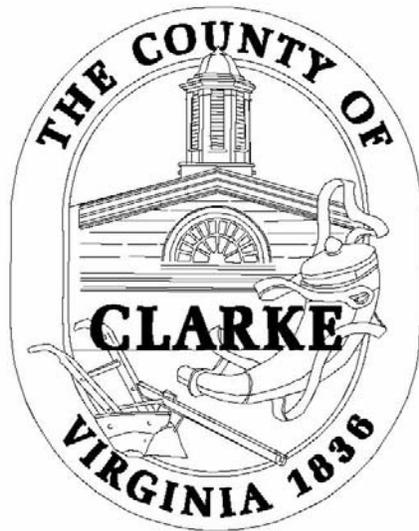


# MOUNTAIN LAND PLAN

Adopted  
August 16, 1994  
Revised  
June 21, 2005



Clarke County  
Comprehensive Plan  
Implementing Component  
Article 2

# Mountain Land Plan

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**Special appreciation is expressed  
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## **I. PURPOSE OF MOUNTAIN LAND PLAN**

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

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

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

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

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

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

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

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

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

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

## **II. IMPLEMENTING ACTIONS**

Based on the physical character of the Mountain Land Area, the development trends and services, and the County Comprehensive Plan Policies, the following actions are recommended:

### **Land Use Issues**

The current limitations on the number of dwelling unit rights on parcels effectively limits the number of houses that can be built, but additional standards should be established to preserve the character of the community and minimize disturbance to the natural character of the area to preserve property values while allowing compatible development.

*The following recommended ordinance amendments would apply only in the Mountain Land Area.*

1. Lot Size (Zoning Ordinance Amendment – FOC Zoning District)  
Increase minimum lot size from 2 acres to 3 acres. This increase in minimum lot area also helps ensure that house sites, well and drainfield locations, and vegetative buffers could reasonably be accommodated on new parcels.
2. Required Open Space (Zoning Ordinance Amendment – FOC Zoning District)  
In order to ensure quality development, preservation of open space, and compliance with the Comprehensive Plan, a defined percentage of the total area of the subdivisions of 40 acres or more should be left in one parcel with only one dwelling unit right or only an existing house. This limits the sprawling of lots in a subdivision, the length of the road accessing the proposed lots, and the impact of development on the environment.

*The following suggested ordinance text amendments were developed as a part of the Mountain Land study as being advisable for applicability in the Mountain Land Area, but also are deemed to be advisable for all areas of the County and are recommended for county-wide applicability:*

1. Administrative Review of 100 acre lot subdivisions (Subdivision Ordinance Amendment)  
Currently subdivisions involving parcels of 100 acres or more are exempt from review. This amendment would provide for review of such subdivisions by the Zoning Administrator to ensure that the parcel size, parcel location, and access easements comply with County ordinances.
2. Boundary Line Adjustments (Zoning and Subdivision Ordinance Amendment)  
To not unduly shift the density of rural dwellings, reallocation of dwelling unit rights should be limited in a boundary line adjustment to comply with the allocation of dwelling unit rights in section 3-D-2 of the Zoning Ordinance; dwelling unit right allocations should be limited to one per boundary line adjustment.
3. Environmental Impact Statement (Subdivision Ordinance Amendment)  
Current Environmental Impact Statement requirements inadequately identify environmental impacts associated with development. Recently issues relating to Appalachian Trail access, endangered species habitat, and sensitive soils have not been satisfactorily addressed in statements provided by applicants. Revised EIS requirements would require applicants to obtain written comments from state and federal agencies to identify current conditions and what steps would be taken to minimize potential impacts on natural and historic resources.
4. Utilities (Subdivision Ordinance Amendment)  
Transmission utility lines should be required to be placed underground and within private access/utility easements.
5. Disclaimer Notices (Subdivision Ordinance Amendment)  
Additional notices should be included in Consumer Disclosure Statements requirements and should be shown on Subdivision Plats. The first notice advises land purchasers that adequate response for emergency services will not be immediate and may be difficult to accomplish under the weather conditions that are known to occur in this region. The second notice advises land purchasers that commercial forestry is a permitted and common activity in this area of the County and adjacent residential property owners need to be aware that while such activity can be considered unpleasant to some, it is an inherent part of living in a rural mountainous area.
6. Propane Tanks (Zoning Ordinance Amendment – County-wide)  
In order to protect the health and safety of County residents through the promotion of fire safety and pursuant to Clarke County policies and ordinances providing for clustering of single-family homes, propane tanks 500 gallons or larger shall be placed underground.

### **Road Issues**

The adequacy and safety of public and private roads are concerns shared by all property owners and residents of the Mountain Land Area. Funding for public improvement of roads comes through the Virginia Department of Transportation. Through an annual planning process, VDOT and the Clarke County Board of Supervisors jointly decide on the allocation of these funds. By this process, VDOT and the Board of Supervisors address safety problems, as identified by area residents. Public road issues must be addressed through this annual planning process. However, the basic thrust of the Mountain Land Plan is preservation of the area's character; therefore, Rural Rustic Road Standards (that minimize impacts on the environment) should be used wherever possible for necessary safety improvements. Current subdivision regulations require the Planning Commission to determine whether existing roads are adequate to accommodate new development.

It is well within the purview of this Plan to call for access easement standards for private roads that minimize the impact of these private roads on the land while providing safe access, particularly for emergency services. It was concluded there were too many variations between parcels to establish a specific standard for a maximum length for private-road access easements. It was also concluded that a maximum private access easement length

could result in long individual driveways, which are usually built to a lower standard than access easements. However, changes to easement design standards are recommended to improve emergency access while minimizing environmental impacts. In addition, application of travel way standards to new driveways (longer than 150 feet) is also recommended, again for safety reasons.

***The following suggested ordinance text amendments were developed as a part of the Mountain Land study as being advisable for applicability in the Mountain Land Area, but also are deemed to be advisable for all areas of the County and are recommended for county-wide applicability:***

**Private road access standards (Subdivision Ordinance Amendment – County-wide)**

1. Private driveways longer than 150 feet (in parcels created after the adoption of the text amendment) shall comply with all Private Access Easement travel way standards.
2. Current minimum 30-ft easement width is to be retained, but a maximum easement width of 40 ft is added (with 50 ft allowed for short distances to meet site-specific conditions) to reduce the amount of tree clearing
3. Current minimum 14-ft travel way shall be retained, but a maximum 18-ft travel way is recommended to limit road impacts.
4. No obstruction (such as posts, pillars, walls, or fences) should be erected within 10 feet of the centerline of a travel way or within a public right of way.
5. All easements should have pull-off areas every 900 ft (fire hoses range from 1,000 to 1,500 ft in length; a 900 ft requirement will allow for some degree of flexibility or for most appropriate location).
6. A turn around area (either circular or ‘T’ shaped) is recommended at the end of a travel way.
7. Travel ways, pull-off areas, and cul-de-sacs are to be constructed to VDOT gravel-road standards.
8. Current road standards set 8% as the maximum grade with up to 16% allowed for short distances. The maximum grade for short distances is to be reduced to 12% to better accommodate large fire trucks.
9. Roads should not be constructed on slopes of 25% or greater where there is a slope width of more than 100 ft (to limit adverse effects on steep slopes subject to erosion).
10. Travel-way side slope is to be reduced from a 4:1 (horizontal: vertical) slope to a 3:1 slope (to provide for drainage while lessening the area needed for clearing and grading). The Planning Commission may approve a slope of 2:1 if there are unique site-specific circumstances.
11. Before a building permit is issued for a residence, the grading and base should be completed for that portion of a private road accessing such a residence. This is recommended to ensure emergency access for a structure under construction. Before a certificate of occupancy is issued for a residence, all construction is to be completed for that portion of a private road accessing such a residence. This is recommended to ensure access to an occupied structure.
12. Private Road length should be minimized (particularly in areas of steep slopes) so as not to make emergency access more difficult and to limit the impact of road construction on the environment.

