and regulations, as they affect farming;
 - c. The Clarke County Farm Bureau's Economic Development Committee.
9. Provision in the Comprehensive Plan for protecting agricultural and mountain lands, on the one hand, and coordinating the control of urban development and the provision of infrastructure, on the other. The intent of such policies is to concentrate new growth in and around the Town of Berryville and at arterial highway intersections. Few jurisdictions in the country can match these accomplishments.

2. Priorities for the Next Few Years

Because so much has been done [since the County started its agriculture protection program], this Plan concentrates on two major themes: (1) the necessity of taking steps to strengthen Clarke County's agricultural sector, so as to assure that farmers can continue to operate profitably, and (2) developments in the law that affect the capacity of the County to protect its farmland resource. Most of the specific recommendations that follow are directed to these themes.

As a general matter, the protection of the County's farmland resource base requires that new development be channeled away from prime farm areas and into those parts of the County that are more suitable for urban development and are well served by necessary infrastructure. In short, it is necessary to manage urban growth thoughtfully and effectively to protect natural and agricultural resources. The County should continue to articulate forcefully its policies for concentration of new building near existing settlements.

In addition, more attention should be paid to the design of the subdivisions, especially in the AOC and FOC districts, so that they are well laid out and their impact on the natural environment is minimized. The County should review its zoning and subdivision regulations and procedures regularly to ensure that they contain policies and criteria that produce better-designed settlements, while minimizing their negative impacts on surrounding areas.

3. Major Policies

1. Encourage and expand the activities of agricultural committees:
 - The Agriculture Committee of the Planning Commission
 - The Economic Development Committee of the County Farm Bureau;
2. Include the promotion of agriculture and related businesses in the responsibilities of the County Economic Development Coordinator;
3. Keep land use taxation;
4. Consider proposing changes to state agricultural district regulations;
5. Encourage the creation of a Clarke County Agricultural and Forestal Land Trust;
6. Consider the purchase of agricultural conservation easements by the County;
7. Require an agricultural disclaimer in agreements of sale for land in the AOC District;
8. Adopt site design guidelines for subdivisions in the AOC and FOC Districts; and
9. Promote agriculture-related businesses in AOC, such as pick-your-own operations, farm stands, and other ways of increasing farmers' agricultural income.

CHAPTER III

B. MOUNTAIN LAND PLAN

The County Board of Supervisors adopted the original Mountain Land Plan in August 1994. The Board adopted an updated Plan in 2005. The following is the Purpose Statement of the 2005 Plan. A copy of this document may be obtained from the County Planning Department.

The Shenandoah River and the Blue Ridge Mountains are outstanding natural and scenic resources. Their beauty is attracting ever-increasing development. Inappropriate and insensitive new development will damage the natural and scenic resources that draw development in the first place. Logging operations are a key element to the local economy and to the management of the health and viability of the forest. Timber harvesting should be conducted in such a manner that the forests as well as the overall natural environment are protected for both short- and long-term horizons.

In 1980, 2213 dwelling unit rights (in addition to existing dwellings) were allocated to the Mountain Land Area zoned Forestal-Open Space-Conservation (FOC). At the end of 2004, 1,266 or 57% remained unused. In the ten years from 1990-2000, 160 new houses were constructed. Seventy-five new houses were built from 2001 to 2003. The number of lots increased by an additional 39 from 2001 to 2004, with 10 more lots proposed in 2005. Development trends over the past 24 years show proportionately more construction activity in the Mountain Land Area of the County, where 57% of the dwelling unit rights remain unused when compared to the agricultural portion of the Valley, west of the Shenandoah River, where 68% of the dwelling unit rights remain unused.

The following objectives were developed to guide public land use policy in the Mountain Land Area based on the above development pressures and on the unique, irreplaceable, and environmentally sensitive character of the Mountain Land Area:

1. Protect the forest resources of the area;
2. Protect surface water quality of the area;
3. Protect availability and quality of groundwater in the area;
4. Protect wildlife habitats and ecosystems (including natural heritage areas);
5. Protect the scenic values and scenic byways of the area;
6. Protect cultural resources (such as the Appalachian National Trail / historic structures/sites);
7. Ensure safe public and private roads;
8. Protect private property rights;
9. Provide for well-sited development compatible with the first eight objectives.

All of these objectives are important, but no single one is pre-eminent. The first five are mutually reinforcing objectives. A development pattern that serves any one of these objectives is likely to serve the others. Nevertheless, achieving each objective required individual consideration. The particular characteristics of the Mountain Land Area in regard to each must be identified and policies that serve each must be developed and enacted.

The Clarke County Comprehensive Planning process strives to identify current needs with regard to land uses and to develop long-range goals and policies to meet those needs. Future decisions on land use, natural resource protection, public facilities, capital improvements, and economic growth are based on the Clarke County Comprehensive Plan. The laws of the Commonwealth of Virginia require all counties to adopt comprehensive plans and to update those plans at 5-year intervals, Title 15.2, Chapter 22, Article 3 (§15.2-2223, et seq), Code of Virginia. Clarke County adopted its initial Comprehensive Plan June 15, 1974. The plan was updated in August 1974, September 1980, March 1988, May 1994, and March 2001.

Specific topical issues within the County require specific study. Plans for such areas and topics are treated as implementing components of the Comprehensive Plan's Goals, Objectives, and Policies. These implementing components are composed of: Agricultural Land Plan, Mountain Land Plan, Berryville Area Plan, Water Resources Plan, Historic Resources Plan, and Public Facilities Plan. Effective implementation of the Comprehensive Plan rests on these components.

The need for a Mountain Land Plan became apparent as people in the community recognized the importance of the mountain to Clarke County as a natural resource, a timber resource, and an environmentally important resource with regard to increases in residential development. The first Mountain Land Plan was adopted in August 1994. The need for an updated Mountain Land Plan has become apparent. Most flat and easily accessible land has been developed. Development is now occurring in mountain areas with increasingly difficult access and terrain challenges that are not adequately addressed in the current Mountain Land Plan.

As an implementing component of the Clarke County Comprehensive Plan, the Mountain Land Plan seeks to describe the mountain environment, to identify the elements that are important to the people of the County with regard to the mountain character, and to outline a plan for future development patterns.

In summary, the updated Mountain Land Plan recommends increasing the minimum lot size, requiring large residual tracts (to encourage the grouping of new lots in a manner that protects the mountain's character), and providing for continued forestry. The standards for private roads are adjusted to improve their safety and limit their impact on the natural terrain. The Plan proposes improved protection of surface and ground water resources. Clearing standards are addressed with regard to slope, property lines, and view shed. Recommendations are made to protect extreme slopes and areas of slippage soils from development, to the maximum extent possible. Forestry issues are addressed as well as cultural and historic resource issues.

CHAPTER III

C. BERRYVILLE AREA PLAN

In 1986, the governing bodies of Clarke County and the Town of Berryville appointed a joint Annexation Committee to study the matter of the Town's annexing areas on its periphery and to draft a proposed annexation agreement. In March 1987, the Committee recommended an annexation agreement for the consideration of the two governing bodies. The County Board of Supervisors and the Town Council approved the annexation agreement on December 29, 1988.

The agreement provided for annexation by the Town of two areas: Area A and Area B. Area A is comprised of parcels that were developed and served by the Town's water and sewer systems as of the date of the agreement. The 350 acres in Area A were added to the Town's 493 acres on January 1, 1989.

The agreement stipulates that several requirements must be met before parcels in the 880-acre Area B can be annexed:

1. A land use plan for this area must be completed and adopted by the County and approved by the Town,
2. Amendments to the Zoning Ordinance and the Zoning Map to implement that plan must be enacted by the County, and
3. The Town provides water and sewer service to proposed development on the parcels.

As of January 1, 2007, the Town has annexed a total of 1,449 acres (or 84 %) of Area B since its establishment in 1989.

