

# Report to the Steering Committee: *Refined Tools for Implementing the Vision*

Community Planning Project  
Shenandoah County, Virginia

**DRAFT** – February 27, 2009

- Define Annexation as Voluntary Settlement
- Landscape - scattered houses
- private rd. standards

**Herd Planning & Design, Ltd.**

in association with Renaissance Planning Group and Patton Harris Rust & Associates





## **Community Planning Project**

### **Project Steering Committee:**

The Hon. David Ferguson, Board of Supervisors  
The Hon. Conrad Helsley, Board of Supervisors  
Russ Adams, Planning Commission  
Gary Lantz, Planning Commission  
John Adamson  
Deb Truban

### **County Staff:**

Lead personnel for the project:

Brandon Davis, Director of Planning  
Joyce Wegryniak, Zoning and Subdivision Administrator

### **Consulting Team:**

*Herd Planning & Design, Ltd., Leesburg, Virginia*  
Lead personnel for the project: Milton Herd, AICP

*Renaissance Planning Group, Charlottesville, Virginia*  
Lead personnel for the project: Vlad Gavrilovic, AICP

*Patton Harris Rust & Associates, Harrisonburg, Virginia*  
Lead personnel for the project: Karl Schaeffer

# Report to the Steering Committee: *Refined Tools for Implementing the Vision*

DRAFT – February 27, 2009

<b><u>Contents</u></b>	<b><u>page</u></b>
<b>1. Introduction and Executive Summary .....</b>	<b>7</b>
<b>2. Background and Analysis .....</b>	<b>13</b>
A. Public Input and Initial Analysis .....	13
B. The Challenge Facing the County .....	14
C. Tools Available to Help Achieve the County’s Vision .....	17
D. How the Vision Might Be Achieved - Possible Options .....	18
1) Options with a High Chance of Effectiveness if Fully Implemented.....	19
2) Options with a Reasonable Chance of Success or Significant Progress.....	26
<b>3. Major Tools Recommended by the Steering Committee.....</b>	<b>30</b>
A. Strengthen Efforts to Attract and Facilitate Growth In and Around the Towns.....	30
1) Prepare Joint Comprehensive Plans with the Towns, with Phased Annexations .....	30
2) Ensure Adequate Utility Capacity for Expected Future Population .....	32
3) Adopt Zoning Standards for Traditional, Compact Development Patterns .....	33
B. Invest in Voluntary Land Conservation Programs .....	35
1) Establish an Agricultural Economic Development program .....	35
2) Fund a Purchase of Development Rights (PDR) .....	36
3) Establish and Fund a Leasing of Development Rights (LDR) .....	38
4) Explore Transferable Development Rights (TDR) .....	38
C. Strengthen Rural Zoning Regulations (for A-1 and C-1 Zoning Districts).....	39
1) Adopt Low Density Zoning Regulations for the A-1 and C-1 Zoning Districts.....	39
2) Amend the Open Space Cluster Zoning Option.....	39
3) Draft Mark-up of Ordinance Amendments.....	41
Draft Amendments to C-1 Zoning District .....	41
Draft Amendments to A-1 Zoning District .....	44
Draft Amendments to Article X Open Space Cluster Development Regulations ....	47
Draft Definitions .....	51
<b>Details of Major Tools – Draft Outline for Committee Review .....</b>	<b>27</b>
1. Strengthen Efforts to Attract and Facilitate Growth In and Around Towns.....	27
2. Invest in Voluntary Land Conservation Programs .....	32
3. Strengthen Rural Zoning Regulations (for A-1 and C-1 Zoning Districts).....	36
Draft Amendments to the Zoning Ordinance .....	39
<b>Appendix.....</b>	<b>53</b>
A. Analysis of Options for Conservation Easement Acquisition .....	53
B. Summary of Available Major Growth Management Tools .....	61

## 1. Introduction and Executive Summary

**Purpose.** This report presents a detailed outline of each of the potential implementation tools selected by the project Steering Committee for further consideration, based upon the public input to date.

As noted in the earlier report on public input (11-14-08), the purpose of the Community Planning Project is “to prepare the necessary amendments to the Comprehensive Plan and Zoning/Subdivision Ordinances in order to accomplish the Vision Statement set forth in the current Comprehensive Plan.”

The central element of the Vision Statement is that the County remains a primarily rural community, by directing future growth to the County’s towns [and public service areas around the towns] so as to ensure the retention of the County’s open, agricultural character. There are several other important elements of the vision, which are supported if this central element is achieved. These include protecting natural resources, preserving natural beauty and historic character, and providing a variety of jobs in business, light industry, tourism and sustainable agriculture.

The process for preparing these amendments includes an analysis and evaluation of current land use trends, existing regulations, and potential tools, in the context of active involvement of citizens, to help determine the best solutions for implementation.

**Public Input.** The four public forums indicated that a broad consensus exists regarding the County’s Vision and expectations for long-term population growth; however, some of that support is contingent on the precise mechanisms for how the vision would be achieved, i.e., the cost and impact of any public investments or land development regulations.

**The challenge facing the County** can be summarized as follows:

- If trends continue, the agricultural and forest landscape will gradually convert to rural residential uses, and the County will lose a significant portion (up to a quarter) of its agricultural land base to residential development during the next 20 to 40 years, nearly doubling the amount of rural land used for housing. **This is due mainly to the expected long-term market demand for rural housing, combined with the number of potential lots that could be created under current zoning regulations (approximately 35,000 to 40,000 new lots).**
- The County *cannot mandate* the location or rate of new houses, and cannot mandate the vacation (elimination) of the existing 7,000+ undeveloped rural lots. **(Even though some of these existing lots are assumed to have various constraints to full development, it is prudent to expect that many can be developed, especially in light of advances in wastewater disposal technology).**
- The County *can mandate* the density and pattern of development **through regulations** (except for the existing lots), and thereby encourage the preferred location of new housing.

**Tools Available.** The general categories of tools are:

1. Police Power (including Zoning and Subdivision Regulations)
2. Financial Power (Taxation, Public Investment, including land acquisition)
3. Combined Powers (Policies, Guidelines, Incentives, combined with Regulations)

**How the Vision Could Be Achieved.** If 90% of new houses were to be located within the Public Service Areas (PSA), including towns, only about 800 new rural lots would be needed by 2030, and thus only 3,000 acres would be converted to residential uses at the *current trend pattern of large lots* (this is less than 20% of the acreage needed at current trends).

Only about 1,500 acres would be converted **if developed in using** a *cluster pattern* (this is less than 10% of **the** acreage needed at current trends). This level of compactness would be considered a successful achievement of the vision in that it would allow a moderate amount of accommodation of new rural residents, yet only an additional 1% to 2% of the total land now in farm and forest uses would be developed.

These measures translate into a logical objective to define successful achievement of the vision: **to limit total rural land conversion to not more than 2% over the next 20 years.** That would mean that up to 20% of total housing demand could locate in the rural areas if it was built in a clustered pattern, but only 10% of housing could locate in rural areas if the large lot pattern continued.

**Unfortunately,** the two most obvious options that would provide a high degree of assurance in achieving the vision would require either very severe zoning restrictions (downzoning to 45 acres per new lot) and/or extremely high costs for acquiring permanent easements (PDRs) on at least 100,000 acres of land (**likely** more than \$200,000,000), and would still not address the existing oversupply vacant lots.

It may be feasible to acquire *term-easements* (LDR) on a large amount of land at a similar cost to that of the current Use Value **Assessment** program. The challenge, however, would be in achieving a level of participation in that voluntary program to assure success. **The other key** limitation of term easements is that they achieve the vision for up to 20 years, **or so**, but beyond that there would be uncertainty. (That uncertainty is also true with any zoning regulation, as zoning is subject to legislative change).

**Major Tools Recommended by the Steering Committee.** The Committee recognized that there is no single “magic bullet” for achieving the vision that is also practical to implement, as described in the above summary.

Thus, a *combination of tools* would balance the impacts and benefits among all citizens, landowners, and taxpayers in the County; **and together would offer the best prospects for success** in achieving the vision. **This combination of tools acknowledges that virtually every participant at the public forums took some issue with one or more of the tools that are available to the County, yet virtually all participants also wanted to achieve the vision. Thus, striking a balance is a delicate matter.** These tools are summarized briefly below, **explained further beginning on page 24,** and set out in detail beginning on page **30.**

**1. Strengthen Efforts to Attract and Facilitate Growth In and Around the Towns**

This strategy received broad support at the public forums and is fully consistent with current County policy. The underlying principle is that by making the towns and PSAs better able to accommodate and attract growth, the objective of the vision can be achieved – 90% of future housing development locating in the PSAs during the next 20 years. Many tools are available for the PSAs; the following three stand out as priorities for implementation.

**a. Joint Comprehensive Plans with the Towns, ~~in-conjunction~~ with phased annexations**

Shenandoah County is a leader in planning with its incorporated towns. These efforts could be formalized and expanded. Joint comprehensive plans could be prepared for the surrounding growth area of each town, adopted by both the County and the Town. Such plans would establish areas into which the extension of water and sewer service would be phased over several decades, as growth demand warranted, in conjunction with annexation by the town to incorporate each phase.

Joint plans would *increase the predictability for landowners* adjacent to the towns, would *improve the coordination of government services and facilities*, would support an *efficient and compact land use pattern*, and would encourage *shared responsibility* between the towns and county, with gradual transition of land use powers from the County to the town as areas are annexed in an orderly fashion.

Draft policy language to add to the County Comprehensive Plan is shown on page 31.

**b. Ensure adequate utility capacity for the expected population**

The County and its towns generally have adequate overall public water and sewer capacity and service for the immediate future. However, these systems need to be monitored, upgraded, and expanded as needed, in advance of expected demand. Additional capacity will need to be added to the public water and wastewater treatment systems in order to meet the objective of locating 90% of the new population within the PSAs over the long term.

Draft policy language to add to the County Comprehensive Plan is shown on page 33.

**c. Adopt zoning standards for traditional, compact development patterns**

Many communities throughout Virginia and other areas of the United States are embracing a return to traditional forms and patterns of development, modeled after the historic districts that are held in high esteem by citizens and visitors. This form of development is often referred to as “new urbanism” or “traditional neighborhood design” (TND), which simply means designing and building new neighborhoods and communities with the beneficial elements of historic districts, but in a way that also accommodates modern technologies and lifestyles.

Neighborhoods and main streets with mixed-uses, “human-scale” streetscapes, connected street networks, parks, trails, and sidewalks, make “in-town” living highly desirable to all age and income groups. This can be a major attractor of future population and jobs, and help take pressure off of the rural landscape to accommodate new housing. Recent state legislation (§ 15.2-2223.1) now requires certain counties (including Shenandoah) to incorporate one or more urban development areas, and the principles of new urbanism, into the comprehensive plan.

The County would coordinate with the towns in preparing zoning ordinance amendments as needed, to ensure that TND can be built within the defined PSAs and within the towns to ensure that Shenandoah County can accommodate and encourage TND in appropriate areas.

## **2. Invest in Voluntary Land Conservation Programs**

The underlying principle of this set of tools is that the costs of land conservation should be shared broadly across the community, since the benefits are also shared broadly. Further, to the greatest extent possible, land conservation should be voluntary. Each of the voluntary tools available has strengths and weaknesses.

Generally, the strength is the certainty of success if the tool is fully applied. The weakness is cost, and thus the limitations on the magnitude of success. Therefore, the Steering Committee sees the logic in using most of the available tools. Three stand out and are listed below as top priorities (a, b, and c), to be used in combination.

*Note that item d., Transferable Development Rights (TDR), was identified by the Committee as having great promise in theory, but also great technical uncertainty, and thus worthy of further exploration but not as the key method of achieving the vision.*

### **a. Establish an Agricultural Economic Development program (this option has a relatively low cost compared to the others)**

The concept of promoting agricultural economic development received the strongest overall support from citizens at the public forums in the autumn of 2008. Formal local government programs for agricultural economic development have been initiated in many counties throughout Virginia

Typically, these offices are based in the County departments of economic development, and carry out a variety of tasks, including promoting agricultural products, assisting in the development of new agricultural businesses, producing informational materials, including brochures and agricultural guides, and sponsoring farm tours, and other agri-tourism events and initiatives, as well as promoting farmers’ markets and community supported agriculture (CSA). Some departments also manage local Agricultural and Forestal District Programs (AFD), Farm Viability Grants, Farmland-for-Lease Programs, and Purchase of Development Rights (PDR) programs.

A more detailed list of typical duties and program activities is included on page 35.

**b. Fund a Purchase of Development Rights (PDR) (from one to five cents on tax rate)**

Major  
Long-term  
↑ in Land Value

The County recently adopted an ordinance establishing a PDR program but has not yet funded it. The County could fund the program on a “pay as you go” basis, or it could issue bonds to finance easement purchases, or some combination of the two.

Expectations for permanent land preservation through a voluntary, locally funded PDR program would likely range from 3,600 acres to over 18,000 acres over a 20-year planning period, depending on funding levels (assuming 1 to 5 cents on the tax rate).

Note that the estimates in this report are based on relatively conservative estimates of land values – with a competitive acquisition process the County might be able to acquire about 30% more land. Also, the County would expect to also “leverage” additional easements through state and private grants, as well as donations, thereby further increasing the total land preserved.

The County cannot expect PDR to “achieve the vision” by itself, but it could be a very important underpinning of all other combined efforts.

More detailed analysis is included on page 36 and in Appendix A.

**c. Establish and Fund a Leasing of Development Rights (LDR) (possibly linked to the existing Use Value Assessment program)**

Under an LDR program, the County would pay participating landowners for short-term easements, rather than the permanent easements of PDR. Term easements can be as short as 5 years, with no upper limit in duration. An LDR program would function much like the current Use Value Assessment program, but would likely focus on the 10 to 20 year time frame for easement duration. Thus, costs would be somewhat higher on a per-acre basis than the current Use Value Assessment program, but the taxpayer (and the landowner) would be getting a longer commitment of preserved, open land.

At funding levels similar to Use Value (about 5 cents on the tax rate), LDR would be expected to preserve about 75% as much land, but for 10 to 20 years, rather than only one year. There are a wide range of approaches to implementing LDR, including offering it to landowners as an alternative to Use Value, or gradually converting the Use Value program to an LDR program.

More detailed analysis is included on page 38 and in Appendix A.

**d. Explore Transferable Development Rights (TDR)**

The project Steering Committee recognizes the potential benefits of the TDR concept – allowing farmland owners to sell their development rights to developers who then apply those development rights to land within the PSAs. However, given the difficulty and uncertainty of implementing TDR - the track record of localities nationwide is not

Transferable  
development  
rights

encouraging - the County should be very cautious to avoid putting undue effort into developing a TDR program at the expense of efforts on other, more viable tools.

3. **Strengthen Rural Zoning Regulations (for A-1 and C-1 Zoning Districts)**

Regulation of land use is a long-standing method of achieving a variety of planning goals, particularly facilitating convenient, attractive and harmonious communities, facilitating the provision of public facilities, preserving agricultural and forest land, and protecting ground and surface water resources (see §15.2-2283 Purpose of Zoning Ordinances, in the Virginia Code).

It is clear from the analysis, that the County's existing zoning and subdivision regulations will not, in and of themselves, support the County's achievement of its vision. Thus, some improvements are needed.

The primary objectives of the proposed amendments to the zoning regulations are to:

- Reduce the total, overall amount of housing development that is permitted in the rural areas, particularly on lands zoned for agriculture, and
- Provide incentives to landowners who wish to develop their land with houses, to develop those houses in a clustered pattern that will save significant pieces of open land that can remain in farm and forest use.

The effect of these zoning changes would be to reduce the potential overall amount of future development in the rural areas, while actually facilitating – and in some case improving - the development potential of most rural land through a more liberal cluster development option.

The amendments to current regulations are summarized as follows:

- a. **Adopt Low Density Zoning Regulations for the A-1 and C-1 Zoning Districts, allowing one lot per 15 to 20 acres on average, and while allowing a cluster development option that would provide a “density bonus” allowing up to one lot per 10 acres, as well as a small density bonus to reduce the impact of the zoning amendment on smaller existing parcels.**
- b. **Amend the Open Space Cluster Zoning Option for the A-1 and C-1 Zoning Districts, so that the cluster option would not require public water and sewer, and would save at least 70% of the each tract in very large, “conservation lots” as part of any subdivision, and with incentives for recombining existing lots and facilitating family subdivisions.**

Drafts of these amendments to the County Zoning regulation are shown in “mark-up” style beginning on page 41.

agricultural  
conservation  
lots

open space & ag.

## 2. Background and Analysis

### A. Public Input and Initial Analysis

**Public Forums.** Four public forums were conducted in September and October 2008. A report of the input from these meetings was compiled and submitted to the County on November 14, 2008.

(Note that in addition to the above meetings, which were part of the scope of work for the project, a meeting of farmers organized by local farmer Laura Long, was held in January in Forestville. A representative from the consulting team and one from the county staff attended this meeting to provide information and answer questions about the project).

The public forums indicated that a broad consensus exists regarding the County's Vision and expectations for long-term population growth; however, some of that support is contingent on the precise mechanisms for how the vision would be achieved, i.e., the cost and impact of any public investments or land development regulations.

At the fourth public forum (October 29, 2008), citizens reviewed and discussed two optional "packages" or combinations of these tools that the consulting team had assembled after the third forum. While no formal consensus was sought or determined, participants appeared to appreciate the benefit of using multiple tools to address the problem. Their questions, comments, and interest focused mostly on the concept of rural cluster development. Concerns continued to be expressed about compatibility of rural residential uses with farming activities, potential zoning restrictions on farmers, and whether the cluster concept might actually undermine the Vision by overly promoting rural residential development.

**Data Analysis.** Analysis of key data has been conducted by the consulting team and is summarized below. Further refinement and additional analysis will be conducted as needed during the coming weeks as the proposed implementation tools are reviewed and refined.

**Steering Committee Meetings.** The project Steering Committee has met five times to date, the most recent on December 4, 2008. At this meeting, the committee reviewed the potential implementation tools that appear to offer the best promise of success, in light of the challenges and dilemmas facing the county, and the input received at the four public forums. The Committee provided some affirmation and direction to the consulting team for refining and detailing these potential tools.

## B. The Challenge Facing the County

**Conflict Between the County’s Vision and Recent Development Trends.** As reported in the November 14 report on public input, an initial analysis of the current situation shows that the County’s existing land development programs and regulations will not ensure the achievement of the Vision during the next few decades.

**Current Situation.** Despite the current economic downturn, the County should expect to experience growth pressures *over the long-term* that will add about 15,000 new residents by the year 2030, and another 20,000 people by 2050. Thus, the County should expect to grow from 40,000 people today, to about 75,000 people by 2050. *(Note that at the second public forum, citizen participants affirmed this forecast as being a reasonable one – not so much a prediction or preference as much as a potential outcome for which the County should prepare).*

The County now has about 229,000 acres (70% of County land area) which are zoned for rural land use (total in the A-1 and C-1 zoning districts outside of the National Forest). Approximately 45,000 acres of that is developed (20% of the rural area), with about 12,000 rural houses.