**Environmental Issues**

The main priorities of this Plan include protecting the forest and associated natural resources, maintaining the forested character of the mountain, and reducing the impact of forestry activities on residential properties. Therefore, the following limitations should be established on forestry activities, on clearing for residential purposes, and on requirements for vegetative buffers on residential parcels.

***The following recommended ordinance amendments would apply only in the Mountain Land Area.***

1. Vegetative Buffers and Clearing Limits (Zoning Ord. Amendment - FOC Zoning District) - for purposes other than forestry (timber harvesting)

Maximum area allowed for clearing (for each house [dwelling unit right] constructed after the Plan is adopted, accessory buildings, and drain field, not including driveways):

Slopes less than 7%

No Limit

Slopes of 7 up to 15% under 800 feet elevation  
Slopes of 7 up to 15% over 800 feet elevation  
Slopes of 15 up to 25%

No Limit  
2 acre limit  
1 acre limit (may be increased to 1.5 acres  
with engineered erosion and sediment  
control plan)  
No clearing

Slopes of 25% and greater, slippage soils  
Slope to be calculated within proposed cleared area.

By previous action, parcels of less than 20 acres recorded after 2 February 2003 must retain their existing woody vegetation within 25 feet of all property lines. Any parcels of four acres or more, created after the date of adoption of this Plan and associated ordinance amendments, must retain existing woody vegetation as follows:

- within 25 feet of all property lines,
- within 50 feet of the edge of public rights of way or 25 feet of private access easements,
- on slopes of 25% or more, and
- on slippage soils.

To allow a limited area to be cleared for views and other esthetic purposes, clearing within 200 feet of the cleared areas described above is permitted as follows:

- no clear-cut openings,
- selective thinning of trees of 2 inches or more in diameter (measured 4.5 feet above ground), is randomly spaced, with removal of not more than 50 % of the crown cover, within any 10 year period,
- pruning of branches is limited to the bottom 1/3 of the tree, and
- such additional clearing associated with new houses shall be done before issuance of final certificate of occupancy.

If clearing limitations are exceeded, revegetation would be required as recommended by a forestry consultant.

2. Clearing for agricultural uses (Zoning Ordinance Amendment – FOC Zoning District)

Inappropriate clearing for pastureland or other agricultural activities has occurred in the Mountain Land Area on steep slopes and erodible soils. Before any such clearing is done, a Conservation Farm Management Plan, approved by either the regional Soil and Water Conservation District or the federal Natural Resources Conservation Service, is to be submitted to the County Zoning Administrator.

3. Slippage Soils (Zoning Ordinance Amendment – FOC Zoning District)

Slippage soils are those soils that could shift dramatically during heavy rains, causing mudslides. Areas of such slippage soils include those soils identified as type 54C in the Clarke County Soil Survey and encompass approximately 2,700 acres on the mountain. Clearing is prohibited on these soils.

***The following suggested ordinance text amendments were developed as a part of the Mountain Land study as being advisable for applicability in the Mountain Land Area, but also are deemed to be advisable for all areas of the County and are recommended for county-wide applicability:***

1. Erosion and Sediment Control (County Code Amendment – County-wide)

- Pond construction for ponds larger than 10,000 square feet is allowed only with an Erosion and Sediment Control Plan approved by the Soil and Water Conservation District and the County. Because of the right-to-farm laws, this requirement may be waived if the property has an approved Conservation Farm Management Plan and is receiving use-value taxation for agriculture.
- The applicant for new homes shall complete an Erosion and Sediment Control Sketch Plan in addition to the land disturbance permit that is currently required. This sketch would detail the proposed land disturbance and proposed erosion control practices without being as formal as a full Erosion and Sediment Control Plan.

## 2. Forestry (Zoning Ordinance Amendment – County-wide)

- The cutting or logging of any trees for profit is allowed only with a Pre-Harvest Plan, which includes Virginia Department of Forestry Best Management Practices, that is reviewed by the County Zoning Administrator and a consulting forester for compliance with County ordinances.
- No subdivision application should be accepted for 3 years before or after a timber harvest operation.
- No timber harvest operations beyond the allowable clearing, as outlined below, shall be allowed within 3 years of a subdivision.
- Selective timber harvest shall be allowed within vegetative buffers, as described below.
- Clearcuts for forest regeneration and wildlife habitat should be laid out with an undulating perimeter instead of squares or rectangles. This is to increase the “edge” effect between adjacent forested areas so vital to wildlife, and to help them blend into the surrounding forest.
- Best Management Practices for clearing within buffer areas shall be implemented so as to limit the amount of disturbance within the buffer.

Specific ordinance text amendments to the County Zoning Ordinance, County Subdivision Ordinance, and County Code can be found in Appendix 1.

### III. PHYSICAL CHARACTER OF THE MOUNTAIN LAND AREA

#### A. Introduction

The Mountain Land Area of Clarke County is defined as all land in Clarke County east of the Shenandoah River, as can be seen in Figure 1. This area encompasses approximately 27,630 acres of the western slope of the Blue Ridge Mountains. It measures nearly 14 miles parallel to the Shenandoah River and between two and four miles perpendicular to it.

Elevations range from 360 feet, where the Shenandoah River enters West Virginia, to 1935 feet at Paris Mountain. The majority of the slopes are forested and timber harvesting is the primary land use east of the Shenandoah River. In 2001, Forests covered 15,425 acres of parcels greater than 20 acres, or 58 % of the land. Residential subdivisions (defined as parcels less than 20 acres) accounted for 6,470 acres, or 24 %, and Agriculture accounted for 1,165 acres, or 4 % (Fig. 2). More detail is given in Table 1.

**Table 1. Acreage by Land Use - FOC Zoning District**

Type of Land Use	Acres	%
Residential		
< 6 acres w/out dwelling	998	4
< 6 acres w/dwelling	1,841	7
6-20 acres w/out dwelling	1,120	4
6-20 acre w/dwelling	2,511	9
> 20 acres w/out dwelling	5,068	19
> 20 acres w/dwelling	11,401	43
Recreational - Appalachian Trail	3,367	13
Commercial	12	<1
Mt. Weather	287	1
Transportation (Rt. 50/7 corridors)	87	<1
Total	26,692	100
Agriculture (Pasture) (parcels > 20 acres)	1,165	
Forest (parcels > 20 acres)	15,425	

\* Residential includes property under easement

\*\* Dwelling is improvement value > \$6,000 (Commissioner of Revenue)

Source: Commissioner of Revenue Land Records database (2004)

Aerial Imagery 2002, Commonwealth of Virginia

The mountain is characterized by rugged, forested terrain isolated from the remainder of the county by the Shenandoah River. Two primary highways, Route 50 and Route 7, provide the only access between the valley region of the County and the mountain area. Within the Mountain Land Area there are few roads and, with one exception, these run north-south. On top of the mountain is the most direct road, Route 601. Along the bench on the western side of the mountain and along the river, Routes 604, 606, and 649 provide more circuitous routes. Steeply-sloped Route 605 is the only road between Routes 7 and 50 to connect the ridge and the river.