On April 21, 1992, the County and Town adopted the Berryville Area Plan, the land use and facilities policy for Annexation Area B. Implementing zoning ordinances were also adopted in April 1992, and properties were rezoned accordingly in July 1993. The Plan was amended in 1997 to show changes in land use policies. This document may be found under separate cover in the County and Town Planning Departments. In 2007, the County and Town plan to start a review and update of this document.

CHAPTER III

D. BUSINESS INTERSECTIONS AREA PLANS

The County has two intersections of major arterial highways that are federally-designated routes: Waterloo (US Routes 50/17 & 340), and Double Tollgate (US Routes 340 & 522) that are uniquely well-suited locations for business activities requiring auto or truck access. Area plans are necessary to insure that appropriate areas of land are provided for such development, that the necessary utility services are available, and that the character of the development enhances the character of the County.

The Waterloo Area Plan was approved in August 1995. The Plan calls for an increase in the area zoned Highway Commercial from 18 acres to 49 acres, an expansion of uses in the Highway Commercial Zoning District, a provision of road networks in the commercial area, and an updating of stormwater management requirements. A copy of the Plan may be obtained from the County Planning Department. Since adoption of the Plan, no new development has been initiated, with just one property, of approximately two acres, redeveloped. No substantial change in the character or circumstances of this area has occurred since the adoption of the Plan, therefore a review and update is not warranted at this time.

The Board of Supervisors adopted the Double Tollgate Area Plan in May 2002. This Plan calls for an increase in the area zoned Highway Commercial at this intersection from 24 acres to 44 acres, establishment of access management standards to protect the carrying capacity of the primary highways, and provision of central water and sewer service. While there has been a substantial increase in the volume of traffic on Route 522, no new private development has occurred since adoption of the Plan. As no substantial change in the character or circumstances of this area have occurred since the adoption of its Plan, a review and update is not warranted at this time.

In December 1995, the Board of Supervisors considered an area plan for the intersection of primary highways U. S. Route 340 and Virginia Route 7 Bypass. Many issues were identified in the planning process, including: diverse land ownership patterns, significant areas prone to flooding, lack of water and sewer service, poor access to primary highways, and interrelationships with the Berryville Area Plan. The Board decided that any action establishing commercial uses at this intersection would be premature until these issues could be efficiently and economically addressed. The appropriate venue for the consideration of these issues would be as part of a future review of the Berryville Area Plan.

CHAPTER III

E. WATER RESOURCES PLAN

The Water Resources Plan is an implementing component of the Comprehensive Plan. It is comprised of two sections, one addressing groundwater resources and the other addressing surface water resources. The Board of Supervisors adopted the groundwater section on October 20, 1998, and the surface water section on December 21, 1999. The following is an overview of these two sections. A copy of the full Water Resources Plan may be obtained from the County Planning Department.

1. Groundwater Resources

The groundwater resources section of the Water Resources Plan covers issues relating to groundwater, including groundwater contamination from non-point sources, protecting the Prospect Hill Spring water supply, and increasing public understanding of the sensitive nature of limestone geology. This section is designed to accomplish Objective 3 in the Comprehensive Plan that states: "Protect natural resources, including soil, water, air, scenery, and fragile ecosystems."

The groundwater resources of Clarke County are particularly susceptible to contamination resulting from human activities, because of the sensitive nature of the aquifers found in carbonate rocks underling the Valley region of the County. Groundwater protection and resource problems are generally greater in areas that are underlain by carbonate rocks, such as limestone and gypsum, than in areas underlain by most other rock types, because of the presence of solution-enlarged sinkholes, conduits, and caves. These geologic features characterize what is called karst terrane. The generally high permeability of these rocks facilitates the infiltration and transport of contaminants from the land surface to the groundwater reservoir.

Three-fourths of the people in Clarke County depend on groundwater as the source of their drinking water. Protecting groundwater from pollution, therefore, has been of primary importance in the County for many years. The urgency, as well as the economics for doing so, was highlighted in 1981, when the Town of Berryville had to abandon the wells that provided its public water supply. The wells had been contaminated by a combination of nitrates, phenols, and herbicides, none of which could be traced to a single point source. Because new wells might later become contaminated, the Town decided to draw its water from the Shenandoah River and to construct a \$1.3 million plant to treat the river water.

Pollution of private wells was recognized as a problem in the 1960s. Pollution sources included improperly installed wells, improperly installed and maintained septic systems, underground storage tanks, and materials placed on the soil surface, including pesticides, herbicides, and human and animal wastes.

The need for potable water in the Boyce-Millwood area led to the creation of the Clarke County Sanitary Authority in 1968. By the mid-1970s, the Authority began supplying water to more than 200 residences and businesses from the high-yielding Prospect Hill Spring. The recharge area of the Spring is now protected by a natural resource conservation overlay district, in which no development may occur that would adversely affect the quantity or quality of the Spring water. In addition, the County has applied for federal designation of the Prospect Hill Spring as a sole-source aquifer.

To minimize the effects of future growth and development, the Planning Commission established a Water Study Committee in 1985. This Committee directs plans and studies aimed at protecting the water resources of the County. Accomplishments of this Committee include the creation of the Clarke County Groundwater Protection Plan (1987), which, in addition to describing the sensitivity of Clarke groundwater, proposed a) an ordinance that limits land use around sinkholes, b) septic system installation guidelines, and c) water-well construction regulations. The Groundwater Protection Plan is a precursor to the groundwater resources section of the Water Resources Plan. The Committee also contracted with the U.S. Geological Survey (USGS) to conduct an in-depth study on the hydrology and quality of groundwater to assist in land use and planning decisions made in the County. This study produced the Water Resources Investigation Report 90-4134 entitled "Ground-Water Hydrology and Quality in the Valley & Ridge and Blue Ridge Physiographic Provinces of Clarke County, Virginia" (Wright, 1990).

2. Surface Water Resources

Surface waters include secondary streams or tributaries, such as the Shenandoah River, the Opequon Creek, and Spout Run (a state-designated trout stream). The surface water resources section of the Water Resources Plan addresses related issues. They include surface water contamination from point and non-point sources, off-stream water use, such as domestic supply and irrigation, and recreational uses. Point-source pollution comes from specific, identifiable sources. Non-point source pollution is caused by diffuse sources such as erosion, runoff, precipitation, percolation, and direct deposition from livestock and wildlife.

The 2000 Bay agreement has resulted in Virginia the establishment of a cap on the total amount of nitrogen and phosphorus that may be discharged from wastewater treatment facilities. The cap is set at the level of those potential pollutants that the Bay can tolerate in correcting its degradation. Most larger wastewater treatment facilities (including Berryville) must upgrade their treatment facilities to achieve much lower discharges of such potential pollutants under individual caps placed on those facilities by the Commonwealth. In any expansion of smaller facilities (Boyce, for example) substantial reductions in the discharge of nitrogen and phosphorus are required.

While nitrogen, phosphorus and sediment non-point source reduction goals have been set for the entire Shenandoah River watershed, no goals have been set as yet for individual counties in the watershed. However, under the coordination of the Department of Conservation and Recreation there is substantial new focus on old programs and the initiation of new programs to achieve the overall non-point source reductions goals which are being carried out by the County and the Lord Fairfax Soil and Water Conservation District. These efforts are focused in the County on (1) Acceleration of Agricultural Best Management Practices; (2) Expansion of Nutrient Management Planning and Implementation Efforts; (3) Consolidation and Strengthening of the Local Stormwater Management Program; (4) Enhancing Implementation of the Local Erosion and Sediment Control Program; (5) Enhancing Outreach, Media and Education Efforts to Reduce Pollution Producing Behaviors.