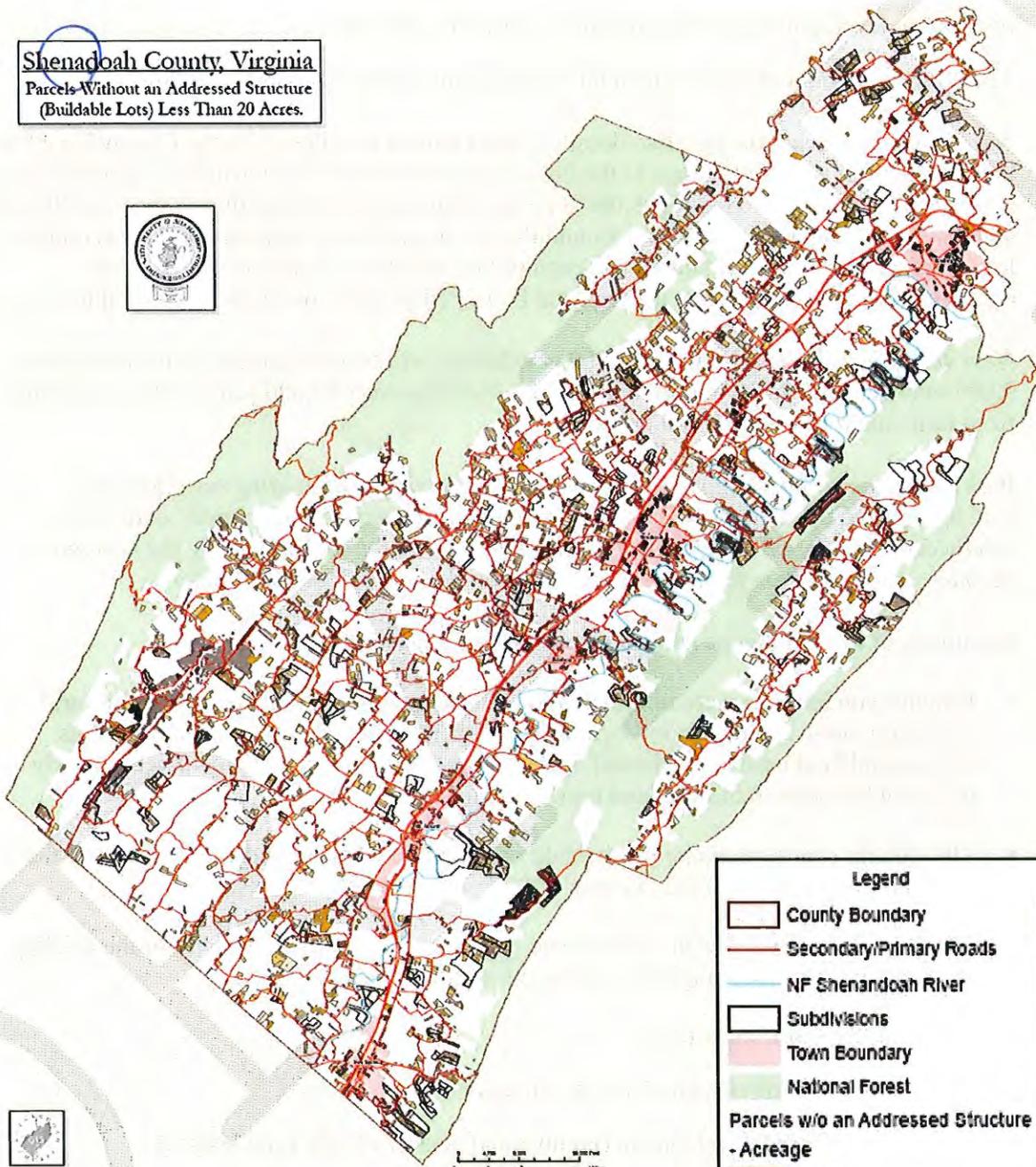
For purposes of comparison, the County now has about 145,000 acres of land in the Use Value Assessment program. Land is enrolled in Use Value Assessment for only one year at a time. Approximately 40,000 acres of land – most of which is presumed to be enrolled in Use Value – is also in voluntary Agricultural and Forestal Districts, which run for up to ten year terms.

Current zoning regulations in the A-1 and C-1 zoning districts would allow for 35,000 to 40,000 new rural houses (more than a 150-year supply at the trend growth rate). While this potential capacity is subject to current restrictions on the rate of subdividing rural property, those restrictions will not have a substantial effect on the total number of lots in the *long term* (20+ years).

In addition to the supply of *potential* lots, there are more than 7,000 *existing* vacant rural lots smaller than 20 acres each. This represents more than a 30-year supply of rural lots. (see Figure 1). (Note, however, that the actual suitability of these lots for development based on access, soils, topography, etc., is not known. **Yet although some of these existing lots are assumed to have various constraints to full development, it is also prudent to expect that many can be developed, especially in light of advances in wastewater disposal technology).**

The County’s traditional patterns of ownership and use have created significant fragmentation of land parcels. While the average *farm size* is 135 acres (2002), the average *parcel size* in the A-1 zoning district is only 14 acres. The average *vacant* parcel size in the A-1 zoning district is 15 acres. Of vacant parcels greater than 14 acres in the A-1 zoning district, the average is 45 acres.

**Shenandoah County, Virginia**  
Parcels Without an Addressed Structure  
(Buildable Lots) Less Than 20 Acres.



**Legend**

- County Boundary
- Secondary/Primary Roads
- NF Shenandoah River
- Subdivisions
- Town Boundary
- National Forest

**Parcels w/o an Addressed Structure - Acreage**

- 0 - 6.9
- 7 - 14.9
- 15 - 20

1/2009

Existing Vacant Lots of Less Than 20 Acres

Due to some unknown parcel boundaries there are some errors in the color associated with a parcel's legal acreage.

**The Long-Term Problem.** The major long-term problem centers on the *trends in* rural residential development, in terms of pattern, location, and rate.

The ultimate amount of rural residential development can be estimated as follows:

*Next 20 years.* During the past two decades, about half of new houses in the County have been built in the rural areas rather than in the Public Service Areas (PSAs), which include the towns. If trends continue, approximately 8,000 total new houses are expected during the next 20 years, about 4,000 of which will be in and around the towns, and about 4,000 in rural areas on large lots. These 4,000 new rural houses will require that 16,000 to 20,000 acres of land be converted from farm and forest uses to rural houses (depending on the average rural lot size).

*Next 40 years.* If trends continue, 18,000 new houses will be built during the next 40 years, 9,000 in towns, and 9,000 in rural areas. From 36,000 to over 40,000 acres will be converted from farm and forest use to rural houses.

*With a 150-year supply of zoned land and a 30+ year supply of existing rural lots, the conclusion from this analysis is that the County's rural area is "over-zoned" and "over-subdivided" in relation to the expected future need for rural housing during the next few decades, and in relation to the goals expressed in the County's adopted vision.*

**Summary of the Challenge can thus be summarized as follows:**

- If trends continue, the agricultural and forest landscape will gradually convert to rural residential uses, and the County will lose a significant portion (up to a quarter) of its agricultural land base to residential development during the next 20 to 40 years, nearly doubling the amount of rural land used for housing.
- The County *cannot mandate* the location or rate of new houses and cannot mandate the vacation (elimination) of the existing 7,000+ undeveloped rural lots.
- The County *can mandate* the density and pattern of development (except for the existing lots), and thereby encourage the preferred location of new housing.
- Key Concerns and Trade-offs:
  - rate (speed) of rural subdivision/development
  - intensity of rural development (number and density of new rural houses)
  - “desire to live in a rural area” vs. the fiscal burden on tax payers for providing services to scattered, low-density housing pattern
  - “affordability” of rural lots (inherent conflict: high property values are good for household wealth, but and bad for real property tax burden)
  - “property rights” (inherent conflict: a person has certain rights to use his own property as he sees fit, yet his neighbor also has the right to quietly enjoy his own property without interference from activities on his neighbor’s land).

## **C. Tools Available to Help Achieve the County’s Vision**

As noted in the 11-14-08 report, and as indicated by the analysis summarized above, a further complication facing the County is that none of the tools available for managing growth offers a certain or total solution to the problem of rural residential development. Further, the citizens and landowners in the County have a wide range of views about the extent and urgency of the problem, as well as which tools should be used to help solve it. The major tools available to the County fall into three broad categories (these are described in greater detail in Appendix B):

### **1. Police Power (Regulations)**

- *Zoning Regulations* – controls the use of land as well as density/lot size (the county now uses this tool, but not to the maximum degree possible).
- *Subdivision and Site Plan Regulations* – controls how land is subdivided but not the use or density of development (the County now uses these tools, but not to the maximum degree possible).
- *Special Exception or Special Use Permitting* – controls the use of land as part of zoning regulations (the County now uses this tool, but not to the maximum degree possible).

### **2. Financial Power (Taxation, Public Investment)**

- *Tax benefit tools* include Use-Value Assessment (“Land Use Tax”) (the County now uses this tool, but not to the maximum degree possible).
- *Public investments to preserve land* can include purchase or leasing of conservation easements (“development rights”) (the County has adopted an easement purchase program – “PDR” - but it is currently unfunded).
- *Public investments in designated development areas* include budgeting tools such as Capital Improvements Programming (CIP), and funding/taxing tools such as Service Districts and Community Development Authorities. (The County has a CIP, and two sanitary districts for utility systems).

### **3. Combined Powers (Policies, Guidelines, Incentives, combined with Regulations)**

- *Urban Growth Boundaries* define the location and extent of public utility service in order to coordinate land use and infrastructure investments. (The County’s designated “public service areas” essentially reflect this concept).
- *Community Design and New Urbanism* – creating new developments that are walkable, mixed-use, and vibrant, primarily through zoning mechanisms.
- *Conditional Zoning (proffers)* – developers voluntarily provide land, cash, or other benefits to mitigate the impact of their development as part of a rezoning approval. (The County uses this tool, but not to the maximum degree possible).
- *Joint Comprehensive Plans / Joint Service Delivery* – County and Towns can coordinate planning around the Towns and share authority for land use and utility

- provision. (The County uses this tool, but not to the maximum degree possible).
- *Agricultural Economic Development and Promotion* – County can actively assist the local agricultural industry in pursuing new products and new markets for agricultural goods.
  - *Agricultural and Forestal Districts* – County can adopt voluntary AFDs. (The County has over 40,000 acres in 21 distinct AFDs, at end of 2007).
  - *Transferable Development Rights (TDR)* – A quasi-zoning mechanism in which the “right” to develop a parcel of land is sold through a private transaction, from a farmer’s rural land parcel to a designated urban parcel owned by a developer, thereby allowing the developer to apply that development right to his urban site to achieve greater density.

#### **D. How the Vision Might Be Achieved - Possible Options**

The Community Planning Project is aimed at identifying and implementing the tool or combination of tools that can best achieve the County’s vision. While the vision is descriptive in nature, the project Steering Committee has identified that the level of dispersion or compactness of the overall residential development pattern in the County is a valid and objective method for judging overall success.

Note that this analysis focuses primarily on the overall development patterns because those underpin every other effort at growth management, economic development, and resource protection. However, zoning regulations in particular may contain specific provisions that address a variety of important concerns that are directly or indirectly a part of the County’s vision, including fiscal impacts (cost of public services), water quality, transportation, and job growth, among others. These elements are considered in the tools developed to date.

If 90% of new houses were to be located within the Public Service Areas (PSA), including towns, only about 800 new rural lots would be needed by 2030, and thus only 3,000 acres would be converted to residential uses at the *current trend pattern of large lots* (this is less than 20% of the acreage needed at current trends); and only about 1,500 acres would be converted using a *cluster pattern* (this is less than 10% of acreage needed at current trends). This level of compactness would be considered a successful achievement of the vision in that it would allow a moderate amount of accommodation of new rural residents, yet only an additional 1% to 2% of the total land now in farm and forest uses would be developed.<sup>1</sup>

These measures translate into a logical objective to define successful achievement of the vision: ***to limit total rural land conversion to not more than 2% over the next 20 years.***

---

<sup>1</sup>Based on 145,000 acres in Use Value Assessment in 2002, as reported in *Fall 2003 Newsletter of Virginia Association of Assessing Officers*; the 2002 Agricultural Census showed 133,000 acres in farms. Note that the new Ag Census (2007) has just been released this month and thus that data was not available for this report.

That would mean that up to 20% of total housing demand could locate in the rural areas if it was built in a clustered pattern, but only 10% of housing could locate in rural areas if the large lot pattern continued. *Note that although this objective is focused on housing development as the key factor in determining rural character, many other factors of rural character, such as traffic intensity, water quality, scenic quality, etc., are directly or indirectly affected by housing development.*

However, achieving such a compact pattern of future housing development is undermined by the 7,000+ existing, undeveloped rural lots that include more than 30,000 acres of land, much of which is presumed to be currently in farm and forest uses, yet subject to future housing development.

Because these lots exist, it is virtually impossible to prohibit housing development on them through the normal methods of minimum lot size requirements or limits on the subdivision of new lots. Further, to purchase conservation easements on these lots would be very expensive, because they are relatively small parcels and thus have higher than average per-acre values. Thus, there is no single – and practical – “magic bullet” of land regulation or acquisition that could guarantee the achievement of this objective. These problems are described below.

For purposes of analysis, achieving the County’s vision is defined as having not more than 2% of farm and forest land converted to housing during the next 20 years. Below are potential methods that have a very high chance of success for achieving this objective, assuming adequate resources are committed. Even these very strong methods are largely undermined by those 7,000+ existing lots, which simply create a great deal of uncertainty for the prospects of any conservation or growth management tool.

Unfortunately, due to the various costs and benefits of these high potential success options, the County may not be willing or able to commit the necessary resources. Thus, following these will be descriptions of other options which seek to strike a more practical balance of costs and benefits, while still providing a reasonable prospect for achieving the vision or at least making very significant progress toward it.

**1) Options with a High Chance of Effectiveness if Fully Implemented.**

**a. Develop rural housing at the trend rate and pattern, but at a much lower density**

The County could change the zoning ordinance so as to reduce the allowable density of new lots in the A-1 and C-1 zoning districts to an average size of 45 acres (as noted previously, this is the current average size of vacant parcels greater than 14 acres in the A-1 zoning district). After 20 years at the trend housing growth rate, the subdivision of the rural landscape would be complete, and thus “stabilized.” The average parcel size would then be 25 acres (for parcels greater than 14 acres).

Note that it would also be necessary to prohibit or limit further subdivision of newly divided parcels to maintain the “stabilized” parcel pattern. While zoning itself is not a

permanent restriction (it is subject to legislative change), if a conservation easement or restrictive covenant was required upon approval of a rural subdivision, the durability of the zoning restrictions would be greatly increased. Also note that this option could be combined with a cluster provision so that the *average* lot size would be no less than 45 acres, but most lots could be smaller (clustered) with a few being much larger.

*Note, however, that this solution does not account for the 7,000+ existing small, vacant parcels, which would still be available for development ([although there is some uncertainty as to exactly how many of those lots are fully developable](#)).*

***b. Develop rural housing at the trend rate, but buy permanent Conservation Easements on all other land (PDR)***

Acquisition of conservation easements does not directly affect the rate or pattern of rural residential development, although it could indirectly reduce the total amount of development, because presumably some of the land put under conservation easement might have otherwise been developed with rural housing.

However, it is also very likely that the “market” pressure for rural housing, if not occurring on one given farm that is put under easement, would simply be applied by the market to a nearby farm that was not restricted by an easement. So the indirect effect on total rural housing development is highly uncertain and could in fact be insignificant.

Therefore, in order to ensure achievement of the vision through the acquisition of conservation easements, a huge amount of land would need to be placed under conservation easement. It would need to be an amount sufficient enough for the County to conclude that it has effectively reduced the amount of land available for new rural housing to less than what is needed to support the market demand for rural housing.

It is virtually impossible to specifically quantify what amount of land would be needed to achieve this effect, but it can be roughly estimated by comparing the total supply of rural land with the amount of land needed to meet the “market demand” for rural housing.

Note that PDR programs are not intended or expected to acquire easements on all the open land within a county; rather they are intended to establish a core area on which to build a more diverse land preservation program. However, this analysis confirms that PDR is not a “magic bullet”.

*Summary of Analysis of PDR.* There are about 229,000 acres of land zoned as agricultural or conservation (A-1 or C-1) outside of the National Forest. However, more than a quarter of that land area is not subject to development for a variety of reasons (floodplain, existing dwellings, soil or slope limitations, etc.).

Thus, the most meaningful measure of the target land area would be the 145,000 acres of land currently enrolled in the Use Value Assessment program. This is somewhat less than total rural land theoretically available for development, yet still larger than the 133,000 total acres that are classified as farms, according to the 2002 Agricultural Census. Thus, it is a good working number for purposes of analysis.

Assuming that a permanent conservation easement (PDR) would cost an average of \$2,300 per acre<sup>2</sup>, purchasing conservation easements on 145,000 acres of rural land would cost in excess of \$300,000,000, not including financing, administration, etc. Thus, full assurance of achieving the vision is not practical through a PDR program alone. *(Note that the estimate of \$2,300 per acre is based upon the market value of land for development vs. farming. However, if an easement program were implemented, funds might be allocated using a de facto “reverse auction” approach which would allow lower priced land to compete with higher priced land; further, various state and federal tax benefits would apply to some landowners which could also reduce the actual per acre cost to the County below the estimated average fair market value. However, it would not be prudent to assume the value of an easement, on average, would be much less than 50% of market value, or \$1,750. If this were the average price, about 30% more land could be preserved per dollar than shown here).*

For comparison purposes, the most extreme contrast to purchasing easements on virtually all farm and forest land would be to purchase easements on a “pay as you go” basis, buying easements for cash from annual tax revenues, rather than borrowing money.

Assuming the County would be willing to allocate three cents on the tax rate to such an effort, the County could purchase approximately 550 acres of land per year, or 11,000 acres over the course of a 20-year period. This would be a “core” amount of land, because one would assume that this County effort would serve to leverage private and state funds to increase the amount of land saved. However, even if the amount doubled, it would only be about 15% of the amount needed to ensure total success of the vision.<sup>3</sup>

*Again, the other challenge facing every option is the 7,000+ existing lots in the A-1 and C-1 zoning districts. Since those lots would sell at “retail” prices rather than “wholesale” (large tracts), the cost of acquiring easements would be significantly*

---

<sup>2</sup> Estimated as follows: Assume land values are 80% of the combined value for land and buildings of farms in Shenandoah County reported in the 2002 U. S. Census of Agriculture; extrapolate value to 2007 at +6% annually (approximately the same rate, rounded, as from 1997-2002). This yields an average/typical fee simple value of \$3,500 per acre for land. Assume typical easement is valued at two-thirds of fee simple value = \$2,300, rounded.