## 1. Natural Features

### A. Slopes

Much, but not all, of the Mountain Land Area is steeply sloped. Figure 3 indicates that slopes between 15% and 25% cover 33% of the area, and slopes of over 25% cover 16%. The relatively flat bench about halfway up the western side of the mountain and two necks on the river are the locations of most of the easily developable land. Steep slopes influence the amount of land area that may be built upon due to problems with access, soil stability, and the ability to locate a septic system. Currently, the Clarke County Septic Ordinance prohibits locating drain fields on slopes in excess of 25%.

### B. Geology

The Blue Ridge region of Clarke County is underlain by crystalline rock, quartzite, sandstone and shale; all of which are relatively resistant to chemical weathering. Less resistant shale, dolomite and limestone lie along the foothills and the valley floor. The distribution of the geologic formations east of the Shenandoah River is shown in Figure 4. The specific geologic formation descriptions are as follows:

*Catoctin Formation* This formation is generally dark green, massive metabasalt. These igneous rocks are poorly exposed in the region, primarily because large angular blocks of epidosite and metabasalt cover extensive areas and mask the bedrock. The 15 to 20 feet of colluvium and saprolite exposed in borrow pits on the south side of State Route 601 approximately 1.3 miles northeast of Ashby Gap may characterize the overburden present on the metabasalts in the more gently sloping areas. In the crystalline rocks of the Piedmont and Blue Ridge Provinces, a two-media system forms the groundwater model. The porous granular saprolite (decomposing bedrock) and the fractured bedrock serve as two distinct aquifers that are hydraulically connected. The saprolite layer serves as a water storage unit for the fractures that transmit groundwater to the well bore.

*Weaverton Formation* The Weaverton Formation is a combination of conglomerates, quartzites, and cemented sandstones. Pressure-solution activity has modified quartz-grain boundaries and destroyed original permeability. As a result, it is likely that the Weaverton Formation is a poor aquifer. The formation is too resistant and uniform that it likely lacks significant fracturing.

*Harpers Formation* The Harpers Formation is a largely monotonous sequence of laminated- to thick-bedded graywackes. Well-developed axial plane cleavage typically obscures bedding features. The extensive fracturing and folding of this formation should significantly improve the permeability of this formation, making it a fair aquifer.

*Antietam Formation* The Antietam Formation is generally a fine-grained feldspathic sandstone. Characteristically, it has thin to medium beds of planar sandstone separated by thin beds of laminar shale. Local concentrations of iron may be present. It is unlikely that this formation is of any hydrogeologic significance since it is generally thin, well-cemented, and not in locations for well sites.

*Sandy Formation* The Sandy Formation occurs generally in topographic low areas between the ridges of the Antietam and the low hills of the Rome. It is an alternation of dark gray limestones and light gray dolomite. Hydrogeologically, this formation has

moderate aquifer potential, depending on its extent of fracturing and the development of solution channels in these fractures.

*Rome Formation* The Rome Formation consists of alternating limestones, dolomites, shales and other fine-grained carbonate rocks. The formation is generally folded and sinuous and could be a good aquifer in folded and fractured areas. Fracture enlargement from dissolution of carbonate rocks may also increase the permeability.

### C. Soils

The Blue Ridge Mountain area is described by the Soil Conservation Service (SCS) as some of the roughest and steepest parts of the County. Soils are formed in residuum, or colluvium, from sedimentary and metamorphic rock. Three main general soil types are described for the mountain. These include the Dekalb-Laidig, Cardiff-Cataska-Whiteford, and Catoclin-Myersville-Lew series (Fig. 5).

*Dekalb-Laidig* These soils make up approximately 34% of the mountain soils. They are deep, well drained soils that have a loamy subsoil and formed in materials weathered from sandstone. These soils are found most frequently on the steep upland side slopes. These soils have many limitations for development including a high content of coarse fragments and slow permeability.

*Cardiff-Cataska-Whiteford* These are deep to shallow, well-drained or excessively-drained soils that have a loamy subsoil and are formed in materials weathered from phylites and slates on uplands. Approximately 28% of the mountain has these soil types. Slope, depth to bedrock, and high content of slate fragments limit septic field location and dwellings with basements.

*Catoclin-Myersville-Lew* Moderately deep or deep, well-drained soils that have a loamy subsoil and are formed in materials weathered from residuum, or colluvium, from greenstone. These soil types are found primarily in upland areas. Stones and boulders limit residential development in these soils, which make up 38% of the mountain.

Certain soil types are more susceptible to disturbance by development than others. These include soils associated with erosion and slippage (Fig. 6). Because of the steep slopes, the majority of soils on the mountain are classified as highly erodible by SCS. Any land disturbance on these soils can contribute to sedimentation of streams and roadways. Slippage soils are those that if disturbed may cause landslides. Vegetation, primarily forest cover, can significantly stabilize soils prone to erosion and slippage. Therefore limits on tree clearing are recommended to reduce the impact to these soils.

The Virginia Erosion and Sediment Control Law (Va. Code Sec. 10.1-560) requires every county, city, and town to pass a local ordinance or program to control erosion sediment and storm water run-off from land-disturbing activities. Currently disturbance exceeding 10,000 square feet requires an Erosion and Sediment Control Plan. In many cases single-family home construction does not require a complete plan but may still cause considerable erosion. Therefore, it is recommended that for all single-family home construction an Erosion and Sediment Control Sketch be submitted. These would not be as detailed as a Plan, but require the homeowner or contractor to submit a sketch identifying the proposed disturbance and erosion control measures to be installed.

## D. Forest Resources

The General Assembly of the Commonwealth has made it clear that forestal lands, as well as agricultural lands, are valuable resources and should be protected. The Agricultural and Forestal Districts Act (Code of Va., Sect. 15.2-4301) states that:

*It is the policy of the Commonwealth to conserve and protect and to encourage the development and improvement of the Commonwealth's agricultural and forestal lands for the production of food and other agricultural and forestal products. It is also the policy of the Commonwealth to conserve and protect agricultural and forestal lands as valued natural and ecological resources that provide essential open spaces for clean air sheds, watershed protection, and wildlife habitat, as well as for aesthetic purposes. It is the purpose of this chapter 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.*

Nearly all of the Mountain Land Area is in oak-hickory timber type, which includes yellow poplar. A very large portion of this area is harvestable timberland.

The acreage under forestry use-value assessment (comprising 61.5% of the Mountain Land Area) is in 241 parcels (Table 2). Land in parcels of over 100 acres comprises 19% of all the land under use-value assessment, and parcels between 20 and 100 acres account for another 51%.