The Federal TMDL Program is currently being carried out by the Lord Fairfax Soil and Water Conservation District in the Abrams/Opequon watershed where an Implementation Plan has been developed to correct the fecal and sediment impairments in the watershed. Further TMDL Program-related efforts are anticipated shortly in the Wheat Spring Branch, Dog Run and other watersheds in the County. It has not been possible to develop a plan to correct the PCB impairment of the main stem of the Shenandoah River in the County where PCBs are concentrated in river sediments. The River continues under a Health Department Advisory against consuming fish caught in the River because of PCBs. The TMDL-related fecal impairment of Spout Run has been dealt with, at least in part, by the installation of sewer lines in Millwood.

Major fish kills have taken place in the Shenandoah River watershed in 2004-2006 with a dramatic reduction evident in the numbers of small-mouth bass and red-breasted sunfish. The State has established a fish-kill task force and a major effort is underway to determine the cause and find a solution to this serious environmental problem. An update of the Water Resources Plan should occur in 2009.

CHAPTER III

F. HISTORIC RESOURCES PLAN

Historic and natural resources define the physical character of Clarke County. The County's documented historic and cultural resources originated with Native Americans, thought to have been present as long as 100 centuries ago, and Europeans and Africans, who arrived almost three centuries ago and established the current settlement pattern. Over the past 270 years, Clarke County has evolved from a rural frontier to part of the Washington Metropolitan Area. The County intends to retain its historic resources and guard its unique character from the ever-increasing pressure of cultural homogenization.

To protect its historic resources, the County amended its zoning ordinance to establish a historic preservation commission and local historic district regulations. To encourage the preservation of these resources, the County amended its tax regulations to allow a freeze on property tax assessments for rehabilitated historic properties. In 1989 and 1992, the County conducted two surveys that documented the 962 historic structures and sites in Clarke County dating from 1710 to 1943.

The Commonwealth of Virginia helps protect historic resources by enabling local governments to have local regulations, providing grants for historic research and building rehabilitation, and providing tax credits for building rehabilitation. In addition, the U.S. Government also encourages historic structure rehabilitation through grants and tax credits. Virginia and the U.S. Government have established, respectively, the Virginia Landmarks Register and the National Register of Historic Places to list, and thereby recognize, specific historic resources. In Clarke County, 28 properties are listed individually on these registers, including two national historic landmarks. In addition, seven national register districts cover a total of 33,750 acres (53 square miles or 27% of the County) and contain 1,478 contributing structures and sites.

The policies and provisions addressed above are described in full in the Historic Resources Plan. This Plan was first adopted in August 1994, readopted in March 2001, and is proposed for readoption as part of the 2007 Comprehensive Plan.

CHAPTER III

G. CAPITAL IMPROVEMENT PROGRAM

The intent of the Capital Improvements Program is to provide an outline of potential facility and services needs based upon the goals outlined in the Comprehensive Plan.

The Capital Improvements Program is a planning tool. Capital expenditures are authorized through the annual operating budget as capital outlays. This Program does not bind the Board of Supervisors to carry out any of the proposed projects, nor does it appropriate or require the expenditure of money. The Capital Improvements Program also provides the basis for evaluating proffers associated requests to amend the County Zoning Districts Map. Proffers benefiting public services should be favorably considered only if they fully address the capital costs incurred by the proposed use.

The following principles have been used to identify Program elements:

1. Capital improvements and public services shall be provided to the citizens of Clarke County in the most timely, efficient, economical, and equitable manner possible.
2. The locations of new capital improvements shall be within the designated growth area, in accord with the Comprehensive Plan.
3. All capital improvements shall enhance the quality, identity, and appearance of established neighborhoods, while preserving the County's natural, cultural, and historic resources.

Capital improvements provide a base for essential services provided by the County to its citizens. These services include education, police and fire protection, and solid waste collection and disposal. In addition, they provide a base for community services such as social services, parks and recreation, and library services.

Because provision of public facilities can influence when and where development will take place, they are very important growth management tools. Sufficient planning for future public facility needs is essential to provide them in the most efficient and equitable manner. Responding to the goals and objectives outlined in the Comprehensive Plan can best do this.

The construction, operation, and maintenance of public facilities are very expensive, and there is never enough money at any time to meet all demands for new and expanded facilities. Directing development to areas where facilities are already available or planned allows such facilities to be utilized more fully. In contrast, scattered development increases the demand for capital improvements and public services over a larger area, dramatically increasing public costs. Therefore, capital improvements and public services should be provided in areas designated for growth by the Comprehensive Plan.

This Capital Improvements Program is a plan to guide the construction or acquisition of capital projects over the next ten years. It identifies needed capital projects, estimates their costs, sorts them by the year, and, in many instances, identifies sources of funding other than County revenues. The Program time schedule may change, depending on new information, availability of funds, population changes, or unexpected circumstances.

The 2001 Comprehensive Plan included the complete CIP. As of January 2007, a new CIP is under development and review. It is planned for public hearing and adoption in the first and second quarters of 2007.

CHAPTER III

H. TRANSPORTATION PLAN

Virginia Code Section 15.2-2223 states:

“The comprehensive plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement, shown on the plan and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use as the case may be.

The comprehensive plan shall include a transportation element that designates a system of transportation infrastructure needs and recommendations that shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities. The Virginia Department of Transportation shall, upon request, provide localities with technical assistance in preparing such transportation element.

The plan shall include: a map that shall show road improvements and transportation improvements, including the cost estimates of such road and transportation improvements as available from the Virginia Department of Transportation, taking into account the current and future needs of residents in the locality while considering the current and future needs of the planning district within which the locality is situated.”

Virginia Code Section 15.2-2224 states:

“In the preparation of a comprehensive plan, the local planning commission shall survey and study ... road improvements and any estimated cost thereof, transportation facilities, transportation improvements,”

The highlighted sections were effective the first of July 2006. As of January 2007, a new Transportation Plan, in compliance with these sections, is under development and review. This new Plan will be the eighth implementing component of the County Comprehensive Plan. It is planned for public hearing and adoption in the second quarter of 2007.

CHAPTER III

G. CAPITAL IMPROVEMENT PROGRAM (amended 2007 August 21)

The intent of the Capital Improvements Program is to provide an outline of potential facility and services needs based upon the goals outlined in the Comprehensive Plan.

The Capital Improvements Program is a planning tool. Capital expenditures are authorized through the annual operating budget as capital outlays. This Program does not bind the Board of Supervisors to carry out any of the proposed projects, nor does it appropriate or require the expenditure of money. The Capital Improvements Program also provides the basis for evaluating proffers associated requests to amend the County Zoning Districts Map. Proffers benefiting public services should be favorably considered only if they fully address the capital costs incurred by the proposed use.

The following principles have been used to identify Program elements:

1. Capital improvements and public services shall be provided to the citizens of Clarke County in the most timely, efficient, economical, and equitable manner possible.
2. The locations of new capital improvements shall be within the Comprehensive Plan designated growth areas: the Town of Berryville and its established annexation area, the Waterloo Exclusive Service Area (the area zoned Highway Commercial at the intersection of Routes 17, 50, and 340, the Double Tollgate Exclusive Service Area, (the area zoned Highway Commercial at the intersection of Routes 277, 340, and 522), the Town of Boyce, and the West Berryville Exclusive Service Area (Chet Hobert Park and Clarke County School Board property).
3. All capital improvements shall enhance the quality, identity, and appearance of established neighborhoods, while preserving the County's natural, cultural, and historic resources.

Capital improvements provide a base for essential services provided by the County to its citizens. These services include education, police and fire protection, and solid waste collection and disposal. In addition, they provide a base for community services such as social services, parks and recreation, and library services.

Because provision of public facilities can influence when and where development will take place, they are very important growth management tools. Sufficient planning for future public facility needs is essential to provide them in the most efficient and equitable manner. Responding to the goals and objectives outlined in the Comprehensive Plan can best do this.