<sup>3</sup> Estimated as follows: \$420,000 per cent on tax rate x 3 cents on the tax rate = \$1,260,000 per year ÷ \$2,300 per acre = 548 acres per year x 20 years = 10,960 acres ÷ 145,000 acres = 7.5% of total target area.

*higher than with larger farm tracts. Assuming only \$30,000 per lot<sup>4</sup> for the value of a conservation easement (a very conservative estimate), the cost of acquiring PDRs on all 7,000 vacant lots would exceed \$200,000,000. (Note that many of these lots are very likely included within the 145,000 acres enrolled in the Use Value program).*

Under an LDR program, landowners would voluntarily put their land in a term easement that would prohibit development of their land for a given period of time (a minimum of five years, and any longer periods that the locality might choose to provide). In return, they would receive an annual payment that would essentially reimburse the landowner for a significant portion of the real estate tax on the land.

**c. *Develop at the trend rate, but lease Conservation Easements on all other land (LDR)***

Conservation easements can be acquired for terms as short as five years, and as long as perpetuity. We are not aware of any Virginia locality that has yet implemented a “term-easement” program (or Leasing of Development Rights) per se, although some localities have adopted a provision within the legislation for Use Value Assessment that allows landowners to make 5-year or 10-year commitments, rather than the standard one-year period.

While an LDR program does not save land in perpetuity, it could last for the duration of the vision planning period (20 years minimum), or even longer. Further, it is important to note that only permanent conservation easements are in fact truly permanent – even zoning regulations are subject to legislative change, at the will of the local governing body.

In theory, an LDR program could be structured so as to include virtually all of the land currently in Use Value (and even more), but with longer commitments for the land to remain open. Thus, LDR could go a very long way toward achieving the defined objectives of the vision – for the next two decades or more – if it was used to the maximum possible extent. That would depend largely, however, on landowner willingness to enroll in the program.

There are many possible options for designing and implementing an LDR program, and many variables to consider, including:

- land eligibility criteria (could include location, acreage, soils, use, etc.)
- duration (term) of easements available (options could include 5, 10, 15, 20 years, etc.)
- rollback payments, if any
- compensation to the landowner (presumably an annual payment)

---

<sup>4</sup> Estimated as follows: Average value of owner-occupied house in Shenandoah County according to 2000 U.S. Census is \$99,500. Extrapolated to 2007 at 6% annual increase indicates that 2007 value is \$150,000, rounded. Assume land value of typical lot is 25% of total value of house and lot. Typical lot value is thus \$37,000. Assume easement value is the total value of the lot less the farmland value of the lot: \$37,000 – (\$1,200 per acre x 5 acres) = \$31,000.

Since the effects of an LDR program are similar to those of the Use Value Assessment program, an LDR program would be implemented as an alternative to Use Value, not as an addition to Use Value, for any given landowner. In other words, if land was enrolled in Use Value, it would not be eligible to also enter into a term easement under LDR.

Estimating the market value for term easements is uncertain, and a detailed determination is beyond the scope of this analysis. However, a rough estimate can be made by comparing the average value of the one-year commitment for Use Value (approximately \$15 per acre per year), and the average value of a permanent easement (approximately \$2,300 total, or \$115 per acre annually over a 20-year period, not taking into account the net present value of money; note that the typical annual cost of a conservation easement financed with 30-year bonds at 5% interest would be approximately \$166 per acre)<sup>5</sup>.

As a practical matter, an LDR program would not likely be applied to every acre of land currently enrolled in the Use Value Assessment program, because more than 40,000 acres of land are currently in Agricultural and Forestal Districts, which are guaranteed to be eligible for Use Value for the duration of the district. One would assume that most of this land would remain in the Use Value program rather than switching to an LDR program. At a later point in time, one might assume that much of the land in AFDs would indeed enroll in an LDR program, but that would likely be phased in over the course of several years.

While the possible combinations of terms, compensation, and participation in an LDR program are virtually infinite, the table below shows a few possibilities, for purposes of comparison to other tools. The table compares alternative programs in relation to the “base” target area of 145,000 acres, and to a smaller area reflecting the exclusion of the 40,000 acres in AFD. They are shown for purposes of an “apples to apples” comparison.

---

<sup>5</sup> See analysis of easement purchase options in Appendix A of this report.

**Comparison of Several Options for Use Value, LDR, and PDR Programs**

Program - duration	Term of Commitment	Annual Effective Payment Per acre	Total Annual Effective Payment	Cents on Tax Rate	Rollback Period	Acres Conserved for Term	Total payment during Term	Total Net Cost to County over 20-year period
Use Value Assessment for six years <sup>1</sup>	1 year	\$15	\$2,175,000	\$0.05	6 years	145,000	\$90 per acre	\$0
Use Value Assessment for 10 continuous years <sup>1</sup>	1 year	\$15	\$2,175,000	\$0.05	6 years	145,000	\$150 per acre	\$30,450,000
Use Value Assessment for 20 continuous years <sup>1</sup>	1 year	\$15	\$2,175,000	\$0.05	6 years	145,000	\$300 per acre	\$30,450,000
Use Value Assessment for six years on less land <sup>1</sup>	1 year	\$15	\$1,575,000	\$0.04	6 years	105,000	\$90 per acre	\$0
Use Value Assessment for 10 cont. yrs on less land <sup>1</sup>	1 year	\$15	\$1,575,000	\$0.04	6 years	105,000	\$150 per acre	\$22,050,000
Use Value Assessment for 20 cont. yrs on less land <sup>1</sup>	1 year	\$15	\$1,575,000	\$0.04	6 years	105,000	\$300 per acre	\$22,050,000
LDR @ 10-year Term <sup>6</sup>	10-years	\$20	\$2,100,000	\$0.05	10 years	105,000 <sup>2</sup>	\$200 per acre	\$21,000,000
LDR @ 15-year Term <sup>6</sup>	15-years	\$25	\$2,625,000	\$0.06	10 years	105,000 <sup>2</sup>	\$250 per acre	\$26,250,000
LDR @ 20-year Term <sup>6</sup>	20-years	\$30	\$3,150,000	\$0.08	10 years	105,000 <sup>2</sup>	\$600 per acre	\$31,500,000
PDR (Permanent)	Perpetuity	\$166 <sup>4</sup>	\$17,430,000	\$0.42	n/a	105,000 <sup>2</sup>	\$2,300 per ac <sup>3</sup>	\$241,500,000 <sup>5</sup>

*Table footnotes:*

- <sup>1</sup> Options for Use Value demonstrate the effect of different durations of continued renewal into the program. The first option shows the value of Use Value Assessment if every participant left the program after during or up to the six-year rollback period. The second option shows the effect of renewing for a total of 10 consecutive years, and the third option shows a 20-year continuous enrollment. The fourth through sixth options show these same effects but only on the 105,000 acres outside of Agricultural and Forestal Districts (Note that this option is somewhat theoretical because the land in AFD is guaranteed eligibility for Use Value, but it is shown so as to compare the costs for the same land area used for the LDR options).
- <sup>2</sup> Assumes LDR and PDR is available and used by all landowners of vacant parcels zoned A-1 or C-1 currently in Use Value Assessment; assumes that the 40,000 acres currently in Agricultural and Forestal Districts do not participate in LDR or PDR in the near term.
- <sup>3</sup> Assumes permanent easements are valued at average of \$2,300 per acre (2/3 average estimated market value of farmland in Shenandoah County – see text for calculations). To simplify calculations, all PDRs are assumed to be acquired in the first year, but actually, easements would be acquired over a period of years; thus acquisition costs (bond financing) would be spread over time.
- <sup>4</sup> If financing is a 30-year bond at 5% annual interest, the total payments (principal & interest) would average roughly \$166 per acre annually, or a total of \$523,000,000 to buy easements on 105,000 acres of land. (Actual cost of the easement purchase would be \$77 per acre to the landowner, with the financing costs being an additional \$89 per acre, for a total cost of \$166 per acre to the County).
- <sup>5</sup> This amount is the actual payment to landowners and reflects a 30-year payment period, but the actual cost to County would be higher due to the financing costs. (See analysis of easement purchase options in Appendix A of this report).
- <sup>6</sup> All of these terms could be offered as options to landowners – they are not necessarily exclusive.

Term-Easement (LDR) restrictions would be similar to those of permanent conservation easements except for the duration, and would likely include:

- No further subdivision of land permitted during the period, except for limited family subdivisions in accord with subdivision ordinance.
- Construction of one dwelling permitted on any undeveloped parcel, in accord with zoning ordinance, with possible additional minimum area requirements.
- No construction of non-agricultural-related buildings, except permitted residential noted above.
- No termination of easement during the period of commitment (option would be to allow early termination after 10 years, only in the case of a defined hardship, with 100% rollback and potential penalties).

*Also note that in the above analysis, the 40,000 acres in AFD is assumed to be excluded from LDR or PDR programs, because it is currently enrolled in a multi-year program that assures Use Value Assessment for enrolled property. In actual practice, however, it is likely that the County would make land within AFD a *priority* for easement acquisition, and thus that land might actually be eligible for LDR or PDR funding. For purposes of analysis – to compare results on an acreage basis – this factor was ignored here.*

*Conclusions.* Two important aspects of the above analysis of LDR options are:

*Effect* - LDR, like PDR, would not, in and of itself, guarantee the prevention of the trend pattern and rate of rural housing development from continuing, because participation in the program is optional. The above analysis shows it pertaining to all land now in Use Value (except AFD land, as explained above), but presumably some of that land would not be enrolled and would be subject to development, due to the preferences of the owner. However, for the land included in an LDR program – and that could be very substantial – preservation would be guaranteed for at least the duration of the easement term; and

*Cost* - In terms of total, long-term cost to the County taxpayer at large, LDR would compare favorably to Use Value Assessment, because Use Value has only a six-year rollback period, and thus any taxes deferred for more than six years are lost to the County revenue stream, whereas LDR could be designed to capture a greater amount of rollback. Further, LDR would also “buy more time” than Use Value because the term of commitment would be much longer than one year, and thus the County taxpayer would “get more for their money”. However, the effectiveness of LDR still relies on a high level of participation. Unless there are adequate “carrots and sticks” to shift land from Use Value to LDR, its effects will be limited.

Finally, LDR could be used in concert with stricter zoning regulations so as to ensure that all priority rural land (about 145,000 acres) is restricted from development, either through mandatory zoning regulations or through voluntary LDR restrictions.

2) ***Options with a Reasonable Chance of Success or Significant Progress.***

Given the difficulties of successfully implementing the tools described above to the extent shown, this report also examines variants on these tools that would provide a reasonable chance of success - or at least significant progress toward success of the vision - with greater prospects of being implemented, in light of political, technical, and financial constraints.

a. ***Develop at the trend rate, but at a lower overall average density for new rural development***

The County could amend the A-1 and C-1 zoning districts to reduce the overall allowable density of new lots. There are many possible variations on this concept, but indications from analysis and input to date are that the following key features would be reasonable:

- Allow the same density for A-1 and C-1 districts. There are good public policy reasons for conserving land in both of these districts, and there is logic for the allowable density to be the same or similar. The permitted uses in these two districts would not change, and would thus still distinguish one from the other.
- Reduce the overall allowable density in these districts to one dwelling per 15 acres or one per 20 acres. A density of one dwelling per 15 acres would match the existing average parcel size in the rural areas, yet would still reduce the overall number of potential new lots. On the other hand, a density of one dwelling per 20 acres would reduce the potential housing supply further, and would allow the creation of a more attractive incentive for clustering new lots (discussed below). In either case, *average* density - rather than minimum lot size - should be used to regulate density. This will help avoid the problem of “using more land per house” than is needed, and thus further reduce the pressures for a rural sprawl pattern.

These two alternative densities are examined below.

***15-acre average density.*** Say the minimum allowable lot size is two acres, but the total *maximum density* is one lot per 15 acres. Thus, for every two-acre lot, a 28-acre lot would also have to be created to meet the overall density requirement. Unless this approach was required however, as with a cluster provision, the average of 15-acres per lot could be achieved with 12 and 18-acre lots, rather than with 2-acre and 28-acre lots, thus still creating a “sprawl” pattern. After 20 years, 4,000 lots at a 15-acre average density would convert roughly 60,000 total acres, although some of those lots would likely be parcels larger than the required 15-acre average, due to the flexibility on lot size.

***20-acre average density.*** Say the minimum allowable lot size is also two acres, but the total *maximum density* would be one lot per 20 acres. Thus, for every two-acre lot, a 38-acre lot would also have to be created to meet the overall density requirement. The average of 20-acres per lot could be achieved with many 10, 20

and 30-acre lots, rather than with 2-acre and 38-acre lots. This would be in some respects less of a “sprawl” pattern than the 15-acre density because many lots would be larger than 20 acres, and in effect, small farms. However, there would still be some risk of a “sprawl” pattern. After 20 years, 4,000 lots would convert roughly 80,000 total acres, although again, some of those lots would likely be parcels larger than the required 20-acre average, due to the flexibility on lot size.

Note that if the location objective were able to be met, due to a combination of all available growth management tools (90% of new houses located within PSAs), then only 400 rural lots would be needed during the next two decades, and only 6,000 acres of land would be converted at an average density of one lot per 15 acres, and 8,000 acres at an average density of 20 acres per lot.

*Note also that this solution also does not account for the 7,000+ existing small, vacant parcels, which would still be available for development.*

**b. Develop at the trend rate, but with a clustered pattern for new rural development**

Through requirements and/or incentives, ensure that all new lots are clustered, with cluster lots of 1.5 acres and at least 70% of the site preserved in larger “conservation” lots of 25 or more acres in size.

With a more compact pattern ensured, it would be logical to allow a somewhat higher density than the large lot option described above. If the average density for cluster development is one lot per 10 acres, after 20 years, 4,000 cluster lots would convert roughly 6,000 total acres to residential lots, with 34,000 acres preserved in larger conserved parcels (larger than 25 acres each, for example). Note that prohibiting or limiting further subdivision of divided parcels would also be necessary to maintain the clustered pattern.

*Note that this solution also does not account for the 7,000+ existing small, vacant parcels, which would still be available for development. However, it is very possible that in designing a cluster subdivision, the subdivider might combine some smaller existing lots or fold them into a cluster plan, in order to maximize the benefits. While this effect may or may not reduce the total number of future rural lot, it would likely improve the pattern of housing in relation to the goal of continuing farm and forest uses.*

**c. Combine Lower Average Density with a Cluster Option**

The lower density zoning approach could be combined with the cluster approach to create both a lower overall density of development, and a more compact pattern of development in the rural areas.

For example, the zoning regulations for A-1 and C-1 could be amended such that a conventional, large lot subdivision would be limited to an overall density of one lot

per 15 or 20 acres, but a cluster option could be permitted that would allow an overall density of one lot per 10 acres. This would provide a de facto “bonus” incentive for using the cluster pattern, while still lowering the overall “envelope” or maximum allowable houses in the County’s rural areas.

Another feature of this provision is that it would limit the restrictive impact on land now zoned C-1, which currently has a minimum lot size of 10 acres. With the density bonus of a cluster option, the development yield in the C-1 district would be the same or marginally greater than under current regulations, yet the impacts on the landscape, farmland and other resources would be reduced.

*d. Strengthen efforts to attract growth to the Public Service Areas (PSAs)*

Regardless of the tools applied to the rural areas, the County will benefit from expanding and strengthening its efforts to attract future residential growth to PSAs where services can be most efficiently provided. Recommendations for these specific tools are examined in the following section of this report.

### **Major Tools Recommended by the Steering Committee**

~~The CCP Steering Committee reviewed the technical analysis as well as the substantial input received from the public during the forums in September and October of 2008. The Committee recognized that there is no single “magic bullet” for achieving the vision that is also practical to implement.~~

~~Thus, the Committee identified a combination of tools that seeks to balance the impacts and benefits among all citizens, landowners, and taxpayers in the County. This combination of tools acknowledges that virtually every participant at the public forums took some issue with one or more of the tools that are available to the County, yet virtually all participants also wanted to achieve the vision. Thus, striking a balance is a delicate matter.~~

~~The basic tools that together offer the best prospects for success in achieving the vision are outlined below, and described in more detail on the following pages.~~

#### ~~1. Strengthen Efforts to Attract and Facilitate Growth In and Around the Towns~~

~~This strategy received broad support at the public forums and it is fully consistent with current County policy. The underlying principle is that by making the towns and PSAs better able to accommodate and attract growth, the objective of the vision can be achieved—90% of future housing development locating in the PSAs. Many tools are available for the PSAs; the following three stand out as priorities for implementation.~~

- ~~a. Joint Comprehensive Plans with the Towns, in conjunction with phased annexations~~
- ~~b. Ensure adequate utility capacity for the expected population~~
- ~~c. Adopt zoning standards that encourage traditional, compact development patterns~~

#### ~~2. Invest in Voluntary Land Conservation Programs~~

The underlying principle of this set of tools is that the costs of land conservation should be shared broadly across the community, since the benefits are also shared broadly. Further, to the greatest extent possible, land conservation should be voluntary. Each of the voluntary tools available has strengths and weaknesses. Generally, the strength is the certainty of success if the tool is fully applied. The weakness is cost, and thus the limitations on the magnitude of success. Therefore, the Steering Committee sees the logic in using most of the available tools. Three stand out and are listed below as top priorities (a, b, and c), to be used in combination:

*Note that item d., Transferable Development Rights (TDR), was identified by the Committee as having great promise in theory, but also great technical uncertainty, and thus worthy of further exploration but not as the key method of achieving the vision.*

- a. ~~Establish an Agricultural Economic Development program~~
- b. ~~Fund a Purchase of Development Rights (PDR) (from one to five cents on tax rate)~~
- c. ~~Establish and Fund a Leasing of Development Rights (LDR) / possibly linked to the existing Use Value Assessment program~~
- d. ~~Explore Transferable Development Rights (TDR)~~

### **3. Strengthen Rural Zoning Regulations (for A-1 and C-1 Zoning Districts)**

Regulation of land use is a long-standing method of achieving a variety of planning goals, particularly facilitating convenient, attractive and harmonious communities, facilitating the provision of public facilities, preserving agricultural and forest land, and protecting ground and surface water resources (see §15.2-2283 Purpose of Zoning Ordinances, in the Code of Virginia).

It is clear from the analysis carried out during the course of this project, that the County's existing zoning and subdivision regulations will not, in and of themselves, support the County's achievement of its vision, particularly with regard to rural land use and development. Thus, some improvements are needed, both as ends in themselves, as well as to reinforce and complement the other tools.