In 1994, about 11,295 acres were in tracts generally considered large enough for commercial forestry. In 2004, 16,247 acres were in land-use. This represents a 31% increase in the number of acres under use-value on the mountain since 1994 (Fig. 7). The remaining small parcels, accounting for only 4% of the acreage, would not be eligible for use-value assessment by themselves (Code of Va. Sect. 58.1-3233), but if in combination with other adjacent parcels in the same ownership they constitute areas of over 20 acres of forested land, they are considered eligible under a 1988 amendment, unless the parcels are shown on a recorded subdivision plat.

The exclusion of lots in recorded subdivisions reflects the fact that it would be questionable public policy to allow forestry use-value assessment for land that had been divided into tracts that are so small as to be clearly intended for the development market and by themselves are too small for normal commercial forestry management and harvesting. Allowing use-value assessment for such lots is likely simply to result in a subsidy to owners intending to develop.

**Table 2. Land Under Forestry Use-Value Assessment**

Tract Size	Parcels		Acres	
	Number	Percent	Number	Percent
0 - 19.9	71	29	586	4
20.0 - 99.9	123	51	5,438	33
100-499.9	46	19	9,425	58
500 acres or more	1	<1	798	5
Total	241	100	16,247	100

Although Forest Management Plans are required in order to receive a tax break through the use of the use-value assessment, neither the Virginia Department of Forestry nor the County Commissioner of Revenue enforces the Plans. The Plans are considered recommendations to the landowner with regard to best forest management practices. The VDF has developed a brochure entitled "Virginia's Forestry Best Management Practices for Water Quality, BMP Field Guide" July 2002 (and as amended). This guidebook outlines minimum Best Management

Practices (BMPs) to be followed during a timber harvest operation. A recommendation is for loggers to submit a Pre-Harvest Plan, which details the proposed location and type of BMPs to be installed before a timber harvest.

## **E. Water Resources**

Water resources throughout the County are its most important natural resource. Quantity and quality of both ground and surface waters are important to protect from degradation. Surface waters are more visible and therefore of more immediate concern to citizens. Groundwater is measured primarily by individual wells and cannot be assessed visually. Problems with ground water often go undetected until widespread problems exist. Once widespread problems exist they are often difficult and expensive, if not impossible, to correct. A severe drought throughout the region between 1999 and 2001 increased awareness as to problems with water availability.

### **1. Surface Water Quality**

Perennial (year round) streams and intermittent (wet-weather) streams are common throughout the mountain area. These are specifically identified by the US Geologic Survey (USGS) on topographic maps. Because of their steepness, mountain lands are particularly susceptible to erosion whenever the natural environment is disturbed, as, for example, by construction of roads or buildings. Construction usually results in increased areas of impervious surface, which speeds and concentrates run off, causing even more erosion. Effluent from septic treatment systems in thin mountain soils is likely to seep to the surface and cause contamination of intermittent and perennial streams.

Increased run-off results in higher peak flows in streams, causing channel enlargement. The material removed by the stream in enlarging its channel to accommodate the increased flow is deposited in relatively level reaches downstream. Any considerable enlargement will result in large and unsightly out-washes of rock and silt into the Shenandoah itself. These will substantially diminish the river's scenic value and the silt will be harmful to aquatic life and add to nutrient enrichment of the tributaries, the river, and eventually the Chesapeake Bay.

### **2. Groundwater**

Concerns over groundwater quality and quantity have prompted the County to consider ways to prevent groundwater degradation. Protection strategies for the valley and mountain areas of the County differ significantly. Sinkholes and limestone bedrock are the main factors influencing groundwater quantity and quality in the valley. Geology, steep slopes, and thin porous soils influence groundwater on the mountain. Groundwater quantity can be low, and contamination potential is high due to these factors.

#### **Quality**

Several features make the mountain area vulnerable to groundwater contamination. First, much of the groundwater recharge to wells occurs from the upper layers of bedrock where fracturing is most prevalent. Waters in these layers have a more direct relation to septic systems than would groundwater at lower levels. Second, slopes cause more rapid movement of water in the shallow zones of soil and fractured rock than would occur in more level areas. This results in less dilution and greater displacement from a source (such as a septic treatment system). Third, effluent moves through thin porous soils more quickly, so there is less time for biologic breakdown and more rapid movement to the water table than is the case with soils in relatively flat areas (Sandberg, 1987). In a well-testing program completed in 1991 that sampled 49 wells on the mountain for various water contaminants, including coliform, 10 of these (20%) were positive for bacteria.

Clarke County has adopted an ordinance that extends the Virginia Department of Health's requirements for subsurface septic systems in order to minimize the potential for groundwater contamination resulting from improper siting and construction of subsurface systems.

Colluvial soils have been identified by the SCS as those soils most likely to contribute to groundwater recharge as well as having a high potential for contamination primarily due to their high permeability (0.6 to 20 in/hr), soil depth (> 60"), a high infiltration rate (hydrologic groups A&B, SCS Soil Survey), and the lack of a fragipan, or impervious, layer.

Figure 8 indicates that the soils in large portions of the Mountain Land Area are not well suited to accommodate on-site septic systems. In fact, no soils series on the mountain are rated as having slight or no limitations for septic systems. The bench area on the western side of the mountain is the best land in the Mountain Land Area for septic systems, but even it is characterized by moderate limitations. The remainder of the Mountain Land Area has one or more severe limitations. The top of the mountain and large areas close to the river exhibit three severe limitations.

Additional contamination sources that need to be addressed include leaking underground storage tanks, pesticides, fertilizers, road chemicals, and household hazardous wastes. These sources will be addressed County wide in Comprehensive Plan Chapter III, Article 4, Groundwater Resources Plan.

### **Quantity**

Inadequate well yields, however, are likely to be at least as much a hindrance to development in the Mountain Land Area as is septic contamination. Well yields tend to be highest where fractures in the rock occur, and often in such places soils are deepest. Regional fractures often occur as linear elements, such as streams, swales, or mountain gaps. Smaller fractures, which cannot be discerned easily on the ground, often can be delineated from air photographs or satellite imagery. Delineation by remote sensing, however, must be complemented by expensive field work (Source: Water Resources Division, U. S. Geological Survey, Richmond, VA). A study conducted by the League of Women Voters of Clarke County in 1986 indicated that typical (median) well yields in the Mountain Land Area are 7 gpm. Half of the 65 wells measured yielded between 2.5 and 15 gpm, while, at the extremes, six had no flow and one had a yield of 100 gpm. In contrast, 166 wells west of the river had a median yield of 15 gpm. Half of these well yields were between 5.5 and 47.5 gpm, and at the extremes, seven had no flow and one had a flow of 200 gpm.

As authorized by the 1988 General Assembly, Clarke County has adopted a well-water ordinance that prescribes well construction standards and water quantity standards to be met before a building permit is issued. This ordinance will help insure that wells have at least a minimum flow level before lot owners invest construction money and will minimize groundwater contamination resulting from improperly constructed wells.

Virginia has enacted several laws designed to protect its groundwater resources. The centerpiece is the Groundwater Act of 1973 (Va. Code, Secs. 62-144.83 to 62.1-44.106). The Act declares that it is the policy of the Commonwealth that the public has the right to exert reasonable control of all groundwater resources in the Commonwealth and that suitable regulations must be adopted to conserve and protect them. The Department of Environmental Quality (formerly State Water Control Board) is given the authority to declare "groundwater

management areas" that require special protective measures. No withdrawals can be made within those areas without a State permit.