The construction, operation, and maintenance of public facilities are very expensive, and there is never enough money at any time to meet all demands for new and expanded facilities. Directing development to areas where facilities are already available or planned allows such

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I. PUBLIC SAFETY

A. Emergency Service Substation: Building to garage an ambulance, and provide workspace for emergency medical technicians to reduce response times to emergencies.

Source: County Funds.

B. Circuit Courthouse Addition for Public Safety. Addition of Public Safety Personnel over the next 10 years will require an addition to the Circuit Courthouse.

II. PARKS AND RECREATION PROJECTS

A. Gymnasium Addition to Recreation Center: One full size gymnasium addition with goals, bleachers, dividing curtain, volleyball equipment, score clock, wall mats and floor covering.

Source: County Funds and Fundraising

B. Senior Center: A 5300 sq. ft. addition onto the north side of the Clarke County Recreation Center. Cost will cover all building costs, site work, parking area (to include paving, striping, wheel stops and signage) and landscaping. Included in new area will be a commercial kitchen, large meeting room, office, storage rooms, pantry and health room.

Source: \$225,000 County Funds, \$772,500 Shenandoah Area on Aging Donation

C. Restrooms:

1. *West Side of Park.* Purchase pre-fabricated concrete restrooms for the area near Soccer Field #1. Cost will include site work as well as electrical and plumbing hook-up.

Source: County Funds

2. *Main Playground in Park.* Purchase pre-fabricated concrete restrooms for the area near Soccer Field #1. Cost will include site work as well as electrical and plumbing hook-up.

Source: County Funds

D. Site Work on New Portion of Park: Land to the South of Soccer Field #1 will be flattened to serve as athletic fields. A portion of leveled land will be used to establish asphalt ready parking area.

Source: County Funds, Donation from Clarke County Youth Soccer

E. Athletic Fields:

1. *Multipurpose Field #1.* Construct one 240' x 360' field with irrigation and circulation path. Field will be located on west side of Park.

Source: 50% Virginia Outdoors Fund, 50% County Funds

2. *One Little League Baseball Field.* One 200' radius fenced field in area to rear of park where soccer fields were before they moved to west side of Park.

Source: 50% Virginia Outdoors Fund, 50% County Funds

3. *Multi-Purpose Athletic Field #2.* One 240' x 360' irrigated multi-purpose athletic field with circulation paths.

Source: 50% Virginia Outdoors Fund, 50% County Funds

4. *Multi-Purpose Athletic Field.* One 240' x 360' irrigated multi-purpose athletic field with circulation paths.

Source: 50% Virginia Outdoors Fund, 50% County Funds

F. Bandstand and Shelter for Inside of Park Circle: One ADA accessible shelter with stainless steel grill, picnic tables, trashcans and cigarette urns. One stage area for summer concerts and performances.

Source: County Funds

G. Concession Stand at Soccer Complex: One ADA accessible shelter with stainless steel grill, picnic tables, trashcans and cigarette urns. At one end of shelter will be enclosed concession area for the new facilities added to the west side of park.

Source: County Funds

H. Tot Lot at West Side of Park: One small multi-age playground to next to shelter/concession area on west side of Park..

Source: \$20,000 Grants, \$35,125 County Funds

I. Parking:

1. *New Multipurpose Field.* Establish asphalt-ready parking area with curb stops for new multi-purpose field.

Source: County Funds

2. *Tennis Court Parking.* Parking for tennis courts, Kiwanis Shelter, and main playground.

Source: County Funds

J. Storage Buildings: One building to house maintenance machinery and equipment.

Source: County Funds

K. Court Games/Skating Area/Horseshoe Pits. Construct an asphalt and concrete street skate and roller hockey area, outdoor basketball area, and horseshoe pit area with control fencing, lighting and parking;

Source: 50% Virginia Outdoor Fund, 50% County Funds

L. Park Office: A 2303 sq. ft. addition onto the Recreation Center to replace Park Offices.

Source: County Funds

M. Pool Renovation and Expansion: Renovate existing pool pump house, locker room facilities, office and concession area as well as to change outdated filtration system and add a 4-lane 25- meter pool and baby pool.

Source: 20% Virginia Outdoors Fund, 80% County Funds

N. Field Lighting:

1. *Light Hobert Field* with 50 (infield)/30 (outfield) foot candles.

Source: County Funds

2. *Light Field 3* with 50 (infield)/30 (outfield) foot candles.

Source: County Funds

3. Additional Field Lighting.

Source: County Funds

O. New Baseball Field Parking: Parking addition to accommodate new baseball field. Asphalt-ready with curb stops.

Source: County Funds

P. New Parkland Acquisition: Purchase property throughout Clarke County to supplement park space. Target areas of Boyce and White Post.

Source: County Funds

III. COMMUNITY DEVELOPMENT

A. Economic Development Projects:

1. *Community Facilities.* Projects designed to improve public access to County resources, thereby improving industry, commerce, agriculture, and tourism.

2. *Real Property Purchase.* Strategic purchase of easements or parcels for access or enlargement of usable site.

3. *Jack Enders Boulevard Extension.* Extend Jack Enders Boulevard westward to Route 340 to promote industrial development.

B. Maintenance Building Addition: Expands the current Maintenance Building to accommodate larger shop space and storage space.

Source: County Funds

C. Courthouse Complex Parking: Repaving of existing parking, expansion of parking to the east, stormwater solution, and traffic reconfiguration.

Source: County Funds

IV. EDUCATION

PROGRAM

The Clarke County School Division's basic operating premise is that all children will learn at high levels. To achieve this, the School Board has identified the following supporting priorities:

- ◆ Obtain, educate and retain a dedicated staff
- ◆ Provide challenging opportunities for students and support them in pursuing these challenges
- ◆ Vigorously pursue community support and involvement
- ◆ Foster an innovative environment within the school system

Associated with these priorities are several policies that enhance the ability of the school division to meet its goal, as well as to provide parents with choices within the school division. Among these is an open enrollment policy at the elementary level, allowing parents the freedom of choice within the division's elementary schools. Another is committed support of pre-K programs currently located at Berryville Primary School. The pre-K programs are Headstart, Be4, and Early Childhood Special Education. These programs prepare young children with a variety of needs to enter Kindergarten. Inclusion of these early childhood programs increases the demand on facilities, but the observed benefits to the entire division far outweigh the cost. Finally, D. G. Cooley Elementary School offers a multi-age program (K - 1st, 2nd - 3rd, and 4th - 5th), as well as traditional classes.

CURRENT AND PLANNED FACILITIES

The County's public schools contain a high school, Clarke County High School (grades 9 - 12), a middle school, Johnson-Williams Middle School (grades 6 - 8), and three elementary schools: Boyce (grades K - 5), D. G. Cooley (K - 5), and Berryville Primary (grades pre-K - 1). Available capacity within the division increased by 118 students in 2000, with the completion of the Johnson-Williams renovation. Construction of a new Clarke County High School is scheduled to begin in 2007 with completion in 2009. Conversion of the current high school into an elementary school is then planned to serve students now at Cooley Elementary plus some students that would have attended Boyce Elementary School. Primary School students would then be transferred to the current Cooley Elementary. An Alternative Education program is offered in the F&M Bank building located in Berryville and leased from the Clarke County Education Foundation.

The School Division has three non-instructional buildings, including the School Board Office and Pupil Support Annex; both are located adjacent to Berryville Primary. The Transportation and Maintenance departments use the third building, which is south of the High School. The

County government and the Joint Administrative Services Purchasing Office and Central Store jointly occupy this building. It was completed in November 1999 and is owned by the County.