The primary objectives of the proposed amendments to the zoning regulations are:

- ~~to reduce the total, overall amount of housing development that is permitted in the rural areas, particularly on lands zoned for agriculture, and~~
  - ~~to provide incentives to landowners who wish to develop their land with houses, to develop those houses in a clustered pattern that will save significant pieces of open land that can remain in farm and forest use.~~
- a. ~~Adopt Low Density Zoning Regulations for the A-1 and C-1 Zoning Districts, at one lot per 15 to 20 acres on average, and allow a cluster development option that would provide a "density bonus" allowing up to one lot per 10 acres.~~
  - b. ~~Amend the Open Space Cluster Zoning Option for the A-1 and C-1 Zoning Districts, that would save at least 70% of the tract in very large, "conservation lots" as part of any subdivision, and explore incentives for recombining existing lots and facilitating family subdivisions.~~

### **Details of Major Tools—Draft Outline for Steering Committee Review**

### **3. Major Tools Recommended by the Steering Committee**

#### **A. Strengthen Efforts to Attract and Facilitate Growth In and Around the Towns**

##### **1) Prepare Joint Comprehensive Plans with the Towns, with Phased Annexations**

Shenandoah County is a leader in Virginia in doing joint planning with its incorporated towns. These efforts could be formalized and expanded. Each town could work with the County to prepare a joint comprehensive plan for the surrounding growth area. Such plans would establish areas into which the extension of water and sewer service would be phased over several decades, as growth demand warranted, in conjunction with annexation by the town to incorporate each phase. By clearly planning for such expansions, several benefits will accrue, including:

- *greater predictability for landowners* - surrounding landowners will have clear expectations for the ultimate use of their property, as well as a sense of what the timing might be for such development (at least in terms of decades)
- *coordination of government services and facilities* - towns and county can jointly coordinate the provision of services for the entire PSA
- *efficient and compact land use pattern* - development can be contained in an efficient and compact area, using only the amount of land necessary to accommodate growth pressures
- *shared responsibility* - towns and county can share decision-making authority, with gradual transition of land use powers from the county to the town as areas are annexed.

The County is well on its way to implementing this set of tools. For example, the Town of New Market recently completed a comprehensive plan element for the surrounding growth area that provides for an accommodation of future growth in a well-designed, compact pattern. Mt. Jackson has done similar plans and studies for surrounding lands during the last few years. Strasburg is currently updating its comprehensive plan with a view toward identifying methods to fully accommodate the expected future growth pressures within the PSA in a very compact, efficient manner.

The County has entered into formal agreements for orderly annexations with the towns of Strasburg and Mt. Jackson, and New Market has proposed such an agreement.

The County itself also has two PSAs, defined in conjunction with the Stoney Creek (Bryce-Basye) and Toms Brook-Maurertown sanitary districts.

Taken together, the PSAs have more than sufficient land area to accommodate the County's future expected growth for the 20-year planning horizon and beyond. Utility capacity is also sufficient for the near-term, but in the longer term, overall water and wastewater treatment capacity will need to be expanded in order to achieve the objective of locating 90% of population growth in the PSAs.

*The specific steps to implement this tool are:*

- Prepare policy language to add to the County Comprehensive Plan (draft shown below)
- Work with the Towns to determine if they will adopt similar language into each of their Comprehensive Plans
- During subsequent plan updates by each of the localities, determine the appropriate mechanisms and processes for preparing and adopting joint plan elements for each town PSA. In the case of New Market, the County could adopt the town's concept plan for its surrounding area. For the other towns, new documents would likely be needed, although much work toward such products has already been completed by some of the towns.

*Draft Comprehensive Plan Amendment Language:*

**Chapter 9 – Growth Management**

**3. LAND USE**

GOAL - Guide and direct growth into and around the towns and public service areas, while preserving the rural and open space character of the balance of the County.

OBJECTIVE A - Guide major development, including 90% of future housing development, to locate in and around the towns and utility service areas.

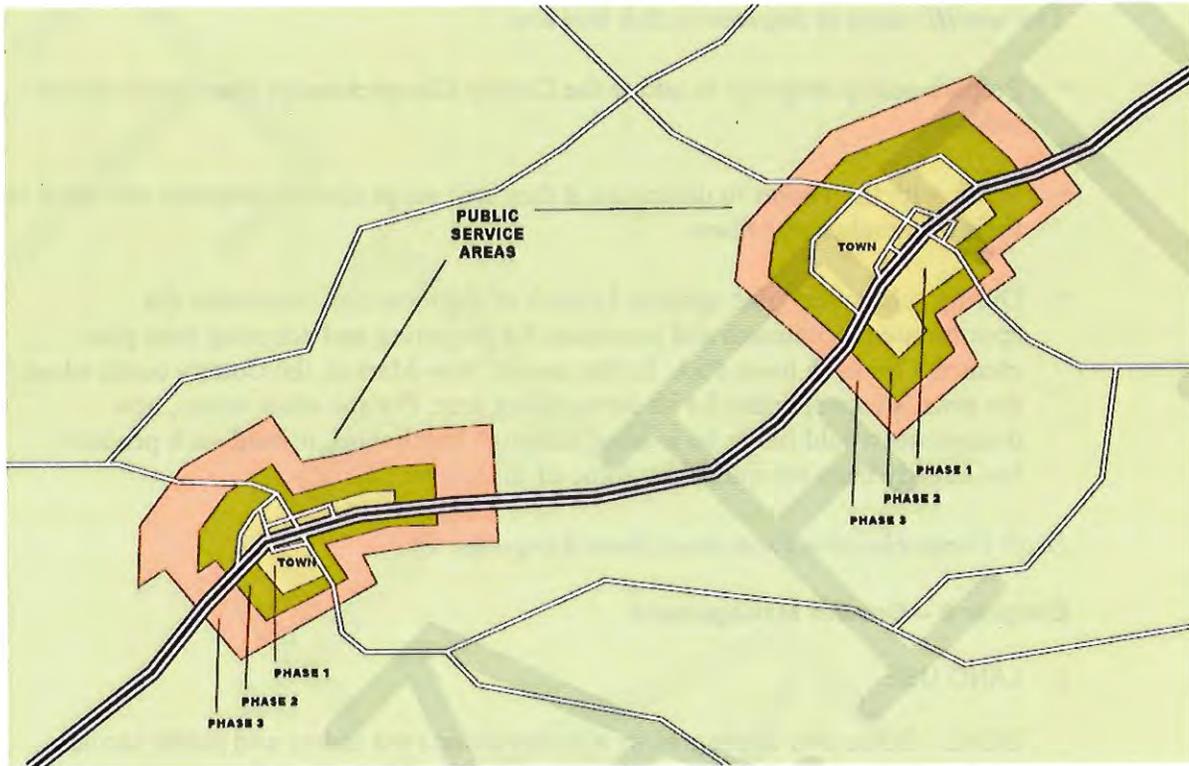
STRATEGY 1) – Undertake joint planning efforts with each incorporated town to create joint comprehensive plan elements for the surrounding Public Service Areas, leading to joint adopted by the County and each town.

STRATEGY 2) - ~~Identify potential~~ In conjunction with Strategy 1, refine the designated public service areas and seek annexation agreements of urban growth-area plans with towns to define carry out the policies set forth in the joint plans those areas.

STRATEGY 3) – Coordinate County zoning in adjacent areas around towns with zoning in the towns so as to ensure compatible zoning.

STRATEGY 4) - Encourage uniform town subdivision regulations.

STRATEGY 5) - Create incentives for development where public services are available.



## 2) Ensure Adequate Utility Capacity for Expected Future Population

Generally speaking, the County and its towns have adequate overall public water and sewer capacity and service for the immediate future. However, these systems need to be monitored, upgraded and expanded as needed, in advance of expected demand. As noted above, additional capacity will need to be added to the public water and wastewater treatment systems in order to meet the objective of locating 90% of the new population within the PSAs over the long term.

Trade-offs are inherent with the provision of water and wastewater treatment, in terms of centralized treatment plants vs. dispersed individual wells and septic systems. However, in the long-term, the County's strategy should be focused primarily on facilitating a mainly centralized approach, in order to contain and control the direct environmental impacts, while also limiting the indirect impacts – both fiscal and environmental – of a rural, sprawling development pattern.

### *The specific steps to implement this tool are:*

- Prepare policy language to add to the County Comprehensive Plan (draft shown below)
- Work with the Towns to affirm existing utility capacities, and to determine the necessary expansions to accommodate the land use objectives of the comprehensive plan during the next 20 to 40 years.

*Draft Comprehensive Plan Amendment Language:*

**Chapter 9 – Growth Management**

**6. PUBLIC FACILITIES**

GOAL - Provide for the improvement of public facilities and for the delivery of necessary public services.

OBJECTIVE A - Provide adequate services and facilities to serve planned land uses and development.

STRATEGY 1) – Refine the delineation of delineate service areas around towns, in conjunction with PSA designation and joint comprehensive plan elements for each town, and phase development within those service areas consistent with the availability of services and the land use policies and objectives of this chapter. The determination of necessary future utility capacity and the commitment to provide it, will be coordinated and determined so as to accommodate the growth forecasts and the objectives for directing growth to these areas during the next 20 years and beyond.

**3) Adopt Zoning Standards for Traditional, Compact Development Patterns**

Many ~~communities~~ towns throughout Virginia and other areas of the United States are embracing a return to traditional forms and patterns of development, modeled after the historic districts that are held in high esteem by citizens and visitors. This form of development is often referred to as “new urbanism”, which simply means designing and building new neighborhoods and communities with the beneficial elements of historic districts, but in a way that also accommodates modern technologies and lifestyles.

This approach can create neighborhoods and main streets with mixed-uses, “human-scale” streetscapes, connected street networks, parks, trails, and sidewalks within walking distance of every resident, and other such features that make “in-town” living highly desirable to all age and income groups. This can be a major attractor of future population and jobs, and help take pressure off of the rural landscape to accommodate new housing.

Recent state legislation (§ 15.2-2223.1) now requires certain counties (including Shenandoah) to incorporate one or more urban development areas, and the principles of new urbanism, into the comprehensive plan. The Code specifically cites features such as (i) pedestrian-friendly road design, (ii) interconnection of new local streets with existing local streets and roads, (iii) connectivity of road and pedestrian networks, (iv) preservation of natural areas, (v) satisfaction of requirements for stormwater management, (vi) mixed-use neighborhoods, including mixed housing types, (vii) reduction of front and side yard building setbacks, and (viii) reduction of subdivision street widths and turning radii at subdivision street intersections.

Most of the towns, like the County, have zoning regulations that were written many years ago and do not always reflect the newest understanding of how to achieve compact, “human-scale” development patterns. The County can work cooperatively with the towns to ensure that local zoning regulations encourage such development patterns.

Joint planning efforts would benefit from a coordinated approach by the towns and County in formulating such zoning laws. Traditional Neighborhood Design (TND) and Form-based Codes (FBC) are two techniques for implementing these concepts. The County could apply these zoning rules to certain parts of the PSAs, and the towns could apply them to areas within their corporate limits, possibly in coordination with planned annexations.

An example of the progressive approach emerging within the County is Woodstock’s Comprehensive Plan which calls for creating *“a zoning ordinance that incorporates newer forms of mixed-use type of development, such as Planned Unit Developments (PUD), to stimulate creative and efficient use and reuse of land”* and for developing *“a zoning approach to require, permit and/or provide incentives for the development of mixed use neighborhoods as identified on the Future Land Use Map.... Ordinance provisions would allow innovative residential building types and permit creative subdivision design solutions that promote neighborhood cohesiveness, walkability, connected street grids, community green spaces, and protection of historic and environmental resources.”*

***The specific steps to implement this tool are:***

- Coordinate with the Towns to determine the necessary amendments and additions to local zoning regulations that are necessary to ensure that traditional neighborhood development (TND) can be built within the PSAs.
- Prepare amendments to the County Zoning Ordinance, as needed, to ensure that TND can be built within the defined PSAs; and coordinate with the towns in developing their own similar zoning amendments so that all jurisdictions within Shenandoah County can accommodate and encourage TND in appropriate areas.

## **B. Invest in Voluntary Land Conservation Programs**

### **1) Establish an Agricultural Economic Development program**

The concept of promoting agricultural economic development received the strongest overall support from citizens at the public forums in the autumn of 2008. The primary purpose of local agricultural development programs is normally to promote the local agriculture industry, to increase the economic viability of farming, and to advise the County Board of Supervisors on matters affecting the agricultural economy and its development.

Formal local government programs for agricultural economic development have been initiated in many counties throughout Virginia, including the counties of Nelson, Pittsylvania, Isle of Wight, King and Queen, Loudoun, Fauquier, Halifax, and Fluvanna, as well as the City of Virginia Beach. In 2008, the professional staffs of these offices established an informal organization, called the Virginia Agricultural Development Officers (VADO), to aid members in offering assistance, information and advice about reaching their shared goals, and taking advantage of opportunities for education and networking.

Typically, these offices are based in the County departments of economic development, and carry out a variety of tasks, including promoting agricultural products, assisting in the development of new agricultural businesses, producing informational materials, including brochures and agricultural guides, and sponsoring farm tours, and other agri-tourism events and initiatives, as well as promoting farmers' markets and community supported agriculture (CSA). Some departments also manage local Agricultural and Forestal District Programs (AFD), Farm Viability Grants, Farmland-for-Lease Programs, and Purchase of Development Rights (PDR) programs.

Typically, the staff of an agricultural development office is relatively small – one or two professionals. The job of the agricultural development officer is essentially to plan, develop, and implement programs and services which promote and enhance agriculture and agricultural economic activities. This can include the following kinds of duties.

- Manage the County's Agricultural Development Office
- Administer agricultural development programs including the Purchase of Development Rights; monitor PDR easements and other conservation easements acquired by the County
- Develop and implement programs to support farm business development and retention
- Write, review and administer agricultural related grants
- Establish and implement public relations, marketing and communications plans to promote agricultural development
- Develop marketing campaigns and materials for agricultural events

- Promote and maintain the department website
- Provide information to the public; create and deliver presentations and speeches to community groups, agricultural associations, schools, local businesses and the general public.
- Provide advice, guidance and expertise on agricultural development plans, policies, trends, and related agricultural issues
- Serve as an advisor to the County Board of Supervisors regarding agricultural related policies including land use, zoning, and federal and state programs
- Serve as Chief of Staff to the County’s Agricultural Advisory Committee; and provide guidance and assistance to the local farm community
- Serve as a member of various boards, task forces, committees and management and planning teams; serve as liaison between the County and local, state and federal agencies, the media, citizen groups, non profit organizations and the general public
- Plan, supervise, coordinate and implement special events and activities
- Conduct research and analysis of agricultural data; identify trends; analyze new developments; apply information to plans, programs and policies
- Prepare, present and distribute statistical and operational reports pertaining to agricultural and departmental programs and services.

***The specific steps to implement this tool are:***

- Define the desired scope of the program. This would likely include coordination with major local agricultural, environmental and tourism business and interest groups to clarify the priority needs.
- Define the level of administrative and professional support required.
- Allocate funding.
- Recruit personnel and initiate the program.

**2) Fund a Purchase of Development Rights (PDR) (from one to five cents on tax rate)**

The County recently adopted an ordinance establishing a PDR program. Establishing funding and staff support are the next steps to fully implement it. Based on the analysis in this report, the County could fund the program on a “pay as you go” basis, or it could issue bonds to finance easement purchases, or some combination of the two.

Expectations for land acquisition at alternative funding levels are summarized in the following table. (Note that the table shows the amount of land the County could expect to directly preserve through its own PDR program; however, it would expect to also “leverage” additional easements through state and private grants, as well as donations).

The table below shows funding up to three cents on the tax rate. At five cents, up to about 18,000 acres could be preserved directly with County funds. See Appendix A for more detail.

**Comparison of Funding Options for PDR Program**  
(Funded at from 1 to 3 Cents on the Tax Rate)

Program Funding Option	Total Annual Payment <sup>3</sup>	Total Annual Funds for PDR	Cents on Tax Rate	Acres Conserved Annually <sup>4</sup>	Total Acres conserved over 20-year period <sup>5</sup>
Annual Funding from General Revenues <sup>1</sup>	\$420,000	\$420,000	\$0.01	182	3,640
Annual Funding from General Revenues <sup>1</sup>	\$840,000	\$840,000	\$0.02	365	7,300
Annual Funding from General Revenues <sup>1</sup>	\$1,260,000	\$1,260,000	\$0.03	548	11,000
Financed with General Obligation Bonds <sup>2</sup>	\$420,000	\$5,830,000	\$0.01	2,500 <sup>5</sup>	2,500
Financed with General Obligation Bonds <sup>2</sup>	\$840,000	\$11,700,000	\$0.02	5,100 <sup>5</sup>	5,100
Financed with General Obligation Bonds <sup>2</sup>	\$1,260,000	\$17,500,000	\$0.03	7,600 <sup>5</sup>	7,600

*Table footnotes:*

<sup>1</sup> "Pay As You Go" approach.

<sup>2</sup> Bond financing would allow the County to leverage its annual payments to acquire more land up front, but at a greater average cost per acre due to financing costs. Most likely, multiple small bonds would be issued over the course of several years, as land became available for purchase.

<sup>3</sup> Annual payments would be cash to the owner under the "pay as you go" approach, and would be payments of principle and interest in the bonding approach.

<sup>4</sup> Assumes \$2,300 average cost per acre of eased land. Assuming financing through a 30-year bond at 5% annual interest, each cent on the tax rate could support a \$5,830,000 bond. If bonds are issued in series, actual annual payments would fluctuate, but this table shows the expected average annual cost impact if one large bond were issued at the beginning of the program to fund all subsequent purchases.

<sup>5</sup> For the bonding approach, it is assumed that all of the funds are applied during a 20-year period even though the financing is over a 30-year period. Also note that the total land acquired through bond financing is shown as less than through the "pay as you go" approach, due to the financing costs; however, these numbers are all in current dollars. Thus, the net present value of money, plus the potential appreciation in land values, means that the sooner funds are used to acquire easements, the less costly the easements will be. This may be balanced somewhat by the increasing revenue yield from a cent on the tax rate. However, this table still likely understates the cost per acre of "pay as you go".

***The specific steps to implement this tool are:***

- Determine the level of funding for the program and the method of financing the purchase of conservation easements (development rights).
- Assign staff to administer the program.