## **F. Wildlife**

There is a strong public interest in maintaining a wide diversity of species and in protecting those species of flora and fauna that are endangered. This interest has been recognized at the federal level in the statutes relating to endangered species and in many state legislatures. Broad problems have local manifestations, so it behooves the counties and municipalities as well as the state governments to take appropriate steps to protect species diversity within their jurisdictions. One practice used to increase diversity of wildlife habitat is the proper use of forest management practices, including but not limited to regeneration clearcuts, intermediate thinnings, and commercial timber harvests. Increased habitat diversity in turn enhances the mountain area for all wildlife species.

The primary concern for protecting threatened and endangered species is to avoid degradation of species habitat, thereby providing an opportunity for species survival. Species survival is an important issue as it relates directly to the natural diversity of a locality or region. The more diversity there is in an area the more able that community is to withstand and adapt to change. For example, the more insect species there are the more prey species are available for insect eating predators. If one insect species is wiped out by disease, for example, then other insects 'fill in' as the prey species. Less species availability means less food opportunity that can lead to fewer species higher up the food chain.

There are several different rankings for species or communities considered threatened or endangered. Federally threatened and endangered species are protected by The Federal Endangered Species Act, which prohibits degradation of species or species habitat. Virginia's threatened or endangered species laws protect endangered species. These laws are similar to the federal laws in scope. The Virginia Departments of Game and Inland Fisheries and of Agriculture develop the state species lists. Currently there are no known federal or state threatened or endangered species in Clarke County.

The Division of Natural Heritage, which is a branch of the Virginia Department of Conservation and Recreation, further identifies areas and species considered to be the most environmentally significant in Virginia, including rare plants and animals, geologic landmarks, natural communities, and other natural features. The Division identifies one-minute blocks within the state where *elements of special concern* for Virginia exist.

To protect habitat, landowners need to be informed if species are located on their property; therefore, revisions to the environmental impact statement for major subdivisions will require the developer to contact the Division of Natural Heritage to insure that sensitive areas are not disturbed by development.

## **G. Scenic Values**

The Shenandoah River corridor and the Blue Ridge Mountains are important scenic assets for the County (Fig. 9). The land that is within sight of the river is a major asset that qualified the river for formal Scenic River designation by the State. The Blue Ridge Mountain in its entirety is recognized as a uniquely important scenic resource. South of Front Royal, its importance has been recognized by inclusion in the National Park System (Shenandoah National Park). The Virginia Scenic Rivers Act (Va. Code, Secs. 10.1 400 to 10.1 418.2) states that its purpose is to provide for the identification, preservation, and protection of the

Clarke County section of the Shenandoah River to assure the enjoyment of its scenic, geologic, fish and wildlife, historic, cultural, and other assets and to encourage the continuance of existing agricultural, horticultural, forestry, and open-space land and water uses. While the Scenic River designation by the state does not include direct controls on development, it demonstrates the state's interest in protecting the river's scenic character.

The Appalachian National Scenic Trail is one of two trails created by the National Trails System Act (16 U.S.C.A. Secs. 1241 et seq.), which was passed in 1968. The Act envisioned a system of trails that were near urban areas, within scenic areas, or along historic travel routes.

Currently 1,424 acres on the mountain are in conservation easements held in perpetuity by the Virginia Outdoors Foundation. Encouraging the creation of open-space management districts is another tool that allows property owners to maintain land as open space for a variety of purposes. While engaged in the district the landowner is eligible for a tax break. These districts are established for a period of 7 years. An individual property owner may withdraw from a district at the end of the 7 year period, if so desired, thereby maintaining land use flexibility.

The Virginia Departments of Conservation and Recreation and of Transportation have designated certain roads as scenic byways because they provide a view of the mountain and other scenic landscapes. In July 2004, the Commonwealth Transportation Board designated Route 601 (Blue Ridge Mountain Road) from Route 7 to Route 50 as a Virginia Byway. In 2005, the Commonwealth Transportation Board designated the following routes as Virginia Byways: Route 606 (River Road) from Route 7 to Route 649, Route 649 (Frogtown Road), Route 606 (Mount Carmel Road) from Route 649 to Route 50, and Route 638 (Howellsville Road) from Route 50 to Warren County.

As the majority of the mountain is currently forested, a feeling of isolation and rural character is maintained along public roadways on the mountain. Maintenance of tree buffers along public roads will ensure the continuance of the rural aesthetics in spite of increases in housing development. Additional measures that maintain the visual integrity of the mountain by spreading development out are increasing minimum lot sizes, minimum lot widths, and minimum setbacks.

## **H. Historic Resources**

The Mountain Land Area contains 125 structures constructed before 1943 that have been documented in the County's Rural Historic Resource Surveys (Fig. 10). Nineteenth-century vernacular buildings predominate. Most of them are located along the Shenandoah River, on the roads that cross the mountain (Routes 7 and 50), and along the bench on the west side of the mountain. There are a number of nineteenth-century churches. Up to a dozen of these buildings are potentially eligible for official historic recognition by nomination to the National Register of Historic Places. However, at this time none of these properties have been registered. The summer homes near Bluemont dating from the 1890s to the 1930s are potentially eligible for group nomination as a historic district.

All these examples of the scenic and historic character of the Mountain Land Area should be taken into account by the County government in its exercise of long-range planning for development and land use.

## IV. DEVELOPMENT TRENDS

### A. Development Pressures

The mountain occupies a strategic position for the development of Clarke County. As part of the Blue Ridge, it separates the county from generally flat, accessible and readily developable land to the east. Washington, D. C., 60 miles eastward, has fueled major suburbanization that has come closer and closer to Clarke County. During the past 10 years, major employment centers have developed in Loudoun County, which abuts the mountain land directly.

Overall housing density is currently controlled in the County by sliding scale zoning, which was adopted in 1980. Before 1980, 5 acre zoning was in place that permitted one dwelling for every 5 acres. The general purposes of sliding scale are to:

- maintain and promote the rural, agricultural, forestal, and open-space character of the land on both sides of the Shenandoah River;
- minimize conflicting land uses detrimental to the historical landscape and to agricultural and forestal operations;
- minimize land disturbance that may result in adverse environmental impacts such as increased erosion and sedimentation, non-point pollution of surface waters, and/or contamination of ground water; and
- limit construction and development of new residential subdivisions requiring unnecessary and costly provision of public facilities and services that would be disruptive to historically significant, scenic, agricultural, forestal, and open-space areas that are remote from existing population centers.

Sliding scale zoning provides for a proportional allocation of development or building rights based on the size of the property. Table 3 describes the original DUR allocation for parcels.

### Building Permits

The Mountain Land Area is under increasingly strong pressure for development. It is the closest part of the county to the center of the Washington Metropolitan Area and adjoins rapidly growing Loudoun County. Between January 1980 and December 1993, the County issued 308 building permits for new residences in the Mountain Land Area, or 35% of all permits in 26% of the County. Between January 1994 and December 2004, the County issued 223 building permits in the Forestal-Open Space-Conservation District, or 31% of all rural permits.