FACILITIES CAPACITY AND ENROLLMENT

Clarke County is experiencing slow but consistent growth. Enrollment has been increasing at a relatively consistent rate of about 2% a year. The Weldon Cooper Center at the University of Virginia predicts that this rate of growth will slow reflecting the national trend in birth rates. However, the population increase from new single-family residential development in the Berryville Annexation Area has balanced this national demographic trend. Rapid growth in housing and population occurred in the first half of the current decade followed by much slower growth since 2005.

	Fall 2006	Fall 2006	Fall 2011	Fall 2011
School	Capacity	Enrollment	Capacity	Enrollment
New Clarke County High School	N/A		800*	840**
Clarke County High School <i>Converted to Elementary School</i>	456	775	450	395
Johnson-Williams Middle School	530	515	530	527
Boyce Elementary School	400	379	400	357
D. G. Cooley Elementary School <i>Converted to Primary School</i>	246	392	300	278
Berryville Primary School	185	252	N/A	
Total	1,817	2,313	1,850	2,397

* with expansion potential to 1000

**declining enrollment projected for subsequent years.

The capacity shortfall within permanent facilities is being dealt with through the use of mobile classrooms.

PROJECTS

The new high school project is underway and is not included in the following list of future projects.

- A. **DG Cooley Gymnasium:** New Gymnasium with bathroom facilities.
- B. **Renovate Current High School to Elementary:** Convert existing high school to Elementary school, with students moved from Cooley and +/-35 voluntary transfer students moved from Boyce. All temporary classrooms removed save one.
- C. **DG Cooley Elementary School Renovation:** Renovation for use as primary school. All but two temporary classrooms removed.
- D. **New High School Addition:** Construction of VOTECH building
- E. **Primary School Renovation:** Renovation for use as School Board offices.

F. Additional Playing Fields at New High School: New practice fields.

CHAPTER III

H: TRANSPORTATION PLAN (amended 2007 June 29)

This Transportation Plan serves as a component of the Clarke County Comprehensive Plan and presents specific transportation policies and construction projects for the County. These policies and projects are intended to result in the movement of people and goods in the county in a manner that is safe and efficient, is beneficial to the local economy and quality of life, and has minimal environmental impacts. This Plan is established in response to the Code of Virginia (including §§15.2-2223, 2224, and 2232.C) that requires inclusion of transportation elements in a jurisdiction's comprehensive plan. This Plan is also established to implement Policy 10 of Objective 9 of the 2007 County Comprehensive Plan, which states: "Maintain the existing primary road system at its present level and upgrade it only for safety purposes or planned traffic increases to the extent funds are provided by the Virginia Department of Transportation. Maintain the existing secondary road system at its present level and upgrade it only for safety purposes to the extent funds are provided by the Virginia Department of Transportation. Additional transportation planning policies may also be established in area plans for the County's designated growth areas."

Alternative Transport Modes

Alternative modes of transportation to single occupancy vehicles are necessary to provide options for those citizens of the County who do not have access to their own vehicles, to provide options to petroleum based transportation (given the issues of increasing costs, dependence on foreign oil, and environmental impacts), and to provide recreational opportunities. VDOT's role in providing transportation services to the County has been focused on moving cars and trucks on highways. However, the County Board of Supervisors currently subsidizes a circulating bus, supplied by Loudoun Transit, to provide limited on demand service in Berryville and weekly trips to Winchester. The Town of Berryville and Clarke County constructed a bike/pedestrian path on the north side of West Main Street from the west side of Town to the West Main and Westwood Road intersection, adjacent to Cooley Elementary School and has used VDOT Revenue Sharing Funds (50% local money matched with state money) to extend sidewalks. Private cycling organizations have developed maps of routes conducive to long-distance recreational cycling.

These limited efforts at non-vehicular transportation modes will remain limited due to the relatively low-density development patterns in Berryville, the rural nature of the County, and the limits on fiscal resources. However, the 2007 County Comprehensive Plan Objective 7, which provides for the Berryville Growth Area, was modified to include Policy 2, which states: *"Apply the following land-use and design principles to development in the Berryville Growth Area:*

- *Provide for a mixture of complimentary land uses;*
- *Create a range of housing opportunities and choices, including an appropriate level of affordable housing;*
- *Create walkable neighborhoods;*
- *Encourage a variety of transportation choices;*

- *Promote compact, efficient land use and building design that maximizes green space and minimizes road and utility costs; and*
- *Foster distinctive and attractive communities with a strong sense of place."*

As development in the Berryville area continues, in accord with this policy, provision for non-vehicular transportation modes should become more viable.

Highways

Public highway maintenance and new construction are the responsibility of the Virginia Department of Transportation with funding as provided by Virginia General Assembly. No local revenue (except as noted below) is used to maintain and construct public roads. The Virginia Commonwealth Transportation Board and the VDOT Luray Resident Administrator seek the recommendations of the Board of Supervisors when prioritizing its maintenance and construction activities in the two annually updated VDOT road construction plans, one for Primary Highway and the second for Secondary Highways. To develop its priority recommendations, the Board holds public hearings, seeks the recommendations of the Planning Commission, and consults the Comprehensive Plan and this document. Due to the limited funding for these Road Plans, it is not expected that construction of any of the projects recommended below will begin in the current decade.

The Primary and Secondary Road Plans are the primary source of funding for road projects. In the past, the County has obtained Industrial Access Funds (now known as Economic Development Funds) for road improvements in the County Business Park and Rural Addition Funds for improving existing private roads so that their maintenance may be assumed by VDOT. The Towns of Berryville and Boyce have obtained Revenue Sharing Funds for sidewalk and drainage improvements in their communities. However, the Economic Development and Rural Addition programs are currently very limited sources of funding due to state transportation budget constraints. state-wide competition for these funds is very strong and the state has set a minimum of \$1,000,000 as the local share for Revenue Sharing projects, meaning projects have to have total cost in excess of \$2,000,000 before they are considered eligible. Additional state money may be allocated to these programs in the future, making them potential sources for future projects.

In order to prioritize which roads receive the limited resources devoted to highway improvements, the following criteria are established. They are not listed in any order.

Priority Criteria

Road Safety: *Road sections with accident death rates or personal injury rates higher than the County average for all highways*

By this criteria the following primary routes have safety issues:

- Route 7 (Harry Byrd Highway) for its entire 14 mile length in the County with a death rate higher than average between its intersection with Route 7 Business (West Main Street) and Route 608 (Wickliffe Road) and between Route 670 (Pine Grove Road) and

the Loudoun County border. The remaining segments of Route 7 have personal injury rates higher than the County average.

- Route 50 (John Mosby Highway) between the Frederick County line and Route 255 (Bishop Mead Road) and between Route 723 (Millwood Road) and the Loudoun County line with a personal injury rate higher than county average.
- Route 340 (Lord Fairfax Highway) with the accident death rates higher than the County average for the two mile segment north of Berryville between its intersection with Route 7 and Warner Washington Lane and on the two mile segment of Route 340 east of the Double Tollgate intersection to Route 658 (White Post Road). The personal injury rates are higher than average on Route 340 between Route 658 and Route 620 (Pyletown Road).
- The two mile segment of Route 522 (Stonewall Jackson Highway) between the Warren County line and the Double Tollgate intersection, with personal injury rates are higher than average.

The sections of secondary highways with accident death and/or personal injury rates higher than the County average are:

- The six mile segment of Route 601 (Blue Ridge Mtn. Road) between Route 50 (John Mosby Highway) and Route 650 (Mt. Weather Road) [higher death rate].
- The two mile segment of Route 613 (Springsbury Road) between Route 621 (Lockes Mill Road) and Route 647 (Possum Hollow Lane) [higher death rate].
- The seven mile segment of Route 606 (Mount Carmel, Feltner, and River Roads) north of Route 50 (John Mosby Highway) to Route 607 (Saw Mill Hill Road) [higher personal injury rate].
- The two mile segment of Route 723 (Millwood road between Route 255 and Route 50 [higher personal injury rate]
- The three mile segment of Route 658 (White Post Road between Route 340 and the Warren County line) [higher personal injury rate, and
- The two mile segment of Route 657 (Senseny Road from Route 349 to Route 652 (Janeville Road) [higher personal injury rate].