**3) Establish and Fund a Leasing of Development Rights (LDR) (possibly linked to the existing Use Value Assessment program)**

The analysis earlier in this report indicated that the County could get greater value from the money it spends on Use Value Assessment if land in that program was converted to an LDR program. The County has several options for implementing LDR, in addition to question of funding levels. These options include:

- *Gradual implementation.* Design and adopt an LDR program and allocate initial funding for it, presumably with 10, 15, and 20 year easement terms. Then, *implement over the course of time as landowners choose to convert from Use Value Assessment to LDR.*
- *Transition from Use Value to LDR.* Design and adopt an LDR program and allocate initial funding for it, presumably with 10, 15, and 20 year easement terms. Then, *rescind Use Value and allow landowners to enroll in LDR instead.*
- *Target Areas.* Design and adopt an LDR program and allocate initial funding for it, presumably with 10, 15, and 20 year easement terms. Then, *make it available to land currently within Agricultural and Forestal Districts, as a voluntary alternative to Use Value Assessment. This would likely require a lower level of initial funding due to the limited target area.*

*The specific steps to implement this tool are:*

- Determine easement terms offered.
- Determine eligibility requirements (minimum acreage, etc.)
- Affirm easement provisions/requirements.
- Establish administrative responsibilities (staff assignments, etc.)
- Adopt the program and allocate initial funding.

**4) Explore Transferable Development Rights (TDR)**

The Virginia General Assembly has been considering refinements to the recent TDR enabling legislation in order to make the concept more practical for implementation. The County should track the progress on these efforts and continue to explore the feasibility of TDR as a long-term prospect.

However, given the difficulty and uncertainty of implementing TDR - [the track record of localities nationwide is not encouraging](#) - the County should be very cautious to avoid putting undue effort into developing a TDR program at the expense of efforts on other, more viable tools.

## **C. Strengthen Rural Zoning Regulations (for A-1 and C-1 Zoning Districts)**

### **1. Adopt Low Density Zoning Regulations for the A-1 and C-1 Zoning Districts**

**Allow one lot per 15 to 20 acres on average, and allow a cluster development option that would provide a “density bonus” allowing up to one lot per 10 acres.**

Based upon the analysis of this report, the following amendments to the A-1 and C-1 zoning districts should be pursued. Note that the draft amendments presented here use a base overall density of 20 acres; however, 15 acres is also valid. The County must make a reasoned judgment as to the trade-offs of these two options.

The basic concept of these draft amendments for the A-1 and C-1 zoning districts are that the overall density of housing development would be lowered to an average of one unit per 20 acres if developed as a large lot subdivision, and one unit per 10 acres if developed as a cluster subdivision. Permitted uses would not be changed.

The draft amendments for the C-1 District, the A-1 District, and the Open Space / Cluster option are shown following the overview of the Cluster option in section 3.b below. In showing the proposed amendments, the existing zoning ordinance is revised in a “legislative mark-up” style, with new language underlined and deleted language ~~stricken through~~.

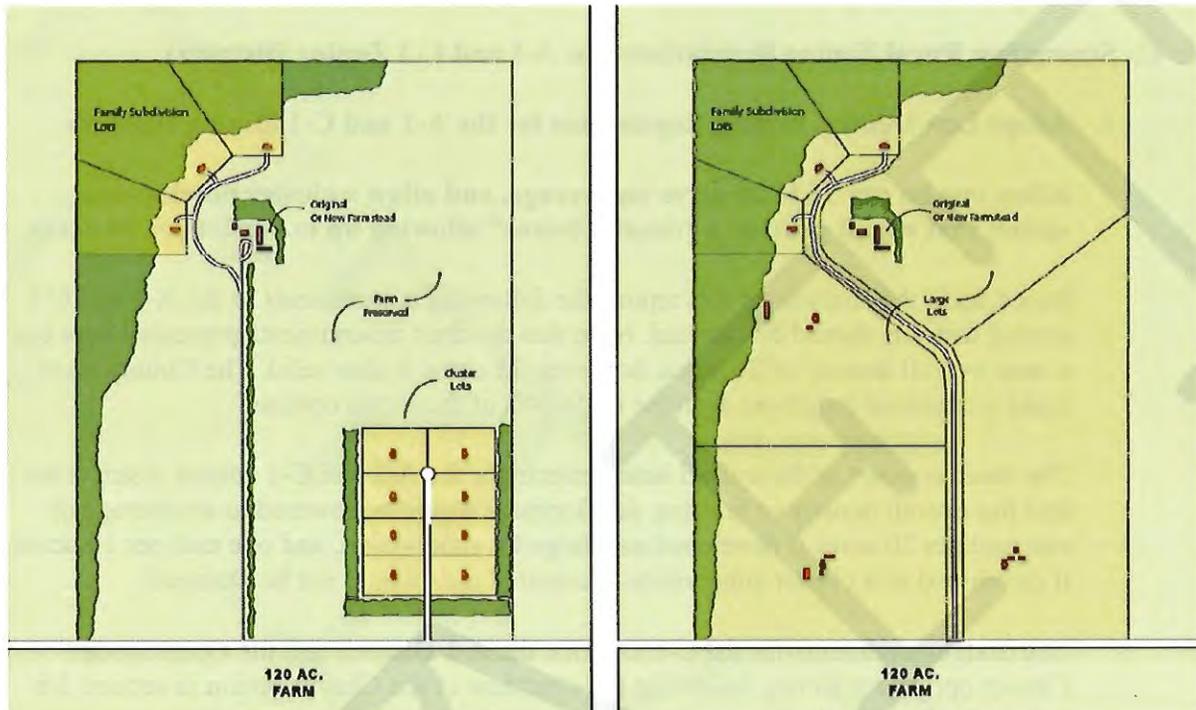
(Implementation steps are shown below, combined with those of item b.

### **2. Amend the Open Space Cluster Zoning Option**

**In the A-1 and C-1 Zoning Districts, that would save at least 70% of the tract in very large, “conservation lots” as part of any subdivision, and explore incentives for recombining existing lots and facilitating family subdivisions.**

The cluster provisions work in concert with the A-1 and C-1 base district provisions. The purpose of the cluster provisions is save significant pieces of open land even as adjacent land is subdivided and developed with rural housing. The result should be rural subdivisions that have less impact than conventional subdivisions, on agriculture, visual quality of the landscape, environmental resources such as water quality, and delivery of public services.

It is further hoped that the incentives of the cluster option may also encourage recombination of existing vacant lots, and facilitation of small-scale family subdivisions.



**Cluster Option**  
(average density of one lot per 10 acres)

**Basic Option**  
(average density of one lot per 20 acres)

*The specific steps to implement these two zoning tools are:*

- Refine the draft language shown in this report, as needed, including coordinating provisions with the subdivision ordinance.
- Conduct public informational meetings as needed.
- Take comment and input from public agencies.
- Conduct work sessions by Planning Commission and Board of Supervisors as needed.
- Issue legal public notice.
- Conduct public hearings before Planning Commission and Board of Supervisors as needed.
- Conduct additional work sessions as needed.
- Make refinements to the amendments as needed.
- Planning Commission makes recommendation to Board of Supervisors.
- Board of Supervisors make refinements as needed and adopts amendments.

### 3. Draft Amendments to the Zoning Ordinance (shown as legislative “mark-up”)

#### § 165-11. Conservation District (C-1).

[Amended 6-8-1982; 1-24-1985; 4-8-1986; 6-9-1987; 11-14-1989; 12-12-1989; 7-9-1991; 9-10-1991; 11-8-1994; 6-13-1995; 5-28-1996; 11-26-1996 by Ord. No. 96-3; 9-23-1997 by Ord. No. 97-7; 3-28-2000 by Ord. No. 00-2; 5-23-2000 by Ord. No. 00-6; 6-26-2001 by Ord. No. 01-6; 11-27-2001 by Ord. No. 01-8; 1-22-2002 by Ord. No. 02-1; 1-22-2002 by Ord. No. 02-2; 2-25-2003 by Ord. No. 2003-2; 6-24-2003 by Ord. No. 2003-4; 4-24-2007 by Ord. No. 2007-08; 4-24-2007 by Ord. No. 2007-09; 6-26-2007, 4-22-2008]

A. Statement of intent. This district covers portions of the County which are occupied by various open uses, such as forests, recreation areas, farms, lakes or streams. Uses not consistent with the existing character of this district are not permitted. Real property in this zoning classification may be subdivided only in accordance with § 142-3.1 of the Code of Shenandoah County. [Amended 3-22-2005 by Ord. No. 2005-4]

B. Uses. In this district, structures to be erected or land to be used shall be for one or more of the following uses:

(1) Uses permitted by right:

- (a) General farming, agriculture, dairying and forestry. See Article XI for poultry and hog regulations.
- (b) Conservation preserves.
- (c) Single-family detached dwellings.
- (d) Kennels.
- (e) Churches, cemeteries, schools, parks and playgrounds, fire and rescue squad stations, office buildings and other public and semipublic uses.
- (f) Roadside stand or market.
- (g) Country or general stores.
- (h) Sawmills or pulpwood concentration yards.
- (i) Manufactured houses on permanent foundations.
- (j) Lines, poles and pipes to provide electric, gas, telephone, water or sewer service to structures located on properties adjacent to said facilities.
- (k) Retail greenhouse and nursery operations under 10,000 square feet. Site plan approval is required as per Article XIV.
- (l) Storage buildings or sheds, as defined.
- (m) Recreational vehicle provided that the recreational vehicle is on the property no more than 30 consecutive days and is removed from the property for at least 14 consecutive days each time it is removed. [Added 4-24-2007 by Ord. No. 2007-09]
- (n) Open Space Developments meeting the requirements of Article X [Added 6-26-2007]
- (o) Wineries [Added 4-22-08]

(2) Permitted accessory uses:

- (a) Off-street parking for uses permitted in the district as provided in Article XII.
- (b) Signs as provided in Article XIII.
- (c) Customary accessory uses and structures as provided in § 165-26.
- (d) Home occupation as provided in § 165-29.
- (e) Level 1 home business as provided in § 165-30.

(3) Uses permitted by special permit:

- (a) Level 2 home business as provided in § 165-30.
- (b) Public utility generating, booster or relay stations, transformer substations, railroads, water and sewerage installations (other than pipes), telephone facilities (other than lines, poles and towers), and other facilities for the provision and maintenance of public utility service.
- (c) Garages, public.
- (d) Farm, lawn and garden machinery and equipment sales and service.
- (e) Lodges, hunting clubs, camps, golf and country clubs.
- (f) Recreational uses or facilities, commercially operated or for private membership, such as game courts, swimming pools, campgrounds, archery ranges, fishing or boating lakes, ski slopes, picnic grounds, marinas and accessory facilities (including the sale of food, beverages, bait, incidentals, supplies and equipment); provided that no such use, structure or accessory use is located closer than 50 feet to any adjoining property lines.
- (g) Conversion of a single residential structure on a lot to contain a maximum of four dwelling units, provided that such structure was in existence prior to September 12, 1978.
- (h) Reserved (4-22-2008)
- (i) Nursing homes and adult-care centers.
- (j) Airports, commercial and private.
- (k) Flea markets.
- (l) Mobile home or manufactured housing parks as provided in Article IX.
- (m) Retail greenhouse and nursery operations over 10,000 square feet. Site plan approval is required as per Article XIV.
- (n) Telecommunications towers as provided in Article XIX.
- (o) (Reserved) [EN]10
- (p) Museums.
- (q) Conversion of existing single-family dwellings to bed-and-breakfasts, provided that the bed-and-breakfast is located at least 900 feet from all lots containing intensive poultry facilities, intensive hog facilities, and other confined feeding operations.
- (r) Corporate training centers. [Added 11-25-2003 by Ord. No. 2003-7]
- (s) Country inns. [Added 11-25-2003 by Ord. No. 2003-7]
- (t) Rural resorts. [Added 11-25-2003 by Ord. No. 2003-7]
- (u) Temporary electric service [Added 4-24-2007 by Ord. No. 2007-09]

C. Area regulations.

(1) The minimum lot area shall be ~~±0~~ two acres. The average parcel size for any subdivision of land, as defined in Chapter 142 of the County Code, shall be 20 acres, except that the cluster provisions of Article X of this Chapter may be applied to permit a greater overall average density. If any proposed subdivision plat includes any lot less than 20 acres in area, the plat must show a boundary survey of the entire tract, in accord with plat requirements as set forth in § 142-45 of the County Code. [such language would be added to the subdivision ordinance]

(2) There shall be a maximum of one single-family detached dwelling or manufactured house per ~~±0~~ 20 acres.

(3) There shall be a maximum of two dwellings or manufactured houses or combination thereof per lot.

(4) Notwithstanding the other provisions of this chapter, each parcel of land existing at the

*Must track parcels from date of adoption to ensure avg. lot size requirements.*

maintains same ability as current regs. except 30 = 40

time of the adoption of this amended provision [X-XX-09] of ~~less~~ greater than 30 acres but not greater than 40 acres in area, and with no existing dwelling, may be subdivided into a total of ~~four~~ three parcels, each not less than two acres in area; and any such parcels greater than 20 acres but not greater than 30 acres may be subdivided into a total of two parcels, each not less than two acres in area.

31-40 acres  
3 lots

21-30 acres  
2 lots

D. Frontage regulations. The minimum frontage for each lot shall be no less than 175 feet, and each lot shall have a length to width ratio of each lot is no greater than 3.5 to 1, except that in no case shall the frontage be required to be greater than 350 feet, 450 feet. (See § 165-27 for cul-de-sac.)

0-20 acres  
0 lots

E. Yard regulations. [NOTE: See Article XI for residential setbacks from poultry facilities.]

(1) Front yard. Structures shall be located 40 ~~100~~ feet or more from the front lot line. This shall be known as the "setback" line.

(2) Side yard. Each side yard for each main structure shall be a minimum of 40 ~~80~~ feet. No accessory building shall be located closer than 30 feet to any side property boundary line.

(3) Rear yard. Each main structure shall have a rear yard of 90 ~~150~~ feet or more. Accessory buildings may be built to within 10 feet of rear property line. When the lot was recorded prior to October 1, 1978, the rear yard may be reduced to 60 feet when it is determined by the Zoning Administrator that the required setback cannot be met because water and/or sanitation facilities are necessary to be located in front of the house as determined by the Health Director.

(4) Lots adjoining an industrial-zoned district. No residential structure shall be constructed closer than 100 feet to any adjacent property line if that property is an industrial-zoned district or contains an industrial use; however, this distance may be reduced to 50 feet for side or 60 feet for rear yards if a screen buffer consisting of total screening is provided.

F. Building coverage. The maximum building coverage on a lot shall be 20%.

G. Height regulations.

(1) Structures may be erected up to 35 feet in height.

(2) All accessory buildings shall be less than the main building in height. Church spires, belfries, cupolas, monuments, water towers, farm silos, barns and other farm related structures, chimneys, flues, flagpoles, parapet walls, television antennas, radio aeriels, microwave towers and other public communication facilities are not governed by the height regulation of 35 feet set forth in the previous subsection.

**§ 165-12. Agriculture District (A-1).**

[Amended 6-8-1982; 3-8-1983; 4-8-1986; 6-9-1987; 11-8-1988; 6-13-1989; 11-14-1989; 12-12-1989; 7-9-1991; 9-10-1991; 12-10-1991; 3-10-1992; 3-23-1993; 4-12-1994; 11-8-1994; 5-28-1996; 6-13-1995; 11-26-1996 by Ord. No. 96-3; 9-23-1997 by Ord. No. 97-7; 3-28-2000 by Ord. No. 00-2; 5-23-2000 by Ord. No. 00-6; 6-26-2001 by Ord. No. 01-6; 11-27-2001 by Ord. No. 01-7; 11-27-2001 by Ord. No. 01-8; 1-22-2002 by Ord. No. 02-1; 1-22-2002 by Ord. No. 02-2; 2-25-2003 by Ord. No. 2003-2; 6-24-2003 by Ord. No. 2003-4; 4-24-2007 by Ord. No. 2007-06; 4-24-2007 by Ord. No. 2007-08; 4-24-2007 by Ord. No. 2007-09; 6-26-2007, 4-22-2008 ]

A. Statement of intent. This district is intended to preserve the character of those portions of the County where agricultural and other low-intensity uses predominate. The permitted uses should include mainly agriculture and related uses. Real property in this zoning classification may be subdivided only in accordance with § 142-3.1 of the Code of Shenandoah County. [Amended 3-22-2005 by Ord. No. 2005-4]

B. Uses. In this district, structures to be erected or land to be used shall be for one or more of the following uses:

(1) Uses permitted by right:

- (a) General farming, agriculture, dairying and forestry. [NOTE: See Article XI for poultry and hog regulations.]
- (b) Conservation preserves.
- (c) Single-family detached dwellings.
- (d) Manufactured houses on permanent foundations.
- (e) Schools, churches, parks, playgrounds, fire and rescue squad stations, libraries, cemeteries, office buildings and other similar public and semipublic uses.
- (f) Sawmills or pulpwood concentration yards.
- (g) Kennels.
- (h) Country or general stores.
- (i) Livestock markets.
- (j) Lines, poles and pipes to provide electric, gas, telephone, water and sewer service to structures located on properties adjacent to said facilities.
- (k) Roadside stand or market.
- (l) Veterinary hospitals
- (m) Retail greenhouse and nursery operations under 10,000 square feet. (Site plan approval is required as per Article XIV.)
- (n) Cat shelters.
- (o) Storage buildings or sheds, as defined.
- (p) Recreational vehicle provided that the recreation vehicle is on the property no more than 30 consecutive days and is removed from the property for at least 14 consecutive days each time it is removed. [Added 4-24-2007 by Ord. No. 2007-09]
- (q) Open Space Developments meeting the requirements of Article X [Added 6-26-2007]
- (r) Wineries [Added 4-22-08]

(2) Permitted accessory uses:

- (a) Off-street parking for uses permitted in this district as provided in § 165-86.
- (b) Signs as provided in Article XIII.
- (c) Customary accessory uses and structures as provided in § 165-26.