### Parcel Creation

Time Period	# parcels approved	total area	# parcels in FOC	% of # in FOC	area in FOC	% of area in FOC
1980-1989	350	2639 ac	75	21%	806 ac	30%
1990-1999	307	9956 ac	65	21%	2294 ac	23%
2000-2004	201	3678 ac	40	20%	516 ac	14%
Pending	10	73 ac	10	100%	73 ac	100%

While parcel creation was slower in the Mountain Land Area than in the rest of the County, the 1500 existing parcels east of the Shenandoah River constitute 40% of all parcels in the rural portion of the County (excluding Berryville). Therefore, parcel availability for development is greater.

In 1980 a total of 2,213 dwelling unit rights were allocated on the mountain; by the end of 2004, 947 DURs remained unused (Table 4) (Fig. 11). Approximately 980 houses currently exist on the mountain (Table 5).

**Table 3. Dwelling Right Allocation.**

Size of Tract	Number of Single- Family Detached Dwelling Units Permitted
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 – 229.99 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 – 1029.99 Acres	14
1030 Acres or More	15

**Table 4. Dwelling Unit Rights Remaining.**

DURs Remaining	# DURs	# Parcels	# Acres	% Acres
0	0	855	9,545	37
1-2	642	623	6,463	25
3-4	251	64	5,233	21
5-7	24	17	2,808	11
> 7	30	3	1,535	6
<b>Total</b>	<b>947</b>	<b>1,562</b>	<b>25,584</b>	

\* Does not include Government owned or Conservation Easements

**B. Lands Committed to Development and Restricted from Development**

Figure 12 shows the areas that have been fully built to the extent permitted by the current zoning ordinance. It is clear that while large sections of the Mountain Land Area have yet to be developed, substantial areas have reached the ultimate development permitted by the current zoning.

Table 5 shows that there are approximately 1,263 lots in the Mountain Land Area that are less than 10 acres, comprising about 81% of the area. Although about 63% of these lots are not yet built on. Their small size makes them of relatively little use for commercial forestry so they generally must be considered as likely to be developed.

The built-out areas and the areas already subdivided into small lots constitute much of the land that is most readily developable. Any significant conservation of land for forestry, wildlife habitat, scenic or recreational purposes will have to occur in the remaining portions of the Mountain Land Area.

Figure 9 indicates that substantial areas already have protection as permanent open space, either because they are fully owned by the public or because public or semi-public bodies have acquired easements restricting their development. The largest such holding is the Appalachian

Trail corridor. As of 2004, it consisted of about 3,323 acres lying generally along the west side of the ridge of the mountain.

Table 5: Size Distribution of Tracts in the Mountain Land Area

Size Class (acres)*	# of Tracts	# of Acres	% of Tracts with a bldg.	# of Tracts with a bldg.
Less than 1	313	161	49	154
1-1.9	102	151	71	72
2-4.9	164	514	64	105
5-9.9	545	3,207	66	360
10-14.9	139	1,616	77	107
15-39.9	155	3,668	55	86
40-79.9	74	3,954	46	34
80-129.9	32	3,246	53	17
130-179.9	14	2,106	36	5
180-229.9	3	592	33	1
230-279.9	5	1,268	20	1
280-329.9	1	301	0	0
330-399.9	1	386	100	1
400-499.9	1	456	100	1
500-599.9	0	0	0	0
600-729.9	0	0	0	0
730-859.9	1	798	0	0
860-1029.9	0	0	0	0
<b>Total</b>	<b>1,550</b>	<b>22,424</b>	<b>61</b>	<b>944</b>

\* Not including Govt. land (Appalachian Trail, Mt. Weather)

\*Includes 280 lots for which size is not given in assessor's records. They are estimated to be 0.5 acres = 140 acres.

\*\*Tracts with improvements assessed at \$6000 or more are assumed to have a building.

Conservation easements have been donated by landowners on several large tracts along the Shenandoah River, south of Calmes Neck. These easements protect the scenic qualities along significant reaches of the river. Several tracts are in easement near the Route 7 corridor, bordering the river and the Appalachian Trail.

Taken together, the already built-out areas and the areas with permanent open-space protection are not likely to change appreciably in the foreseeable future.

## **V. ROADS AND FIRE SAFETY**

### **A. Transportation**

The mountain is characterized by rugged, forested terrain isolated from the remainder of the County by the Shenandoah River. Two primary highways, Rt. 50 and Rt. 7, provide the only access between the valley region of the County and the mountain area. Within the Mountain Land Area there are few roads; with one exception, these run north-south. On top of the mountain is the most direct road, Rt. 601. Along the bench on the western side of the mountain and along the river, Routes 604, 606, and 649 provide more circuitous routes. Steeply-sloped Rt. 605 is the only road between Routes 7 and 50 to connect the ridge and the river.

The main problem with maintaining mountain roads is steep slopes and overall mountainous terrain. Because of the terrain, runoff during storm events erodes the roadbeds quickly as water is traveling at a high velocity off the slopes and onto the roads. Steep terrain, combined with unimproved conditions along some routes, especially Rt. 605, has created difficult driving conditions. Rt. 605 is difficult to maintain, with annual storm events causing significant damage. Every effort should be made by the County Board of Supervisors and the Virginia Department of Transportation to insure that roads in need of safety improvements are placed on the Six-Year Highway Plan so that they are upgraded in a timely manner. Grading should be designed and executed to cause the least possible disruption to natural ground forms and existing vegetation. Specific standards that will cause the “least possible disruption” should be provided.

The majority of new lots are accessed by private-access easements. To ensure safe emergency vehicle access via such easements, modifications to easement construction standards would reduce the maximum grade, provide setbacks for entry way posts or pillars, require pull-off areas for emergency vehicles, provide terminus turn around areas, and the use of VDOT gravel road standards for the road surface and base. To limit the impact construction of such private roads on the natural environment, a maximum right of way width is established, a maximum travel way width is established, and steeper shoulder slopes allowed.

### **B. Fire Safety**

Because of the rugged topography, inaccessibility, lack of access to water, and forest cover, ensuring mountain residents protection from fire is a difficult task. Forest fires are administered by local volunteer fire departments and the Department of Forestry. Reports of the two volunteer fire companies in the mountain area: Blue Ridge on Retreat Road and Shenandoah Farms on Howellsville Road, state that the most common fire event is forest fires.

Homeowners can assist fire fighters by ensuring that fire prevention techniques are used in and around their homes. Many pamphlets are available from the Virginia Department of Forestry that describe appropriate landscaping around homes that can reduce the risk of fire damage.

In addition to reducing fire hazards around the home, property owners need to be concerned with emergency vehicle accessibility. Minimum standards are available from your local fire station. In general, emergency vehicles require a cul-de-sac at the end of roads with a minimum 40-foot radius. Private access easements should be up to 18 feet wide to allow for vehicles to pass. Pillars or gates at road entrances should be set back and far enough apart to allow a smooth turn into a property by fire apparatus. Propane tanks of more than 500 gallons should be placed underground to lessen the danger when forest fires come close to homes and businesses. Finally, dry hydrants connected to adjacent ponds are encouraged to provide potential water sources for fire fighting activities.