Traffic Volume: Increases in Traffic Volume by more than 5% per year over a ten year cycle

Significant increases in traffic volumes were seen on the following Primary Highways:

- Traffic volume on Route 7 between the Frederick County and Route 340 increased by more than 100% between 1995 and 2005 and increased by more than 50% east of Route 340.
- Traffic volume on Route 340 between Route 7 Bypass and Route 611 (Summit Point Road) increased by more than 100% and by more than 50% north Route 611 to the Jefferson County line. It increased by more than 50% between Route 255 (Bishop Meade Road).
- Traffic volume on Route 522 between the Warren County line and Ray of Hope Lane (access to the White Post correction facility) increased by more than 50%.

Significant increases in traffic volumes occurred on the following Secondary Highways:

- Increases of at least 100% on:
 - Route 612 (Shepherds Mill Road)

- Route 632 (Triple J Road)
- Route 636 (Westwood Road)
- Route 657 (Senseny Road) between Routes 340 and 636 and between Route 632 and 634 (Salem Church Road)
- Increases of at least 50% on:
 - Route 601 (Blue Ridge Mountain Road)
 - The remaining sections of Route 657 not described above
 - Route 723 (Old Winchester Road) west of the Town of Boyce

Designation:

- a. For Primary Highways
Principal Arterials receive preference over Minor Arterials
- b. For Secondary Highways
Major Collectors receive preference over Minor Collectors
Minor Collectors receive preference over Local highways

Public Need: Proposed road serves a public facility or implements a Comprehensive Plan policy

Deferred Costs: A professional assessment of increased maintenance costs due to insufficient construction

Recommended Project Priorities

Based on the criteria for road improvements, the following improvement projects are recommended. The VDOT Luray Resident Administrator's office provided the cost estimates. These cost estimates are an educated guess and are the best approximation available based on general information.

Future projects to improve safety and allow for higher volumes of traffic on primary highways should include higher standards of access management (allowing fewer, better designed points of access) and closing low-volume median crossings (providing access to no driveways or driveways with a few number of houses).

Primary Highways

Current Project

Waterloo Intersection (Rts. 50, and 340)

What needs to be done:

Upgrade Rt. 340 (Lord Fairfax Highway) to 4 through lanes within a quarter mile of the intersection and expand the turn lanes on these routes as well as the East/West Routes 50 (John Mosby Highway). The Preliminary Engineering Study is well underway. Continued funding of the preliminary engineering should be provided. It is time to schedule funding for right of way and construction. The County will work with developers to get any needed additional right of way and turn lane improvements through the site plan process.

Why this project is needed:

This intersection has been targeted for commercial development by the County Comprehensive Plan. Sewer and water are available and the area is witnessing growth. Traffic has become a problem and safety will be at risk until upgrades have been completed.

Priority Rating

All routes at this intersection are minor arterials. In 2005, there were 12,000 trips per day on Routes 50 and 8,700 VPD (vehicles per day) on Route 340. From 1995 to 2005 traffic on Rt. 340 increased 33% and was essentially flat on Rt. 50. The rate of accidents with personal injuries was higher on these routes than the County average. The Comprehensive Plan designates this intersection as a commercial growth area.

Cost and Time on list:

The VDOT estimated preliminary engineering cost is \$731,000. \$364,000 has been allocated (\$254,000 for the current year, \$110,00 in the previous year). This project has been on the County list of priorities since 1992.

New Projects

1. Rt. 340 (Lord Fairfax Hwy.) and Rt. 657 (Senseny Rd.) intersection ½ mile south of Berryville

What needs to be done:

A left turn lane needs to be built for northbound traffic on Rt. 340 (Lord Fairfax Highway), a two-lane highway, at its intersection with Rt. 657 (Senseny Road). This lane can be installed on existing right of way with little adjustment needed, resulting in cost savings.

Why this project is needed:

- Due to a curve on Rt. 340 the sight distance to this intersection is less than 2/10ths of a mile. When a vehicle stops in the northbound lane to make a left turn onto Rt. 657, it puts itself in the position of being rear-ended; this is a very dangerous intersection. Since May 2000, there have been 17 accidents, 8 persons injured, and over \$90,000 of property damage as well as many more unreported minor accidents. The potential for a fatality is great and can be avoided.
- School buses from the southern 2/3 of the County travel Rt. 340 to get to the County high school. All of these school buses turn left onto Rt. 657 and have to wait in the one lane of traffic for oncoming traffic to clear. One of these school buses will be rear-ended if nothing is done soon.

Priority Rating

Rt. 340 is a minor arterial and Rt. 657 is major collector. In 2005, there were 10,200 VPD on this portion of Route 340 and 1,300 VPD on Route 657. From 1995 to 2005 traffic on Rt. 340 north and south of this intersection increased 57%, Rt. 657 increased by 106%. The rate of accidents with personal injuries was higher on Rt. 657 than the County average. This intersection provides access to county school facilities and the largest growth area designated in the Comprehensive Plan.

Cost and Time on list:

The VDOT estimated cost of this improvement is \$400,000 to \$500,000, depending on the final design. This project has been on the list of priorities since 1998.

2. Rt. 7 Bus. (West Main St.) / Rt. 636 (Westwood Rd.) intersection on west side of Berryville

What needs to be done:

This project is the most important component of priority 5 below, which is the upgrading Rt. 7 Business (West Main Street) on the west side of Berryville to a 3 lane roadway with curb, gutter, sidewalks, signalization and turn lanes at major intersections. This intersection sits mid-way on this section of West Main and is the key component of a safe and efficient highway. A new county high school is under design for a site ½ mile south of the intersection and the adjacent existing high school is to be reused as a expanded elementary school. The improvement of this intersection is essential for safe access to these new facilities. Proffers/site plan improvements/subdivision improvements will be requested from developers if there is a study that supports VDOT's need for a wider right-of-way.

Why this project is needed:

This area is heavily traveled by cars, trucks and children (on foot and bicycle):

- There are currently 4 schools in the area (2 elementary, 1 middle school, and a high school), specifically an elementary school and the high school are in the southwest corner of this intersection.
- The 60-acre County Park (with a Recreation Center and ball fields) is located on the south side of West Main.
- The 52-acre Ruritan County Fair Grounds is located on the north side of West Main.
- Berryville is designated the County's growth area in our Comprehensive Plan. The goal is to create a community conducive to walking and biking and between the Town and the County's School and Park complex.
- There are two active residential subdivisions (totaling 640 dwellings) and 46 acres of commercial zoning along the corridor.

The new developments are home to a large number of children. To get to school or the park, many of these children are currently trespassing over private property and/or walking along the two-lane business route through this intersection. Neither activity is safe or wise.

Priority Rating

Rt. 7 Business is a major collector. Rt. 636 is a minor collector. In 2005, there were 7,200 VPD on this portion of Route 7 Business. From 1995 to 2005 traffic on Rt. 7 Business, east and west

of this intersection was essentially flat due recently opened nearby collector roads. However, the more than 1,000 VPD on Rt. 636 south of the intersection represent an increase of 104%. This intersection is the western access to Berryville, the largest growth area designated in the County Comprehensive Plan. Rt. 636 is the primary access to the County High School and one of its elementary schools.

Cost Time on list:

The VDOT estimated cost of this project is \$1,000,000 and the project has been on the list of priorities since 1997. This intersection project has been singled out in order to advance its potential for design and construction.