- (d) Home occupation as provided in § 165-29.
  - (e) Level 1 home business as provided in § 165-30.
- (3) Uses permitted by special permit:
- (a) Lodges, hunting clubs, camps, golf and country clubs.
  - (b) Level 2 home business as provided in § 165-30.
  - (c) Garages, public.
  - (d) Farm, lawn and garden machinery and equipment sales and service.
  - (e) Public utility generating, booster or relay stations, transformer substations, railroads, water and sewerage installations (other than pipes), telephone facilities (other than lines, poles and towers), and other facilities for the provision and maintenance of public utility service.
  - (f) Airports, commercial and private.
  - (g) Recreational uses or facilities, commercially operated or for a private membership, such as game courts, swimming pools, campgrounds, archery ranges, fishing or boating lakes, ski slopes, picnic grounds, marinas and accessory facilities (including the sale of food, beverage, bait, incidentals, supplies and equipment); provided that no such use, structure or accessory use is located closer than 50 feet to any adjoining property lines.
  - (h) Commercial slaughterhouse.
  - (i) Rendering plant.
  - (j) Blacksmith shop.
  - (k) Conversion of a single residential structure on a lot to contain a maximum of four dwelling units, provided that such structure was in existence prior to September 12, 1978.
  - (l) Reserved (4-22-08)
  - (m) Bulk petroleum products storage and distribution.
  - (n) Nursing homes and adult-care centers.
  - (o) Asphalt mixing plants.
  - (p) Flea market.
  - (q) Mobile home or manufactured housing parks as provided in Article IX.
  - (r) Motor vehicle impoundment lots.
  - (s) Retail greenhouse and nursery operations over 10,000 square feet. (Site plan approval is required as per Article XIV.)
  - (t) Manufacture of deli sandwiches.
  - (u) Off-street parking area as a main use.
  - (v) Personal service establishments under 1,500 square feet.
  - (w) Telecommunications towers as provided in Article XIX.
  - (x) (Reserved) [EN]11
  - (y) Dormitory housing for farm workers.
  - (z) Museums.
  - (aa) Conversion of existing single-family dwellings to bed-and-breakfasts, provided that the bed-and-breakfast is located at least 900 feet from all lots containing intensive poultry facilities, intensive hog facilities, and other confined feeding operations.
  - (bb) Child-care centers, provided that the child-care center is licensed by the Commonwealth of Virginia.
  - (cc) Corporate training centers. [Added 11-25-2003 by Ord. No. 2003-7]
  - (dd) Country inns. [Added 11-25-2003 by Ord. No. 2003-7]
  - (ee) Rural resorts. [Added 11-25-2003 by Ord. No. 2003-7]
  - (ff) Wholesale bakeries. [Added 11-25-2003 by Ord. No. 2003-8]
  - (gg) Cold storage of plant and animal cultures. [Added 3-8-2005 by Ord. No. 2005-2]
  - (hh) Temporary electric service [Added 4-24-2007 by Ord. No. 2007-09]
  - (ii) Ice Cream Stand. [Added 4-24-2007 by Ord. No. 2007-06]

C. Area regulations.

(1) The minimum lot area shall be ~~3-1/2~~ two acres. The average parcel size for any subdivision of land, as defined in Chapter 142 of the County Code, shall be 20 acres, except that the cluster provisions of Article X of this Chapter may be applied to permit a greater overall average density. If any proposed subdivision plat includes any lot less than 20 acres in area, the plat must show a boundary survey of the entire tract, in accord with plat requirements as set forth in § 142-45 of the County Code. [such language would be added to the subdivision ordinance]

(2) There shall be a maximum of one single-family detached dwelling or manufactured house per ~~3-1/2~~ 20 acres.

(3) There shall be a maximum of two dwellings or manufactured houses or combination thereof per lot.

(4) Notwithstanding the other provisions of this chapter, each parcel of land existing at the time of the adoption of this amended provision [X-XX-09] less of 20 or greater acres in area, but not greater than 32.5 acres and with no existing dwelling, may be subdivided into a total of ~~four~~ five parcels, each not less than two acres in area, and any such parcels greater than 14 acres but not greater than 20 acres may be subdivided into a total of four parcels, each not less than two acres in area.

D. Frontage regulations. The minimum frontage for each lot shall be no less than 175 feet, and each lot shall have a length to width ratio of each lot is no greater than 3.5 to 1, except that in no case shall the frontage be required to be greater than 350 feet. (See § 165-27 for culs-de-sac.)

E. Yard regulations. [NOTE: See Article XI for residential setbacks from poultry facilities.]

(1) Front yard. Structures shall be located ~~40~~ 60 feet or more from the front lot line. This shall be known as the "setback" line.

(2) Side yard. Each side yard for each main structure shall be a minimum of ~~40~~ 60 feet. No accessory building shall be located closer than 30 feet to any side property boundary line.

(3) Rear yard. Each main structure shall have a rear yard of 90 feet or more. Accessory buildings may be built to within 10 feet of rear property line.

(4) Lots adjoining an industrial zoned district. No residential structure shall be constructed closer than 100 feet to any adjacent property line if that property is an industrial-zoned district or contains an industrial use; however, this distance may be reduced to 50 feet for side or 60 feet for rear yards if a screen buffer consisting of total screening is provided.

F. Building coverage. The maximum building coverage on a lot shall be ~~20%~~ 30%.

G. Height regulations.

(1) Structures may be erected up to 35 feet in height from grade.

(2) All accessory buildings shall be less than the main building in height. Church spires, belfries, cupolas, monuments, water towers, farm silos, barns and other farm related structures, chimneys, flues, flagpoles, parapet walls, television antennas, radio aerials, microwave towers and other public communication facilities are not governed by the height regulation of 35 feet set forth in the previous subsection.

old regs:  
5 - 9 lots w/ 20-32.5 acres  
4 - 5 lots w/ 14-20 acres  
New Regs:  
20-32.5 acres  
5 Lots  
14-20 acres  
4 lots  
\* problem - 20 acres included in both.  
7-13 acres  
0 lots

**ARTICLE X, Open Space Cluster Development Regulations [Added 6-26-2007]**

**§ 165-69. Purpose and Intent.**

A. The regulations established in this article are to encourage the preservation of open spaces to be used for agricultural, forestal, and recreational uses, by permitting the clustering of smaller parcels within a subdivision so as to preserve larger lots within that subdivision. These regulations are consistent with Section 15.2-2286.1 of the Code of Virginia, as amended.

B. Objectives:

- (1) Protect and preserve large tracts of land for agriculture, forest, and other open space uses.
- (2) Protect and preserve natural resources, trees, watersheds, floodplains, water features, sink holes, mountain ridge lines, steep slopes, and other sensitive natural features, while enhancing the natural scenic beauty of the land.
- (3) Protect and preserve historic areas, including any area containing one or more buildings or places in which historic events occurred or having special public value because of notable architectural, archeological, or other features relating to the cultural or artistic heritage of the community, of such significance as to warrant conservation and preservation.

**§ 165-70. Minimum area requirement.**

An open space development shall consist of at least 5 contiguous acres in the Low-Density Residential (R-1), Medium-Density Residential (R-2), and High-Density Residential (R-3) districts, 32.5 ~~40.5~~ acres in the Agriculture (A-1) and Rural-Residential Agriculture (RRA) districts and 32.5 ~~30~~ acres in the Conservation (C-1) and Rural-Residential Conservation (RRC) districts, under one ownership or control.

**§ 165-71. Public water and sewer.**

An open space development project shall be serviced by public water and sewer as defined in Section 142-3.B of the Code of Shenandoah, except that in the C-1 or A-1 districts the lots may be served by individual well and septic systems if approved by the Health Department.

**§ 165-72. Density, area, frontage, and yard requirements.**

A. An open space development shall be designed at an overall density corresponding to the minimum lot size contained in the specific applicable district regulations section for single-family lots, except as provided for in § 165-11.C of this chapter for the C-1 district, and in § 165-12.C. of this chapter for the A-1 district.

B. All structures on residential lots in an open space development shall ~~be clustered within an avoid any~~ area ~~not~~ containing prime farm and forest land, 100-year floodplain, wetlands, stream buffers, sink holes, mountain ridge lines, steep slopes, historic areas, and areas with other sensitive natural and historical features. The Administrator shall evaluate information provided by the applicant ~~in the site plan, soil surveys, floodplain maps, historical surveys, USGS topographical maps,~~ and other sources of information pertaining to the property and surrounding areas. In order to facilitate such evaluation, the applicant shall show the location of building envelopes on each lot. *[amend chapter 165-42 to add prime farmland, steep slopes, historic structures and wetlands to plat submission requirements]*

*New #1s  
 175' - 350'  
 3.5:1 ratio  
 40, 40, 90  
 40, 40, 90  
 yard setbacks*

C. The minimum lot area, frontage, and yard requirements for individual, cluster lots in an open space development shall be as follows:

District	Minimum Lot Area	Minimum Frontage	Required Front Yard	Required Side Yard	Required Rear Yard
C-1	60,000 sq ft.	<i>450'</i> 125 feet	<i>100'</i> 35'	<i>80'</i> 15'	<i>150'</i> 50'
A-1	60,000 sq ft.	<i>350'</i> 125 feet	<i>60'</i> 35'	<i>60'</i> 15'	<i>90'</i> 50'
C-1/RRC	1 acre	125 feet	35'	15'	30'
A-1/RRA	30,000 sq ft.	125 feet	35'	15'	30'
R-1	15,000 sq ft.	100 feet	35'	10'	25'
R-2	10,000 sq ft.	90 feet	35'	10'	25'
R-3	10,000 sq ft.	90 feet	35'	10'	25'

*100' 50' 50'  
 100' 50' 50'*

Accessory structures shall be located at least 5 feet from side and rear lot lines in the RRC, RRA, R-1, R-2, and R-3 districts, and 15 feet in the C-1 and A-1 districts.

Note: 100' setback is required for all primary structures from a pre-existing street.

**§ 165-73. Open Space and Conservation Lots**

A. A minimum percentage of each open space development shall be preserved in open space or conservation lots as shown in the following table:

C-1/RRC	<del>70%</del> 75%
A-1/RRA	70%
R-1, R-2, R-3	50%

B. Open space and conservation lots shall be used only for the following purposes:

- (1) For properties zoned C-1, RRC, A-1, RRA: Agricultural and forestal uses including the construction of farm related accessory structures necessary to conduct agricultural activities on the property.
- (2) For properties zoned R-1, R-2, R-3: Recreation areas meaning park areas, pedestrian paths, bicycle trails, and other recreational facilities. Structures directly supporting the recreation use may be constructed.
- (3) For all properties: Preservation areas meaning historic places, buildings, battlefields, and other areas of historical significance, stream buffers, floodplains, wetlands, steep slopes, and other natural and environmental resources, not including structures except those farm structures allowed in Section 165-73.B(1).
- (4) For properties zoned C-1 or A-1: One single family detached dwelling per conservation lot. Such lots must have a minimum area of 30 acres and must meet all other frontage and setback requirements of for those districts as set forth in § 165-11 and § 165-12.

C. Except for conservation lots in the C-1 and A-1 districts, all open space within a development shall be contiguous. When open space is already designated on neighboring properties, all new open space shall be designed to be linked together with neighboring properties whenever feasible. The open space shall be arranged and designed to facilitate its use, ensure continuity of design, and preserve sensitive environmental features. Failure to achieve these goals shall be sufficient reason

for the agent to deny applications for open development plan approval or to require modifications that may include the loss of lots.

D. ~~An open space development shall include~~ A perpetual or conservation easement acceptable to and approved by the County, shall be recorded on the all open space and conservation lots to ensure it continues as open space in perpetuity and is not further subdivided or developed in excess of what is permitted by the provisions of this Article.

E. In the C-1, RRC, A-1, & RRA Zoning Districts the open space may remain in private ownership if the provisions of this ordinance are met. If the open space remains in private ownership and it contains an existing single-family dwelling, that single-family dwelling may be continued, improved, expanded, and repaired as necessary. The requirement of a perpetual conservation easement as required in § 165-73.D also pertains.

F. In the R-1, R-2, R-3 Zoning Districts the ~~Home~~ Property Owner's Association shall own and maintain the open space unless the developer wishes to dedicate the open space to the county for recreational uses, and where the Board of Supervisors agrees to accept such open space, or where a conservation organization agrees to take ownership and maintenance of the open space, if approved by the Board of Supervisors. Recreational open space shall be linked together to provide access for all residents. The ~~Home~~ Property Owner's Association shall conform to the following requirements:

- (1) The developer shall establish the organization prior to the sale of any property.
- (2) Membership in the organization shall be mandatory for all residential property owners, present or future, within the development.
- (3) The organization shall manage all open space and recreational and cultural facilities; shall provide for the maintenance, administration, and operation of said land and improvements, and any other land within the development, and shall secure adequate liability insurance on the land.
- (4) The organization shall conform to the Condominium Act, Code of Virginia (1950), as amended.

#### § 165-74. Streets

A. Except for conservation lots, no new lots created under the open space development regulations shall be accessed by an existing street.

B. All lots other than conservation lots shall be accessed by new streets meeting the provisions of Section 142-20 of the Code of Shenandoah, except that in the C-1 and A-1 districts, new streets may be public or may be private; if private streets are created, they must meet the provisions of parts Section 142-20 (2) (i) [b], 3 through 11. If such private streets are created in accord with such provisions, the open space cluster development must have a Property Owners Association, established in accord with Section § 165-73.F. of this Chapter and in accord with Chapter 142.

C. All new residential structures shall be located at least 100' from any street in existence at the time of subdivision. An opaque screen buffer, as defined in Section 165-4, shall be installed and maintained along all pre-existing streets on residential lots in an open space development. The Subdivision Administrator may waive this requirement if the existing tree cover is found to adequately screen new houses from existing streets and if the trees in that area are preserved in an easement.

#### § 165-75. Buffers

A. Where an open space development is to be located adjacent to land zoned or currently used for industrial or business uses, the required open space shall be located to buffer the residential lots

from those properties.

B. Where an open space development is to be located adjacent to land in an Agriculture & Forest District or land used for intensive poultry or hog facilities, the required open space shall be located to buffer the residential lots from those uses.

#### **§ 165-76. Approval Process**

Open space developments shall be reviewed administratively by staff. In determining whether or not to grant approval, the applicant shall be required to show that the requirements of this Chapter and of Chapter 142 are met, how the proposed open space development provides superior protection of those resources listed in 165-69.B to that which would be effected by conventional subdivision of the subject property.

For open space development subdivisions of 10 or more total lots, a site plan, meeting the requirements of Section 165-98 shall be submitted to the Administrator. In addition to the requirements of Section 165-98, mountain ridge lines and areas of environmental/historical value, as described in Section 169.B, shall be shown on the site plan and preserved as open space or conservation lots. Where an open space development is to be developed in phases, a site plan shall be submitted for the development of the entire site with a phasing plan. This general site plan shall not bind the county into approving further phases if the Code of Shenandoah is amended to disallow such use approved in the site plan.

Once a site plan is approved, a final plat meeting the requirements of Section 142-48 shall be submitted to the Administrator. In addition, final plats recorded for an open space development shall bear a statement indicating that the land is within an approved open space development subdivision and shall also bear a statement indicating the ownership status of the development's open space system and shall reference the covenants creating a property owners association, which shall also be recorded at the time final plats are recorded. The easement preserving the open space, restrictive covenants spelling out the maintenance of the open space, articles of incorporation for the Home Property Owner's Association, and any bonding necessary for improvements shall be approved by the County Attorney. If those items are approved by the County Attorney, the Administrator shall approve or deny the final plat based on compliance with all applicable codes.

#### **§ 165-77. Variations**

In order to promote more creative and innovative designs, the Board of Supervisors may approve variations to the requirements of this chapter through the issuance of a special use permit.

#### **§ 165-78. Low Impact Development Techniques**

In order to limit the impact of stormwater runoff from compact rural residential developments, open space cluster developments are permitted to use low impact development (LID) techniques to meet stormwater management requirements, including, but not limited to the following:

- Bioretention areas
- Green Roofs and Rooftop Gardens
- Vegetated Swales, Buffers, and Strips; Tree Preservation
- Rain Barrels and Cisterns
- Permeable Pavement
- Soil Amendments
- Impervious Surface Reduction

## § 165-4. Definitions

[add the following]:

*BUILDING ENVELOPE* – an area not greater than 20% of the total lot area, shown for lots within an open space development subdivision, which defines the area on the lot within which the principle structure may be built.

*CLUSTER LOT* -- Any lot within an open space development subdivision that is not an open space lot or a conservation lot.

*CONSERVATION LOT* – A permanently preserved lot of not less than 30 acres in area that is created as part of an open space development subdivision, as specified in § 165-73.

*LOW IMPACT DEVELOPMENT TECHNIQUES (LID)* – An approach to stormwater management that emphasizes the use of on-site natural and built features to reduce the impacts of increased flow rates and volumes associated with increases in impervious area. LID involves assessing and understanding the site, protecting native vegetation and soils, and minimizing and managing stormwater at the source. LID techniques may be considered an alternative to traditional, structural stormwater management solutions. Such techniques reduce runoff volume by infiltrating rainfall water to groundwater, evaporating rain water back to the atmosphere after a storm, and by using water on-site rather than exporting it as a waste product down storm sewers.

*Bioretention areas* - vegetated depressions that collect and filter runoff. Bioretention BMPs increase the amount of rain water a property can absorb and include vegetative strips, grassy swales, rain gardens, shallow surface ponds, tree box filters, and underground drainage systems.

*Green Roofs and Rooftop Gardens* - Plants that can tolerate drought and extreme temperature conditions are planted in green roofs to absorb rainwater

*Vegetated Swales, Buffers, and Strips* – mild slopes adjacent to roads, parking lots and other impervious surfaces that are planted with vegetation to retain and absorb water runoff.

*Tree Preservation* – saving existing vegetation on site.

*Rain Barrels and Cisterns* – storage containers which collect and hold stormwater run-off from roofs.

*Permeable Pavement* - an alternative to asphalt and concrete that allows rainwater to percolate into the ground.

*Soil Amendments* - amending the soil with organic matter can help retain the site's ability to absorb water and prevent runoff

*Impervious Surface Reduction* – minimizing the construction of impervious surfaces on the site, through narrower streets, compact parking areas, extensive vegetated areas, etc.

*OPEN SPACE DEVELOPMENT (CLUSTER DEVELOPMENT TECHNIQUES)* -- The clustering of single-family dwellings meeting the requirements of Article X. [Amended 6-26-2007]

## Appendix

### A. Analysis of Options for Conservation Easement Acquisition

This analysis examines various options for County acquisition of conservation easements through term (leasing) or permanent (purchase) programs.

The Open-Space Land Act in the Virginia Code (§ 10.1-1700 through 1705) allows localities to acquire conservation easements for purposes of open space land preservation, for as short as five-year time periods, or for as long as perpetuity. It is up to the County to determine most of the rules and procedures for such programs, including the duration of the easements, and the method and amount of compensation that would be given to landowners who choose to be part of any such program.

This analysis explores some of the choices available to the county for pursuing these tools, and compares the estimated costs and benefits with those of the current Use Value Assessment program. Because some features of any easement acquisition program are unknown (such as the actual value of any particular easement), and because there are so many variations that are possible in terms of how these programs could be implemented, in this analysis I have:

- Made reasonable assumptions or estimates where precise numbers are not available;
- Limited the analysis to several major choices for conservation easement acquisition, in terms of funding allocations and duration of term-easements; and
- Explicitly cited all data sources, assumptions, and calculations used in the analysis, either directly in the text, or through footnotes.

#### Overview

This analysis examines and compares Use Value Assessment (“Land Use”), Purchase of Development Rights (PDR), and Leasing of Development Rights (LDR).

This is not to suggest that Use Value Assessment should be changed or eliminated, but rather to show how PDR and LDR programs might compare to Use Value in terms of cost effectiveness for both landowners participants, and for County taxpayers at large.

These three land preservation programs are not necessarily incompatible with each other. Indeed, any of them could be used together in virtually any combination.