**APPENDIX 1**

**ITEM 1.  
PROPOSED ZONING ORDINANCE TEXT AMENDMENTS**

**ITEM 2.  
PROPOSED SUBDIVISION ORDINANCE TEXT AMENDMENTS**

**ITEM 3.  
PROPOSED COUNTY CODE TEXT AMENDMENT**

**ITEM 4.  
RESOLUTION**

**ITEM 5.  
PUBLIC HEARING NOTICE**



*for a house site, or 1.5 acres if an erosion and sediment control plan is prepared by a professional engineer and approved by the Zoning Administrator for dwellings constructed after [adoption date of ordinance]*

- 3-A-2-f-(4)** *Except for those clearing activities listed in section 3-A-2-f-(9), clearing is allowed within 200 feet of the house site area described in the previous section provided: 1) there are no clear-cut openings, 2) the thinning of trees of 2 inches or more in diameter (measured 4.5 feet above ground), is allowed, if randomly spaced with not more than 50% of the crown cover removed within any 10 year period, 3) pruning of branches is limited to the bottom 1/3 of the tree, and 4) this clearing within 200 feet of house site areas shall be done before issuance of final certificate of occupancy.*
- 3-A-2-f-(5)** *Except for those clearing activities listed in section 3-A-2-f-(9), existing woody vegetation shall be retained on all parcels :*
- a. on slopes of 25% or more, and*
  - b. on slippage soils.*
- 3-A-2-f-(6)** *Tree Protection during Construction*
- a. Critical Root Zone*

*Tree preservation areas shall be identified on the subdivision plat or construction plans. A “critical root zone” (CRZ) shall be delineated on the plans and clearly marked and protected in the field prior to any land disturbance. The CRZ is the area underneath the Tree Drip Line as defined in Section 9-B-#.*
  - b. General Requirements*
    - 1. Before any land disturbance, suitable protective barriers, such as safety fencing, shall be erected outside of the CRZ of any tree or stand of trees to be preserved. Protective barriers shall remain so erected throughout all phases of construction. No grade changes or storage of equipment, materials, debris, or fill shall be allowed within the area protected by the barrier. No construction traffic, parking of vehicles, or disposal of liquids is permitted within the CRZ.*
    - 2. Trees likely to die as a result of site disturbance activities within 25 feet of the safety fence, as identified in the tree conservation plan, shall be removed.*
- 3-A-2-f-(7)** *Revegetation/tree replacement, in consultation with a Forestry Consultant or Certified Arborist and within the guidelines described below, shall be required for all areas where any clearing occurs in excess of the standards for maximum cleared area or in required vegetative buffer.*
- a. Replacement criteria.*

*Trees that are removed shall be replaced so that there is, at a minimum, no loss of tree canopy coverage upon maturity of the replacement trees. All trees to be used as replacement trees shall be:*

    - 1. a Virginia native tree species as identified in the Virginia Department of Forestry’s Tree Seedling Brochure described by the Virginia Native Plant Society ([dcr.Virginia.gov](http://dcr.Virginia.gov));*
    - 2. be of minimum quality as identified in the American Standard for Nursery Stock (ANSI Z60.1-2004) (as amended);*
    - 3. planted as described in the American Standard for Nursery Stock (ANSI Z60.1-2004) (as amended); by a qualified landscape contractor to insure survival; and*
    - 4. a minimum of 4 feet in height with caliper dependent on species.*
- 3-A-2-f-(8)** *Clearing for agricultural uses shall require a Conservation Farm Management Plan approved by either the regional Soil and Water Conservation District or the federal Natural Resources Conservation Service and submitted to the County Zoning Administrator.*
- 3-A-2-f-(9)** *The following clearing activities shall be allowed in the no-clear areas:*

- ~~3-A-2-f(1)~~
  - ~~3-A-2-f(2)~~
  - ~~3-A-2-f(3)~~
- a. Dead trees and shrubs may be removed.
  - b. Invasive alien species may be removed. Invasive alien species shall be those listed by the Virginia Department of Conservation and Recreation.
  - c. ***Forestry activities as described in Section 3-C-2-1.***
  - d. ***Clearing for the following activities types of development may occur be located in the vegetated property buffer, provided no more land, trees, or vegetation shall be disturbed than is necessary for construction, use, and maintenance of:***
    - i. driveways and access easements of not more than 30 feet ***wide***,
    - ii. electric, gas, and telephone utility easements, on-site water facilities and sewage disposal systems, if the Planning Commission determines that not allowing such facilities or systems in the buffer would prohibit the ***feasible construction practical development*** of such facilities or systems,
    - iv. public water and sewer lines (including water and sewer lines constructed by private interests for dedication to public agencies), or
    - v. fences.
    - vi. ***Forestry activities as described in Section 3-C-2-1.***

**3-A-2-g**                    **Private driveway standards**  
***All private driveways longer than 150 feet shall comply with all Private Access Easement travel way standards as stated in Subdivision Ordinance Section 8-J-2-(c) on parcels created after [adoption date of ordinance].***

3-C    **SUPPLEMENTARY REGULATIONS (10/17/00) (11/18/03)**

3-C-1            **General**  
 The following regulations are supplementary regulations for districts listed in the Schedule of District Regulations, and are in addition to other provisions and requirements of this Ordinance.

3-C-2            **Uses in Various Districts**

3-C-2-1        Forestry Uses and Structures: The cutting or logging of any trees for ***profit that exceeds one acre of harvested area, commercial purposes*** shall not be conducted without a Pre-Harvest Plan, submitted by the property owner ***which shall include Virginia Department of Forestry Best Management Practices, that is reviewed by the County Zoning Administrator and a consulting forester or certified arborist for compliance with County ordinance*** and approved by the Virginia Department of Forestry and a Timber Harvest Permit issued by the Zoning Administrator. ***The Pre-Harvest Plan shall be submitted to the Zoning Administrator at least 10 business days before the start of a harvest operation.***

3-C-2-1(1)     Intent  
 The standards for the Pre-Harvest Plan are Best Management Practices (BMPs) specifically established to reduce logging costs, reduce erosion, and prevent water quality problems.

3-C-2-1(2)     Pre-Harvest Plan  
 The Pre-Harvest Plan shall include a map identifying:

- a) property boundaries,
- b) streams and drainages,
- c) ***Critical Area vegetated buffers as described in Section 3-A-2-f,***

- d) road and trail locations,
- e) stream and drainage crossings,
- f) log landings and mill seats,
- g) streamside management zones (SMZs), and
- h) other environmental concerns.

As appropriate, written notes shall address:

- a) road and trail specifications,
- b) harvesting equipment to be used,
- c) timing of harvest,
- d) logging contract specifications,
- e) special planning for wet areas,
- f) obstructions such as rock outcroppings, and
- g) when and where BMPs will be installed.