3. Rt. 7 (Harry Byrd Hwy.) / Rt. 612 (Shepherds Mill Rd.) intersection 3 miles east of Berryville

What needs to be done:

This intersection is unsafe due to sight distance and increases volume of traffic. The grade on west bound Rt. 7 needs to be changed. A dip in west bound Rt. 7, just east of the intersection, cause cars to disappear to motorists turning north on to Rt. 612. In addition, there are no right turn lanes for movements between 7 and 612. A light for this intersection is also warranted as Rt. 612 provides a direct connection to Rt. 340 north. The significant amount of development around Charles Town in Jefferson County, West Virginia that is discouraged to travel through Loudoun County because of congestion on Route 9 is now using Rt. 612 and Rt. 7 as its access to Northern Virginia.

Why this project is needed:

Since January 2003 there have been 8 accidents (with 2 injuries) immediately at this intersection. There are no lights for 15 miles east of this intersection and for 3 miles west of this intersection, so actual speeds are well in excess of the posted limit. The combination of poor sight distance, lack of turn lanes, and high speeds make a fatal accident inevitable.

Priority Rating

Rt. 7 is a principal arterial. Rt. 612 is a minor collector. This section Route 7 had 23,500 VPD in 2005, a 10 year increase of 68%. The 1300 VPD on Rt. 612 have increased 187% over 10 years. This segment of Route has a personal injury rate greater than the County average.

Cost and Time on list:

VDOT has estimated the cost of this project as \$1,000,000. This project has been on the list of priorities since 2006.

4. Double Tollgate (Intersection of Routes 277, 340, and 522)

What needs to be done:

The East/West Routes 277/340 (Lord Fairfax Highway) crossing at this intersection need to be upgraded to 4 through lanes and the turn lanes expanded on these routes as well as the North/South Routes 340/522 (Stonewall Jackson Highway).

Why this project is needed:

- The intersection is poorly designed and dangerous. Application of access management design concepts should be incorporated into the redesign of this intersection.
- Since May 1999, there have been 66 accidents at this intersection, with 1 fatality, 38 injuries, and almost \$300,000 of property damage.

- Safety improvements have been made to improve signalization and extend existing turning lanes. But, these changes are the minimum necessary to address current traffic volumes. The intersection remains congested and dangerous at peak hours. During peak travel periods East/West and North/South traffic is often delayed several light changes. At times there is a back up of 400 feet or more at the intersection.
- The Double Tollgate area has been targeted for growth by Clarke, Frederick, and Warren Counties.
 - Several manufacturing plants and distribution centers, as well as Virginia's Inland Port, are located south of Double Tollgate in Warren County, so there is already heavy truck traffic at the intersection. Additional significant growth is planned for northern Warren County along Rt. 340/522 with over 1,000 acres zoned Industrial and hundreds of acres planned for commercial and residential uses. Warren County's Rt. 522 Corridor Study predicts 108,000 VPD on Rt. 340/522 when this zoning is built out.
 - A 1 million square foot distribution center located 2 miles north of this intersection on Route 522 in Frederick County was completed in 2005. The traffic study for this project states that this intersection will be at a Level of Service F in 2007. And, about 5,000 new homes are scheduled to be built in Frederick County near Double Tollgate, including 2,200 homes (plus retail) in the Shenandoah development (surrounding Lake Frederick State Park) with access off Route 522 in Clarke County. This project alone will generate 25,000 trips per day. In Warren County, two miles south of this intersection, millions of square feet of industrial and commercial projects and thousands of residential units have been completed or are under construction. This development will significantly add to the volume of traffic on this route.
 - Frederick County has asked the Commonwealth to widen Rt. 277 west of this intersection. A section of this request is in the preliminary engineering process now. This project will attract more cars and trucks and head them towards Double Tollgate.
 - In Clarke County 44 acres at the intersection are zoned for highway commercial uses.
- The situation is bad now and will worsen quickly if nothing is done.

Priority Rating

Rt. 522, north and south of this intersection is a minor arterial. Routes 340 and 277 to the east and west, respectively, are minor arterials. In 2005 there were 18,000 VPD at this intersection traveling north/south on Routes 340/522 and 7,700 VPD traveling east/west on Routes 277/340. From 1995 to 2005 traffic on Rt. 522 increased 90%, Route 340 east of intersection increased 18%. Accidents on Route 522 south of this intersection had a personal injury rate higher than the County average. Accidents on Route 340 east of this intersection had a death rate higher than the County average. The Comprehensive Plan designates this intersection as a commercial growth area.

Cost and Time on list:

The VDOT cost estimate is \$4,500,000. This project has been on the County list of priorities since 1997.

5. Rt. 7 Business on the west side of Berryville (approx. 1.2 miles of Primary Highway)

What needs to be done:

Rt. 7 Business (West Main Street) on the west side of Berryville needs to be upgraded to a 3 lane roadway with curb, gutter, sidewalks, signalization and turn lanes at major intersections. The design should also contain a bike trail connecting the town, schools and the County Park.

Why this project is needed:

This area is heavily traveled by cars, trucks and children (on foot and bicycle):

- There are currently 4 schools in the area (2 elementary, 1 middle school, and a high school), specifically an elementary school and the high school are in the southwest corner of this intersection.
- The 60-acre County Park (with a Recreation Center and ball fields) is located on the south side of West Main.
- The 52-acre Ruritan County Fair Grounds is located on the north side of West Main.
- Berryville is designated the County's growth area in our Comprehensive Plan. The goal is to create a community conducive to walking and biking and between the Town and the County's School and Park complex.
- There are two active residential subdivisions (totaling 640 dwellings) and 46 acres of commercial zoning in the area.
- In 2005, there were 7,400 VPD on this portion of Route 7 Business.

Timing is important:

The new developments are home to a large number of children. To get to school or the park, many of these children are currently trespassing over private property and/or walking along the two-lane business route. Neither activity is safe or wise.

Priority Rating

Rt. 7 Business is a major collector. From 1995 to 2005 traffic on this Rt. 340 remained essential flat at 7,200 VPD because of the construction of Mosby Boulevard and Jackson Drive that function as collector roads. However, this route serves as the western entrance to the largest growth area designated in the Comprehensive Plan and the principal access to the County High School and one of its elementary schools.

Cost and Time on list:

VDOT's estimated cost is \$6,000,000. This project has been on the list of priorities since 1993.

6. Rt. 340 Drainage in the Town of Boyce

What needs to be done:

The storm water run-off from U. S. Route 340 (Greenway Avenue) in the Town of Boyce runs off through modest above ground channels swales installed at time of original road construction in the 1960s without any detention facilities. This drainage should be placed underground in adequately designed facilities so as to preclude flooding of private property and tie into proposed drainage improvements for Route 723.

Why this project is needed:

- The uninhibited stormwater flow off Rt. 340 traverses seven private properties above ground and then empties onto the pavement of Route 723 (East Main Street). These

private properties are developed residential lots and drainage runs through the yards of these homes. During intense annual storm events these yards are usually flooded.

- The Town of Boyce is seeking to improve East Main Street, the traditional commercial center of the Town. The Town is seeking Secondary Road funds to upgrade this section to contemporary engineering standards for traffic flow, stormwater, on-street parking, and pedestrian facilities. Addressing the drainage from Rt. 340 that traverses the private properties before flowing onto East Main Street is a critical element. Preliminary engineering work by the Town's engineer estimates the cost of the Rt. 340 stormwater improvements as \$350,000.

What has been done so far:

VDOT has approved a \$144,000 Revenue Sharing Project with the County and the Town of Boyce to start work on drainage improvements along Rt. 723. The limited amount funds will be focused on drainage problems at the lowest elevation of East Main Street adjacent to the Norfolk Southern Railroad. Engineering design of the storm water element should be completed by the first quarter of 2008.