## **Current Use Value Assessment and Agricultural & Forestal District Programs**

The Use Value Assessment program has been widely used throughout Virginia (and most other states) for the past few decades. The program provides a deferral and reduction of property tax on qualifying farm, forest, and open space land by taxing the land at its use-value for those agricultural uses, rather than at its true market value. This approach provides a tax reduction to the landowner because in this region the majority of the value of a given piece of land is due to its value for development (residential, commercial or industrial), rather than its value for farm or forest production. This is due mainly to the overall size and intensity of the non-farm economy in this region, as well as to ongoing population growth. (In areas of the country that have no growth pressures and extremely low population densities, such as southwestern Kansas, for example, the use value of the land will often match the total market value of the land).

### ***Costs and Benefits of Use Value Assessment***

Shenandoah County's 2007 real property tax raised \$21,400,000.<sup>1</sup> The 2007 real property tax rate was \$0.51 per \$100 of assessed value. Thus, one cent on the tax rate raised approximately \$420,000 per year ( $\$21,400,000 \div 51$ ).

A total of approximately \$2,130,000 taxes is deferred from 145,000 acres of land in the Use Value Program.<sup>2</sup> Thus, the average benefit to the landowner in terms of reduced taxes is approximately \$15 per acre ( $\$2,130,000 \div 145,000$ ).

The annual amount of \$2,130,000 accounts for approximately 5 cents on the real property tax rate ( $\$2,130,000 \div \$420,000$ ). Note that this amount does not consider the roll back payments that the landowner must pay on the most recent six-year period when property is removed from the program.

Farmland owners must renew their enrollment in the program annually, but are not required to make any longer commitment to the program. Many farmers claim that the Use Value program is critical to their ability to continue farming, because it reduces one of the significant costs of doing business. Further, it is widely acknowledged that farmland itself is not a direct cause of financial stress on the County in terms of the demand for public services (schools, public safety services, etc.).

Thus, the main benefit to County citizens and taxpayers at large is the encouragement of the continuation of farming in the County by reducing the financial burden on farmland owners. However, one of the criticisms of the Use Value program is that by requiring only a one year commitment to the program, the program can be used as a tax subsidy for those who wish to hold the land at low cost pending future residential development. This is probably a greater

---

<sup>1</sup> Shenandoah County Budget Book FY09

<sup>2</sup> 2002 data as reported in Fall 2003 Newsletter Virginia Association of Assessing Officers

problem in areas of more rapid growth, but nevertheless, it is a valid concern in terms of judging the cost-effectiveness of the program. With only a one-year commitment to the program, the taxpayers at large do not get any assurance of a long-term land preservation benefit.

The state program also provides the option to localities of a “sliding scale” use value agreement, in which landowners could commit to five-year or 10-year enrollment periods. These options begin to resemble the term easement option of LDR. However, there is less flexibility for the locality in terms of the details of the program, and longer term periods are not available.

### ***Agricultural and Forestal Districts (AFD)***

The major feature of the AFD program that is relevant to this analysis is the fact that enrollment of land in an AFD ensures that any land that otherwise qualifies for Use Value Assessment will continue to qualify for Use Value for the duration of the term of the District. Thus, even if the County rescinded Use Value, such land would still get the tax deferral for the term of the AFD.

### ***Rollback Payments***

The six-year roll back provision of the Use Value program means that all deferred taxes prior to the most recent six years prior to a property being removed from the program are foregone, and constitute a cost to the County. At any given point in time, the County can consider the deferred taxes on 105,000 acres of land (145,000 total acres in Use Value less 40,000 acres in AFD) to be theoretically available for potential recapture through rollback payments, if for example, the Use Value program was ever rescinded. Note that it is unlikely the County would ever rescind the Use Value program unless it was replaced with a program of equal or better effectiveness.

### ***Purchase of Development Rights (PDR)***

Under a PDR program, the County would purchase conservation easements from willing landowners. Provisions and procedures for eligibility, establishing the value/cost of the easements, funding sources, etc., could be as set forth in the County’s Conservation Easement Program (Chapter 82 of the County Code). The major remaining question would then be: What are the County’s reasonable expectations for cost and benefit of such a program, i.e., what might the County expect to get for its investment of public funds?

The following analysis examines one possible approach, including reasonable assumptions about land and easement values, levels of participation by landowners, financing mechanisms, etc. While this represents only one possible outcome of many possibilities, it provides an example of what could be expected. (Note that the analysis uses 2007 data, which was the most readily available for all data sets).

### ***Costs and Benefits of PDR***

Any easement acquisition program will incur acquisition, financing, and administrative costs. Acquisition and financing would be the major cost components, and thus, this analysis ignores administrative costs, which would likely be a very small percentage of the total costs of a robust program, and likely roughly in line with those of the current Use Value Assessment program.

The County could fund a PDR from annual tax revenues, on a “pay as you go” basis. This would be the most economical in the sense that there would be no borrowing costs. However, it would limit the initial size of the program and would delay much of the acquisition to later years, causing a risk that the cost of acquiring easements would rise due to rising long-term land values. Alternatively, the County could finance a larger purchase of land in the early years through a general bond issue, thereby leveraging the annual tax revenue to acquire more land “up front”. Note that for purposes of this analysis, we assume the County would issue a single initial bond of several million dollars. However, it is more likely that financing would be achieved through a series of smaller bonds over a period of several years, as available lands became available for easement purchase.

Three important points should be noted. *First*, a variety of financing mechanisms could be used because many landowners may prefer to be paid on an installment basis rather than an up front lump sum in order to minimize capital gains. This limitation is ignored for the purposes of this analysis. *Second*, the County has limits on the total amount of borrowing which it can incur. This issue is also ignored for the purposes of this analysis. *Third*, this analysis uses conservative figures when estimating costs and benefits, i.e., when choosing between two possible assumptions or estimates of cost values, the lower cost / higher benefit choice is used. *Also note that all numbers in this analysis are rounded.*

A \$1,000,000 bond amortized over 30 years at 4% annual interest would cost \$4,770 per month or \$57,000 per year in loan and principle payments<sup>3</sup> for a rounded total cost of \$1,710,000 (principal plus interest) over the course of the 30-year period. Thus, it would cost \$1,710,000 to fund the acquisition of \$1,000,000 worth of easements, assuming a 4% interest rate and 30-year period.

A \$1,000,000 bond amortized over 30 years at 5% annual interest would cost \$5,996 per month or \$71,950 per year in loan and principle payments<sup>3</sup> for a rounded total cost of \$2,160,000 (principal plus interest) over the course of the 30-year period.

Therefore, one cent on the tax rate at the current tax revenue yield would support a bond of between \$5,830,000 and \$7,400,000 bond, depending on the available interest rate, which would cost a total of \$12,600,000 over 30 years (\$420,000 x 30).

### ***Land Values and Cost of Easements***

The 2002 U. S. Census of Agriculture (the most recent available)<sup>4</sup> shows that the average value of land and buildings in farms in Shenandoah County is \$3,280<sup>5</sup>. If this amount is extrapolated at 6% annually, the value in 2007 would be \$4,400. If land is assumed to constitute on average 80% of the total value of property, then the average fee simple value of land in farms in the County is roughly \$3,500 per acre (\$4,400 x 0.80 = \$3,500).

---

<sup>3</sup> Standard amortization formula:

$$A = P \frac{r(1+r)^n}{(1+r)^n - 1}$$

where:

A = payment amount per period

P = initial Principal (loan amount)

r = interest rate per period

n = total number of payments or periods

<sup>4</sup> 2007 Ag Census became available only in February 2009, as this analysis was being prepared.

<sup>5</sup> 2002 U. S. Agricultural Census, U.S. Department of Agriculture, 2004.

Assume the typical permanent conservation easement is valued at two-thirds of the fee simple value ( $\$3,500 \times 0.667 = \$2,300$ ). (Note that this percentage will vary from property to property, but two-thirds is a reasonable assumption, because for most properties, the value for development accounts for the majority of the fee simple value of the land, as evidenced by use-value assessments).

### ***Optional Funding Levels***

Permanent conservation easements (PDRs) would thus cost an average of \$2,300 per acre. Therefore, using local bond financing by the County, the following levels of easement acquisition could be expected, assuming 30 years at 5% interest:

One cent on the tax rate would fund a \$5,830,000 bond which would achieve the acquisition of easements on 2,500 acres of land ( $\$5,830,000 \div \$2,300$  per acre).

Two cents on the tax rate would support a \$11,700,000 bond which would achieve the acquisition of easements on 5,100 acres of land ( $\$11,700,000 \div \$2,300$  per acre).

Three cents on the tax rate would support a \$17,500,000 bond which would achieve the acquisition of easements on 7,600 acres of land ( $\$17,500,000 \div \$2,300$  per acre).

Four cents on the tax rate would support a \$23,300,000 bond which would achieve the acquisition of easements on 10,100 acres of land ( $\$23,300,000 \div \$2,300$  per acre).

Five cents on the tax rate would support a \$29,100,000 bond which would achieve the acquisition of easements on 12,700 acres of land ( $\$29,100,000 \div \$2,300$  per acre).

*It is important to note* that these estimates do not take into account other funding sources, including state and private foundation funds, nor the prospect of leveraging additional acquisitions through creative combinations of donations, purchases, and site planning techniques (known as “limited development” or “conservation subdivisions”) for particular farms where the owner has the interest and capability.

These calculations are shown in tabular form in the following tables.

**Optional Funding Levels for a Purchase of Development Rights (PDR) Program  
Funded with a 30-year Bond**

*(All Figures are Rounded and Approximate)*

Cents on Tax Rate Dedicated to the Program	Total Annual Cost to County <sup>1</sup>	Amount of 30-year Bond <sup>2</sup>	Average Payment to Landowner per acre <sup>3</sup>	Total Number of Acres Preserved	Total Cost During 30-year Bond Period <sup>4</sup> (principal & interest)
\$0.01	\$420,000	\$5,830,000	\$2,300 per acre	2,500 acres	\$12,600,000
\$0.02	\$840,000	\$11,700,000	\$2,300 per acre	5,100 acres	\$25,200,000
\$0.03	\$1,260,000	\$17,500,000	\$2,300 per acre	7,600 acres	\$37,800,000
\$0.04	\$1,680,000	\$23,300,000	\$2,300 per acre	10,100 acres	\$50,400,000
\$0.05	\$2,100,000	\$29,100,000	\$2,300 per acre	12,700 acres	\$63,000,000

<sup>1</sup> One cent on the tax rate generates \$420,000 in real property tax revenue (2007 data)

<sup>2</sup> Assumes 30-year bond at 5% annual interest

<sup>3</sup> Assumes initial lump sum payment for all easements (in reality, easement purchases would be phased in over several years)

<sup>4</sup> In constant dollars (\$420,000 x number of cents on the tax rate x 30 years)

**Optional Funding Levels for a Purchase of Development Rights (PDR) Program  
Funded through Annual General Tax Revenues**

*(All Figures are Rounded and Approximate)*

Cents on Tax Rate Dedicated to the Program	Total Annual Cost to County <sup>1</sup>	Amount of 30-year Bond	Average Payment to Landowner per acre	Total Number of Acres Preserved During 20-years	Annual Number of Acres Preserved
\$0.01	\$420,000	n/a	\$2,300 per acre	3,640 acres	182 acres
\$0.02	\$840,000	n/a	\$2,300 per acre	7,300 acres	365 acres
\$0.03	\$1,260,000	n/a	\$2,300 per acre	11,000 acres	548 acres
\$0.04	\$1,680,000	n/a	\$2,300 per acre	14,600 acres	728 acres
\$0.05	\$2,100,000	n/a	\$2,300 per acre	18,200 acres	910 acres

<sup>1</sup> One cent on the tax rate generates \$420,000 in real property tax revenue (2007 data)

**Leasing of Development Rights (LDR)**

With an LDR program, the County would acquire conservation easements on farm and forest land for time periods of less than perpetuity. These are known as “term easements”. The effect is similar to what is achieved through the Use Value Assessment program, but with LDR, the landowner would likely be given a greater benefit in return for a longer commitment to maintaining the land as open space (whether or not it is actively farmed).

It is difficult to know in advance what the market value would be for a typical term easement, since it is temporary in nature and has no comparable entity in the local market today (other than the inexact comparison of use value assessment). For purposes of this analysis, the value is assumed to be an incremental increase in the net financial benefit a landowner now receives through the Use Value Assessment program (but a lesser amount than he would receive if he sold a permanent easement to the County through a PDR program).

### ***Available Land Area***

As noted above, the County currently defers \$2,130,000 annually in property tax revenues through the Use Value program, on approximately 145,000 acres of land, for an average net benefit to the landowner of approximately \$15 per acre.

This analysis assumes that the LDR program would be available to all land currently in the Use Value Assessment program. Note that the County faces a dilemma with small, vacant rural parcels that may be enrolled in Use Value. On the one hand, it would be reasonable for the County to exclude such parcels from a leasing program since they are potential building lots rather than “farms” in and of themselves. On the other hand, because they are small lots subject to eminent housing development, there could be particular benefit to leasing the development right to ensure that any such development is postponed.

These kinds of parcels could be defined as vacant parcels of seven acres or less in the current A-1 zoning district and 10 acres or less in the current C-1 district. These lands are estimated at approximately 15,000 acres. Because of the nature of this dilemma, for the purposes of this analysis such parcels are not excluded, but it would certainly not be irrational to do so.

The analysis assumes that the 40,000 acres of land currently in Agricultural and Forestal Districts would not be made available for the LDR program by those landowners, since they are guaranteed access to Use Value Assessment for the term of the AFD (although the County would not likely preclude them from joining the LDR program if they chose to do so, and many might in fact enroll in LDR).

### ***Easement Duration***

The County could offer to lease development rights (conservation easements) for any number of possible durations, from as short as five years, and no upper limit. For purposes of analysis, we assume that the durations of term easements offered to landowners are 10, 15, or 20-year time periods. The payment to the landowner would be proportional in some manner to the length of the easement commitment.

For purposes of this analysis, we examine the effect if every eligible acre of land was enrolled in the LDR program for the same duration. In reality, the County could offer alternative durations, and some landowners would opt for shorter terms, while others would opt for longer terms. Thus, the potential combinations are virtually infinite. This analysis simplifies the outcome in order to understand the potential costs and benefits.

### ***Cost of Easement Lease***

As noted above, there is little local precedent for the value of a term easement, and there are many ways the County could determine or assign the value. One way would be to make it an incremental increase in the value given to landowners through the one-year commitment of the Use Value Assessment program.

For purposes of this analysis – again, to show the magnitude of potential costs and benefits – the annual payments to landowners, per acre, for term easements (compared to Use Value) are as follows:

Use Value (1-year commitment): \$15 per acre (de facto payment through lower assessment)  
 LDR 10-year Term Easement: \$20 per acre  
 LDR 15-year Term Easement: \$25 per acre  
 LDR 20-year Term Easement: \$30 per acre

As the benefit to the landowner approaches \$20 per acre per year, it becomes a positive net cash flow to the owner, rather than simply a reduction in taxes.

***Rollback Provisions***

The easement lease agreement could include provisions for recapturing some or all of the lease payments at the end of the term. The amount of any such rollback provision should be what is reasonable enough to attract landowners into the program yet sufficient to provide an incentive for landowners to renew leases for extended terms, and also balance the overall cost-benefit to the County. There is great flexibility in the terms of any rollback, and it could vary in proportion to the duration of the easement.

**Comparison of Several Term Easements Options<sup>1</sup>**

Easement Duration	Term of Commitment	Annual Effective Payment Per acre	Total Annual Effective Payment	Cents on Tax Rate	Rollback Period	Acres Conserved for Term	Total payment during Term	Total Net Cost to County over 20-year period <sup>3</sup>
10-year Term	10-years	\$20	\$2,100,000	\$0.05	10 years	105,000 <sup>2</sup>	\$200 per acre	\$21,000,000
15-year Term	15-years	\$25	\$2,625,000	\$0.06	10 years	105,000 <sup>2</sup>	\$250 per acre	\$26,250,000
20-year Term	20-years	\$30	\$3,150,000	\$0.08	10 years	105,000 <sup>2</sup>	\$600 per acre	\$31,500,000

<sup>1</sup> All of these terms could be offered as options to landowners – they are not necessarily exclusive.

<sup>2</sup> Total land now enrolled in Use Value Assessment less land in Agricultural and Forest Districts (40,000 acres).

<sup>3</sup> Reflects subtraction of rollback paid to county at end of term.

## **B. Summary of Available Major Growth Management Tools**

### **Police Power (Regulatory Tools)**

#### *Zoning Regulations (legislative authority)*

1. Large Lot / Agricultural Zoning
2. Sliding Scale Zoning
3. Cluster Zoning
4. Traditional Neighborhood Development (TND) and Form-Based Codes
5. Conditional Zoning/Cash Proffers

#### *Subdivision and Site Plan Regulations (ministerial authority)*

#### *Special Exception Permitting (Conditional Use, Special Use)*

### **Financial Power (Taxation, Public Investment)**

1. Use-Value Assessment and Taxation (“Land Use”) (temporary)
2. Agricultural and Forestal Districts (AFD) (temporary)
3. Purchase of Conservation Easements / Development Rights – PDR (permanent)
4. Lease of Conservation Easements / Development Rights (temporary)
5. Capital Improvements Program (CIP)
6. Service Districts
7. Community Development Authorities

### **Combined Powers (Planning Policy, Regulations, Guidelines, Incentives)**

1. Urban Growth Boundaries (*Land Use and Infrastructure Coordination*)
2. Community Design and New Urbanism
3. Transferable Development Rights (TDR)
4. Level of Service Standards
5. Density Incentives
6. Joint Comprehensive Plans / Joint Service Delivery
7. Commission Permits (“2232” Review)
8. Agricultural Economic Development and Promotion

## **Brief Summary of Each Tool**

*These summaries were prepared by Milton Herd, AICP, and/or excerpted from a 2-9-07 Draft of "Managing Growth and Development in Virginia: A Review of the Tools Available to Localities", prepared for the Virginia Chapter of the American Planning Association*

### **Police Power (Regulatory Tools)**

#### ***Zoning Regulations (legislative authority)***

##### **1. Large Lot / Agricultural Zoning**

Large lot zoning is one of the techniques in a more inclusive category of zoning techniques called agricultural zoning or agricultural protection zoning. Large lot zoning simply requires that the minimum lot size in a designated rural zoning district is set at a large enough size to protect agricultural activities from excessive encroachment of residential and other non-agricultural land uses.

The American Farmland Trust defines a "large lot" for the purposes of agricultural protection as being 20 acres or more. Many localities consider smaller minimum lots sizes such as five or 10 acres as being a "large lot" measure.

#### *Examples of Large Lot Zoning in Virginia*

- Fauquier County (25 to 50 acre minimum lot size)\*
- Hanover County (10 acre minimum lot size)\*
- Prince William County (10 acre minimum lot size)
- Rappahannock County (25 acre minimum lot size)
- Amelia County (5 acre minimum lot size)
- Powhatan County (10 acre minimum lot size)
- Accomack County (5 acre minimum lot size)\*
- Isle of Wight County (40 acre minimum lot size)\*

*\*also allows a cluster option*

##### **2. Cluster Zoning (also "open space development")**

Under cluster zoning provisions, when a residential subdivision is created, it is designed so that the dwelling units are clustered together on smaller than average lots on only a portion of the tract, leaving the remainder available for open space or similar uses. Clustering may be used in either urban or rural areas. However, the term "cluster zoning" is usually associated with rural land use issues.

Depending on the provisions of the specific cluster ordinance, the remaining open space within a cluster development may be held in common and/or be a strictly agricultural or environmental area with no "development rights" remaining on it; or, the open space parcel

(s) may be allowed to have a dwelling unit, with a permanent easement that prohibits further subdivision or additional dwellings.

### 3. Sliding Scale Zoning

Sliding Scale zoning essentially requires that the larger the initial size of the parent parcel prior to subdividing, the lower the permitted average density of newly subdivided lots. The permitted density decreases on a “sliding scale” as the size of the parent parcel increases. The rationale for sliding scale is that higher densities should be allowed on smaller tracts because they are difficult to farm and may have already passed out of agriculture into the residential land market.

This can best be illustrated by an example from Clarke County, as follows:

<i>Size of Tract of Land</i>	<i>Number of Single Family Detached Dwellings Permitted</i>
0 - 14.99 acres	1
15 - 39.99 acres	2
40 - 79.99 acres	3
80 - 129.99 acres	4
130 - 179.99 acres	5
180 - 229.00 acres	6
230 - 279.99 acres	7
280 - 329.99 acres	8
330 - 399.99 acres	9
400 - 499.99 acres	10
500 - 599.99 acres	11
600 - 729.99 acres	12
730 - 859.99 acres	13
860 - 1,029.99 acres	14
1,030 or more	15

*Minimum Lot Size is 1 acre; maximum lot size is 2 acres*

Using the above scale, a landowner with an existing parent parcel of 200 acres would be permitted to divide it into six lots for dwelling units, for an average density / lot size of 33.33 acres. Each new lot could be no greater than two acres, with the remainder of the tract (188 acres) remaining in open farmland or forest land.

#### *Examples in Virginia*

- Clarke County
- Fauquier County
- Montgomery County

#### **4. Traditional Neighborhood Development (TND) and Form-Based Codes**

Traditional Neighborhood Development (TND) is a form of development that reflects the principles of New Urbanism, which is aimed at achieving a “human-scale” built environment of mixed uses and interconnected streets that is conducive to pedestrian movements, as well as to motor vehicle movements. These principles should be implemented through both comprehensive plan policies and zoning regulations.

Implementing New Urbanism through zoning typically involves creating one or more districts that are a variation of “planned” districts, or “planned unit development” districts. These TND districts typically allow (or require) a variety of dwelling types, relatively narrow streets that form a connected network, a variety of permitted uses, location of parking at the rear of lots, and the use of alleys for motor vehicle access. Form-based codes are best applied to downtowns and other urban neighborhoods – these regulations focus on creating streetscapes that are conducive to pedestrian movement, by ensuring that buildings frame the street and parking is relegated to the rear of buildings. Form-based codes are usually permissive with regard to density and use, and prescriptive with regard to building location on the lot.

#### **5. Conditional Zoning/Cash Proffers**

Conditional zoning was enabled by the Virginia General Assembly 30 years ago to address the shortcomings of traditional zoning methods when competing and incompatible land uses conflict. While it is actually a zoning tool, it is also a tool for managing the financial impacts of growth, which is how it is used by many localities.

As designed, conditional zoning allows reasonable conditions, known as proffers, to be offered by the applicant during a rezoning process as a way of mitigating the impacts of the proposed rezoning. Proffers may include land, infrastructure, cash or other conditions/constraints on the use of the property. These proffers, if accepted by the governing body as part of the rezoning approval, become part of the zoning ordinance as it applies to that property. In theory, conditional zoning allows land to be rezoned that might not otherwise be rezoned because the proffers will protect the community or area affected by the rezoning.

#### ***Subdivision and Site Plan Regulations (ministerial authority)***

Subdivision regulations are also one of the four primary tools of implementing the comprehensive plan. Each local government in Virginia is required to adopt a subdivision ordinance to assure that land development occurs in an orderly and safe manner. The subdivision ordinance establishes the procedures, platting and design requirements, as well as surety guarantees for public infrastructure improvements, associated with the subdivision of land into parcels or lots of development.

A subdivision according to the Virginia Code means the division of a parcel of land into either three or more lots or into parcels of less than five acres each for the purpose of transfer of ownership or building development. Many Virginia localities have three types of subdivisions: minor, major, and family.

The code defines a site plan as the “proposal for a development or a subdivision, including all covenants, grants or easements and other conditions relating to use, location and bulk of buildings, density of development, common open space, public facilities and such other information as required by the subdivision ordinance to which the proposed development or subdivision is subject.”

Because the subdivision of land is considered a by-right activity, the landowner’s only obligation is to meet the applicable subdivision (and zoning) regulations before subdividing. This guarantee can become a liability if the subdivision regulations are out of date or the underlying zoning of the property does not reflect the intent of the community’s comprehensive plan. When this happens the subdivision, regardless of the concern expressed by citizens, the planning staff, the planning commission or the governing body, must be approved. Accordingly, it is essential that subdivision ordinances be reviewed and updated on a regular basis.

### ***Special Exception Permitting (Conditional Use, Special Use)***

Zoning ordinances usually delineate a number of uses that are allowed as a matter of right, and a number of uses that are allowed by special exception. (Special exceptions are also called “special use permits” or “conditional use permits”, which mean the same thing).

Uses allowed by special exception are those considered to have a potentially greater impact upon neighboring properties or the public than those uses permitted by right in the district. For example, houses of worship may be desirable in a residential area, but controls over parking, circulation, setbacks and landscaping may be needed to prevent them from adversely affecting surrounding residences. By classifying them as special exceptions, separate and specialized regulations or conditions can be imposed by the locality to mitigate the adverse impacts. These conditions may be imposed and need not be negotiated or agreed to by the applicant. Such conditions must be specific, reasonable and enforceable.

### **Financial Power (Taxation, Public Investment)**

#### **1. Use-Value Assessment and Taxation (“Land Use”) (temporary)**

The Use Value Assessment and Taxation Program uses discounts in property tax assessments to promote and preserve agricultural, forestal, and open space lands.

Use Value Assessment (also commonly known as “land use” or “land use assessment”) is a state guided program available to localities in which the locality can tax farmland and open space land at its “use” value rather than its fair market value. In most rapidly growing jurisdictions, this typically reduces the real estate tax on the land by a significant amount, thus

making it easier to continue a farming business. The program is voluntary to the landowner and requires only five acres to qualify under agricultural or open space classification or 20 acres under the forest use classification (areas as small as one quarter acre may qualify if adjacent to a scenic river or scenic highway or other specific instances provided by the code). Rollback taxes must be paid when the property is removed from the program.

## **2. Agricultural and Forestal Districts (AFD) (temporary)**

The Virginia Code provides for the voluntary creation of Agricultural and Forestal Districts (AFDs) in order to “provide a means for a mutual undertaking by landowners and localities to protect and enhance agricultural and forestal land as a viable segment of the Commonwealth's economy and as an economic and environmental resource of major importance.”

Agricultural and/or Forestal Districts are established by local ordinance to run for a set number of years (from 4 to 10), during which the property owner continues to hold fee simple title to the land, and enjoy various benefits provided by the code for such districts. The local ordinances usually include provisions that permit the landowner to withdraw from the program under certain defined circumstances.

## **3. Purchase of Conservation Easements / Development Rights (permanent)**

A conservation easement (also known as an Open Space or Scenic Easement) is a legal agreement between a landowner and a land trust or government agency that limits the use of the land by recording deed restrictions that prohibit or severely restrict further development in order to protect the conservation value of the property, such as farmland, watersheds, wildlife habitat, forests, and/or historical lands. Each easement is unique in terms of acreage, description, use restrictions, and duration. These details are negotiated between the property owner granting the easement, and the organization that will be holding the easement.

***Purchase of Easements (Development Rights) (PDR).*** When conservation easements are purchased as part of a broad government program, it typically called “Purchase of Development Rights” or PDR. In some other parts of the country it is also known as PACE or Purchase of Agricultural Conservation Easements. Purchasing “development rights” is the same as purchasing conservation easements, or that portion of the “bundle of rights” that allows landowners to construct dwellings or non-farm commercial structures on the property. Thus, when a locality purchases a conservation easement from a landowner, it essentially “buys” the right to develop the land and “retires” that right by placing a permanent conservation easement on the property that restricts or prohibits further non-farm development. Typically, these easement restrictions run in perpetuity.

## **4. Lease of Conservation Easements / Development Rights (temporary)**

When conservation easements are acquired for short periods, they are called easement leases, term easements, or the leasing of development rights (LDR).

Lease of Development Rights (LDR) is the same as Purchase of Development Rights except that the term of the easement can be as short as five years. To date, no Virginia locality has enacted an LDR program. However, this tool offers great potential because the locality can set the terms of eligibility, easement duration, restrictions, and compensation; whereas under the Use Value program, the state sets most of the rules. However, like Use Value Assessment, an LDR program is a temporary solution to the problem of farmland and open space conversion.

## **5. Capital Improvements Program (CIP)**

The Capital Improvement Program (CIP) is one of the four primary tools of implementing the comprehensive plan. It is an integral component of a locality's overall growth management program. It outlines the multi-year scheduling of public physical improvements and related costs to help guide the locality's decisions on how to allocate available funds over a 5-year period. The CIP is sometimes called a Capital Improvement Budget or Capital Improvement Plan.

## **6. Service Districts**

Service Districts (sometimes called Special Service Districts) are legally defined geographic portions of a jurisdiction established by the local governing body. They are created to provide additional, more complete, or more timely services of government than are desired in the locality as a whole. Property owners within the special service district pay a higher tax rate in exchange for these enhanced services.

Sections 15.2-2400 through 15.2-2405 of the Code of Virginia grant localities the authority to create and fund service districts. Any locality may by ordinance, or any two or more localities may by concurrent ordinances, create service districts within the locality or localities. In addition, in any city created from the consolidation of two or more localities, service districts may be created by order of the circuit court for the city upon the petition of fifty voters of the proposed district.

Once created, the additional revenue derived from service districts may be used for a wide variety of public enhancements as specified when the district is created, including, but not limited to, water supply and sewerage facilities; garbage removal and disposal; fire-fighting equipment; sidewalks; economic development services; promotion of business and retail development services; beautification and landscaping; beach and shoreline management and restoration; public parking; extra security, street cleaning, snow removal, and other services, events, or any other activities that will enhance the public use and enjoyment of, and the public safety, public convenience, and well-being within, a service district.

## **7. Community Development Authorities**

A community development authority (CDA) is a political subdivision of the Commonwealth. A CDA can be authorized and created by a local governing body upon petition by a majority of property owners, or those owning a majority of the assessed property value, within the proposed CDA boundaries. CDAs are authorized and created for the purpose of providing

public infrastructure associated with the development or redevelopment of an area. Community development authorities are authorized by §15.2-5152 through §15.2-5158 of the Code of Virginia.

To establish a CDA, counties and towns must first elect by ordinance to accept CDA creation authority. A CDA is empowered to issue tax-exempt bonds for many different kinds of infrastructure improvements including roads, parks, recreation facilities, educational facilities, water and sewer, and fire prevention and control systems. Any bonds issued by the CDA are repaid through special assessments levied upon all the property owners within the boundaries of the CDA district. Such special assessments cannot exceed .25 dollars per \$100 dollars of assessed value unless every property owner in the CDA agrees to a higher special assessment.

### **Combined Powers (Planning Policy, Regulations, Guidelines, Incentives)**

#### **1. Urban Growth Boundaries (*Land Use and Infrastructure Coordination*)**

Extensions of infrastructure, particularly water and sewer lines and major streets, significantly affect the timing and density of development. The comprehensive plan can designate areas which are planned for immediate or long-term utility service, thereby coordinating development approvals (rezonings) and utility extensions to achieve an orderly and compact development pattern adjacent to existing settlements. Urban Growth Boundaries in Virginia are not zoning designations per se, but rather policy designations established in the comprehensive plan so as to guide decisions about rezoning applications and public infrastructure investments.

#### **2. Community Design and New Urbanism**

New Urbanism is a planning concept that includes, or is otherwise known as neo-traditional design, transit-oriented development, and traditional neighborhood development. It has blossomed into a widespread planning movement during the past two decades, largely as a reaction to the deficiencies and unintended consequences of conventional suburban development patterns.

It is based upon principles of urban design that have been used successfully for centuries, but which have been largely neglected during the advent of the motor vehicle in the 20<sup>th</sup> century. It seeks to combine classic principles with the best features of modern urban design to create walkable, human-scale communities that have the timeless quality of historic settlements while also meeting the needs of modern society.

New Urbanism aims to create new communities that have the civic features that people have long enjoyed, including “human-scale” streetscapes that are comfortable for pedestrians, a “fine-grain” of mixed-uses, an interconnected street system, usable public spaces, prominent civic buildings, and strong neighborhood identity. These are provided in ways that still accommodate motor vehicles, modern commercial markets, and consumer preferences.

New Urbanism will typically provide for parking to be at the side or rear of buildings, and will locate buildings fairly close to the street so as to provide spatial definition to the public

right-of-way. Wide sidewalks, street trees, on-street parking, and other pedestrian amenities are common features as well.

Recent state legislation (§ 15.2-2223.1) now requires certain counties (including Shenandoah) to incorporate one or more urban development areas, and the principles of new urbanism, into the comprehensive plan. The Code specifically cites features such as (i) pedestrian-friendly road design, (ii) interconnection of new local streets with existing local streets and roads, (iii) connectivity of road and pedestrian networks, (iv) preservation of natural areas, (v) satisfaction of requirements for stormwater management, (vi) mixed-use neighborhoods, including mixed housing types, (vii) reduction of front and side yard building setbacks, and (viii) reduction of subdivision street widths and turning radii at subdivision street intersections.

### **3. Transferable Development Rights (TDR)**

TDR, or transfer of development rights, is a concept in which some or all of the rights to develop a parcel of land in one district (the sending district) can be transferred to a parcel of land in a different district (the receiving district). TDR is a tool used to preserve open space, farmland, water resources, and other resources in areas where a locality wishes to limit or curtail development.

In a classic TDR system one or more sending districts are identified as well as one or more receiving districts. “Development rights” are assigned to landowners in the sending district, typically on the basis of a certain number of permitted dwellings per acre. Owners of land in the sending district are not allowed to develop at the full level of their development rights, but instead may sell their development rights to owners of land in the receiving district, who may then use the newly acquired development rights to build at higher densities than normally allowed by existing zoning (without further legislative approval). TDR systems are intended to maintain designated land in open or non-developed uses and to compensate owners of the preserved land for limitations on their right to develop it.

### **4. Level of Service Standards**

Level of service (LOS) standards specify the public facilities needed for new residential developments in an effort to determine if those facilities are adequate to support a proposed rezoning. Virginia Code § 15.2-2223-2280 allows any locality to incorporate level of service standards as a means in determining adequacy of facilities for future development. This does not apply to land already zoned for development.

Level of service standards are typically set out in a guidance document or comprehensive plan for public facilities such as schools, roads, libraries, parks, public transit, water and sewer systems. An example of LOS is the City of Chesapeake, which requires all rezoning applications to be subject to level of service standards for roads, schools and sewer capacity. If the proposed development fails any of the standards articulated in the plan, the staff recommends denial of the application. The policy exempts a development that will have minimal impact on schools and roads.

## **5. Density Incentives**

A zoning ordinance is a principal planning tool used by localities to achieve their development objectives. Historically, zoning ordinances were purely regulatory tools that established minimum standards for new development. However, because “minimum standards” many times become “maximum performance”, zoning ordinances have evolved to include incentive-based approaches to community development objectives. Although different types of incentives can be incorporated into a zoning ordinance (fast track plan reviews, reduced application fees, etc.), the most positive incentive to developers is often increased density.

Incentives may be considered and applied through the rezoning process and/or directly through provisions of the zoning ordinance text. In the rezoning process, a locality’s comprehensive plan provides recommended density ranges for areas planned for residential use and intensity ranges (i.e., ranges of building square footage, floor area ratios) for nonresidential use areas. Establishing density as part of a rezoning approval is a matter of the extent to which the objectives as specified in the comprehensive plan are met by the rezoning proposal.

Incentives may also be directly incorporated into a locality’s zoning ordinance text, and be available to anyone who meets the standards established in the zoning ordinance. Incentives may be structured to foster an assortment of community objectives including, but not limited to affordable housing, dedication of land for highway improvements, reservation of land for open space, enhanced landscaping or signage design, or dedication of land for public uses.

## **6. Joint Comprehensive Plans / Joint Service Delivery**

Because the problems and opportunities facing localities do not necessarily respect jurisdictional boundaries, the Code of Virginia provides Virginia’s network of local governments broad authority to cooperate with one another. The most frequently used grant of authority for interlocal cooperation is the joint exercise of powers provision found in § 15.2-1300 of the Virginia Code. This section of the code permits any two or more localities to exercise jointly any power, privilege or authority they would be able to exercise separately.

In addition, § 15.2-2231 provides for the inclusion of incorporated towns into a county plan, and the inclusion of adjacent unincorporated territory into a municipal plan. Any county plan may include planning of incorporated towns to the extent to which, in the county local planning commission's judgment, it is related to planning of the unincorporated territory of the county as a whole. However, the plan shall not be considered as a comprehensive plan for any incorporated town unless recommended by the town planning commission and adopted by the governing body of the town. The same provision applies to a municipality that wishes to include the planning of adjacent unincorporated territory into its plan.

## 7. Commission Permits (“2232” Review)

According to § 15.2-2232 of the Virginia Code, the comprehensive plan “shall control the general and approximate location, character, and extent of each feature shown.” Thus, while the comprehensive plan itself does not directly regulate land use, the plan does have status as a fundamental instrument of land use control once it is adopted by the local governing body.

Section 15.2-2232 provides that unless a feature is already shown on the adopted plan, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation, whether publicly or privately owned, shall be constructed, established or authorized until its location has been approved by the local planning commission as being substantially in accord with the adopted comprehensive plan.

## 8. Agricultural Economic Development and Promotion

Several Virginia localities have undertaken efforts to strengthen the farm economy so that farmers can remain in business and thus keep their land in agricultural rather than be forced to sell it for development. Often these programs are aimed at sponsoring marketing efforts for local products, promoting educational and recreational services provided by farmers (“agri-tourism”), fostering “branding” efforts for local goods, and sponsoring farmers markets to give growers direct access to customers.