Priority Rating

Rt. 340, the source of much of the drainage flowing through the center of the Town of Boyce, was constructed 50 years ago without storm water detention facilities. With the construction of central water (in the 1970s) and sewage treatment facilities (in the 1990s), the Town is experiencing significant residential infill. The lack of central storm water facility is becoming an increasing issue for the Town. The Comprehensive Plan recognizes the Town as one of the areas where growth should be accommodated.

Cost and Time on list:

The VDOT cost estimate is \$750,000. This project has been on the list of priorities since 2003.

7. Rt. 7 Business on the east side of Berryville (approximately .94 miles of Primary Highway)

What needs to be done:

Rt. 7 Business (East Main Street) on the east side of Berryville (from T-615 to Rt. 7 Bypass) needs to be upgraded to a 3-lane roadway with curb, gutter, improved drainage, sidewalks, signalization and turn lanes at major intersections.

Why this project is needed:

- This section of road serves a large number of trucks.
- This section of road is already crowded with trucks as it serves a large (800 employee) publishing company. This publisher is the largest employer in Clarke County. The company depends on trucks and adequate access is a necessity for the business as well as the economic vitality of our community.
- Facilities for 11 new companies have opened or are under construction in the County's 83-acre Industrial Park that is accessed by this section of Rt. 7 Business.
- Other truck dependant businesses (located off of Rt. 615) also use this section of road.
- In 2006, the County used secondary six-year plan money to improve the Rt. 700 (Jack Enders Blvd.) intersection with Rt. 7 Business to provide adequate turn lanes and radii for the heavy truck traffic into the County Business Park. However, without improvements to Route 7 Business, the entire problem is not solved.

- This section of road is not only heavily traveled, it is dangerous.
- Sight distance is a problem at the intersection of Rt. 615 and Rt. 7 Business and creates a safety hazard. The proximity of the Norfolk/Southern railroad tracks to this intersection makes improvements time critical as train traffic is increasing dramatically. The situation is deteriorating as both truck and train traffic increases.
- Rt. 7 is home for many small businesses. In addition, many private residences currently line the road and several subdivisions access it. In the next 10 years it is likely that 456 new homes will use Rt. 7 for access. This means there will be even more turning vehicles. Given the mix of cars and trucks, there is a definite need for turn lanes.

Priority Rating

Rt. 7 Business is a major collector. In 2005, there were 4,300 VPD on this portion of Route 7 Business. From 1995 to 2005 traffic on this route increased 9% and it serves as the eastern entrance to the largest growth area designated in the Comprehensive Plan

Cost Time on list:

The VDOT cost estimate is \$6,000,000. This project has been on the list of priorities since 1995.

8. Park and Ride lot near intersection of Rts. 7, Bypass and Business

What needs to be done:

Funds to study, design, and construct a park and ride lot in the Rt. 7 corridor near Berryville is needed. Property owners have expressed a willingness to provide a site for this facility.

Why this project is needed:

Commuter traffic coming from Frederick County into Clarke County on Rt. 7 has increased by 175% from 1995 to 2005. Similarly, commuter traffic from Jefferson County going through Clarke County has increased 75% over the same period. Alternatives to Single Occupancy Vehicles must be provided. The Northern Shenandoah Valley Regional Commission has successfully promoted ridesharing throughout the area. It now has contracted for three commuter buses from the Valley to Northern Virginia. Due to excessive numbers of vehicles, commuters have been banned from using existing private parking lots in Berryville.

Priority Rating

Alternatives to single occupancy vehicles in the Rt. 7 corridor are necessary (such as carpools, vanpools, and private bus service) to reduce congestion and provide alternative transportation modes. From 1995 to 2005, traffic in this corridor increased by over 150%.

Cost and Time on list:

VDOT's estimated cost is \$1,500,000. This project has been on the County's list of priorities since 2006.

Secondary Highways

1. Rt. 636 (Westwood Road)

What needs to be done:

.95 mile improvements of Route 636 south of Route 7 Business, West Main Street, Berryville needs to be made to provide widened road with turn lanes for the new County high school, the existing high school, which is to be converted to an elementary school, and the current elementary school, which is to be converted to a primary school.

Why this project is needed:

This road is means of access to the identified school facilities and safe access is critical. The current road has no turn lanes and was not constructed to carry the volume of traffic occurring today and anticipated in the future.

Priority Rating

Rt. 636 is a minor collector. From 1995 to 2005 traffic on this route increased 104% to over 1000 VPD. Rt. 636 is the primary access to the County High School and one of its elementary schools.

Cost and Time on list:

The VDOT estimated total cost is \$4,500,000. This project has been on the County's list of priorities since 2002. Construction will start when all funding has been provided, which is after 2013, based on current funding levels.

2. Rt. 723 (East and West Main Street, Boyce)

What needs to be done:

.06 mile improvements on each side of Route 723 in Boyce to provide left turn lanes for traffic turning onto Route 340, thereby allowing the installation of a traffic light.

Why this project is needed:

Traffic volume on Rt. 723 and 340 may approach the levels that warrant a traffic light when the three approved major subdivisions in the Town are built out.

Priority Rating

Rt. 340 is a minor arterial. Rt. 723 is a major collector. From 1995 to 2005 traffic on Rt. 340 north and south of this intersection increased by 33% to 8700 VPD. Rt. 723 east of intersection increased by 39% to 1500 VPD. The Comprehensive Plan recognizes the Town of Boyce as one of the area of the County that can accept growth because of the central water and sewer service available.

Cost and Time on list:

The VDOT estimated total cost of this project is \$1,200,000 (the 2007 Secondary Highway plan proposes \$100,000 for professional engineering). This project has been on the County's list of priorities since 2005. The estimated initiation of engineering work is after 2017.

3. Rt. 723 (Millwood Road)

What needs to be done:

The bridge for Route 723 over Page Brook between Millwood and Boyce needs to be replaced.

Why this project is needed:

The current crossing has reached the end of its design life.

Priority Rating

Rt. 723 is a major collector. From 1995 to 2005 traffic on this route remained at about 1300 VPD.

Cost and Time on list:

The VDOT estimated total cost is \$375,000. This project has been on the County's list of priorities since 2006. The estimated completion is 2013, based on availability of federal funds

4. Rt. 604 (Ebenezer Road)

What needs to be done:

Reconstruct and surface road from Rt. 605 (Morgan's Mill Road) to Rt. 607 (Saw Mill Hill road).

Why this project is needed:

Completion of this project would improve emergency access and replace stream crossings that do not accommodate current stream flows during major storm events.

Priority Rating:

Rt. 604 is a local secondary road. From 1995 to 2005 traffic on this route remained at about 150 VPD.

Cost and Time on list:

The VDOT estimated total cost is \$2,750,000. This project has been on the County's list of priorities since 1999. The estimated completion date is after 2013.

CODE of VIRGINIA SECTIONS

Virginia Code Section 15.2-2223 states:

“The comprehensive plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement, shown on the plan and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use as the case may be.

The comprehensive plan shall include a transportation element that designates a system of transportation infrastructure needs and recommendations that shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities. The Virginia Department of Transportation shall, upon request, provide localities with technical assistance in preparing such transportation element.

The plan shall include: a map that shall show road improvements and transportation improvements, including the cost estimates of such road and transportation improvements as available from the Virginia Department of Transportation, taking into account the current and future needs of residents in the locality while considering the current and future needs of the planning district within which the locality is situated.”

Virginia Code Section 15.2-2224 states:

“In the preparation of a comprehensive plan, the local planning commission shall survey and study ... road improvements and any estimated cost thereof, transportation facilities, transportation improvements,”

Virginia Code Section 15.2-2232.C. states:

“Widening, narrowing, extension, enlargement, vacation or change of use of streets or public areas shall likewise be submitted for approval [by the Planning Commission], but paving, repair, reconstruction, improvement, drainage or similar work and normal service extensions of public utilities or public service corporations shall not require approval unless involving a change in location or extent of a street or public area.