3-C-2-l-(3)

The guidelines in the “~~Loggers Guide~~”, Virginia Department of Forestry, 1988, “*Virginia’s Forestry Best Management Practices for Water Quality, BMP Field Guide*” July 2002 (and as amended) shall be the minimum standards and criteria for the Pre-Harvest Plan and shall be understood and applied as the minimum requirements for:

- a. haul roads,
- b. skid trails,
- c. haul road and skid trail drainage,
- d. log decks, landings, and mill seats,
- e. stream side management zone (SMZ); however, in no instance shall a SMZ be less than 100 feet for a perennial stream or 50 feet for an intermittent stream as identified *on the 7.5 minute USGS topographic maps* ~~the U.S. Geological Survey,~~
- f. *Buffer areas as described in section 3-C-2-l-(6),*
- g. *Clearcuts for forest regeneration and wildlife habitat should be laid out with an undulating perimeter instead of squares or rectangles. This is to increase the “edge” effect between adjacent forested areas so vital to wildlife, and to help them blend into the surrounding forest, and*
- h. seeding bare soil

3-C-2-l-(4)

*No subdivision application accepted for three years before or after a timber harvest operation.*

3-C-2-l-(5)

*No Pre-Harvest Plan would be accepted for a property within three years of an approved subdivision*

3-C-2-l-(6)

*A buffer shall be maintained, for commercial forestry activities with a Pre-Harvest Plan, of 25 feet along public rights of way and 25 feet along property lines, allowing for the thinning of trees not to exceed ~~25~~ 50% of the crown cover (~~25~~ 50% crown cover retained at all times).*

- a. *no skid trails shall be located within buffer areas,*
- b. *tree removal in buffers shall be with directional felling and winching,*
- c. *within this managed area up to 50% of the basal area or up to 50% of the forest canopy can be harvested,*
- d. *salvage shall be conducted in accord with recommendations outlined in the BMP manual,*
- e. *removal of harvested timber in the buffer shall be done so that the forest floor remains virtually undisturbed. If disturbance does occur, a permanent vegetative cover shall be established on exposed soil within the buffer area;*
- f. *equipment shall not be operated in or adjacent to the buffer area for salvage and sanitation purposes when soils are saturated, and*

g. areas of damage of less than 1 acre may be completely harvested.  
3-C-2-l-(7) *Revegetation, as described in Section 3-A-2-f-(7), shall be required for all areas where any clearing occurs in excess of the standards for required vegetative buffers.*

3-C-2-\* *Propane Tanks: Propane tanks of 500 gallons or larger shall be placed underground.*

3-D ALLOCATION OF SINGLE-FAMILY DETACHED DWELLING UNIT RIGHTS IN THE AGRICULTURAL-OPEN SPACE-CONSERVATION (AOC) AND THE FORESTAL-OPEN SPACE-CONSERVATION (FOC) DISTRICTS AND LOT SIZE IN THE AOC DISTRICT

3-D-8 **Boundary Line Adjustment of Lots or Parcels of Land in the AOC/FOC Districts**  
*If a boundary line adjustment results in an increase in acreage of a tract by 10% or more, the allocation of dwelling unit rights between the tracts may be adjusted by reallocation of not more than one dwelling unit right from the tract reduced in size to the parcel increased in size, provided:*  
*(a) the resulting dwelling unit rights on the tract increased in size does not exceed the dwelling units rights that would have been allocated to such parcel under Section 3-D-2 if such parcel had been a parcel of record that existed in the Clarke County Real Property Identification Maps on October 17, 1980, and*  
*(b) not more than one boundary line adjustment that includes reallocation of a dwelling unit right may be approved in any two year period.*

## 9 DEFINITIONS

9-B-152 **SLIPPAGE SOILS:** *Soil types identified as 54C Udorthents in the “Soil Survey of Clarke County” (1982).*

(the following terms to be inserted in alphabetical order)

9-B-# **CERTIFIED ARBORIST:** *An individual certified by the International Society of Arboriculture (ISA) who has demonstrated through a professionally developed examination and education program a thorough knowledge of tree biology and tree care practices.*

9-B-# **CONSULTING FORESTER:** *An individual who has at a minimum a 4-year degree in forest management from a college accredited by the Society of American Foresters.*

9-B-# **TREE:** *any living, self-supporting, wood perennial plant that normally grows to an overall height of no less than 10 feet.*

9-B-# **TREE CANOPY:** *the upper portion of the tree consisting of limbs, branches, and leaves.*

9-B-# **TREE CANOPY COVERAGE:** *the areal extent of ground within the drip line of the tree.*

9-B-# **TREE DIAMETER AT BREAST HEIGHT (DBH):** *the diameter of the trunk of a tree measured at breast height (a height of 4.5 feet above the natural grade). The DBH of*

*trees with multiple trunks shall be the assumed diameter obtained from the sum of the cross-sectional areas of individual trunks at breast height. Trees with less than 4.5 feet of clear trunk shall be measured at the diameter of the largest vertical branch or leader at breast height.*

- 9-B-#** ***TREE DRIP LINE:** the peripheral limits of the horizontal crown of a tree spread vertically to the ground, provided, however, that the same shall not be less than a circle with a 5 foot radius measured from the center of the tree.*
  - 9-B-#** ***TREE, LARGE MATURE:** any tree that has a DBH of 18 inches or greater; with the exception of non-native, dead, dying or diseased trees.*
  - 9-B-#** ***TREE PROTECTIVE BARRIER:** fences or like structures at least 4 feet in height that are conspicuously colored and prevent or obstruct passage.*
  - 9-B-#** ***TREE PRUNING:** to cut away, remove, cut off or cut back parts of a tree for general maintenance purposes.*
  - 9-B-#** ***TREE REMOVAL:** to cut down, dig up, destroy, effectively destroy, or the unlicensed relocation of any tree.*
-

**AMENDMENT 2.**  
**PROPOSED SUBDIVISION ORDINANCE TEXT AMENDMENTS**

Sections to be added shown in *bold Italics*

Section to be deleted shown ~~struck through~~

**2 USAGE AND DEFINITIONS**

**2-B DEFINITIONS**

- 2-B-50 SUBDIVIDE: To divide any tract, parcel, or lot of land into  
(2/16/01) two or more parts, with the following exceptions:
- 2-B-50-(a) Boundary Line Adjustments (see Special Regulations, Article 10-D).
- ~~2-B-50-(b) The division of land shall not be considered a subdivision if, in the opinion of the Zoning Administrator, it meets all of the following requirements:~~
- ~~2-B-50-(b)-(1) It is not in conflict with the general meaning and purpose of this Ordinance;~~
- ~~2-B-50-(b)-(2) No streets, roads, or rights-of-way not already accepted into the State Highway System are needed to serve any parcel in the subdivision;~~
- ~~2-B-50-(b)-(3) It does not include a dedication of land to public use; and~~
- ~~2-B-50-(b)-(4) No parcel resulting from such division is less than 100 acres; provided that a resulting parcel will be measured with and included in any previously existing separate parcel to which it is merged.~~
- ~~2-B-50-(c) The division of land shall not be considered a~~  
(7/20/93) ~~subdivision if, in the opinion of the Zoning Administrator:~~
- ~~2-B-50-(c)-(1) It is not in conflict with the general meaning and purpose of this Ordinance;~~
- ~~2-B-50-(c)-(2) No streets, roads, or rights-of-way not already accepted into the State Highway System are needed to serve any parcel in the subdivision;~~
- ~~2-B-50-(c)-(3) Not more than two parcels would result from the division of land;~~
- 2-B-50-(~~b e~~)-(4) **The use of one of the parcels will be public utility uses *and not more than two parcels would result from the division of land.***
- 2-B-50-(~~c d~~) All persons proposing to divide and/or merge land who contend  
(6/13/89) such division is exempted from the provisions of this Ordinance  
(2/20/90) under subsections (a) **or** (b), ~~or (c)~~, above, shall submit to the  
(7/20/93) Zoning Administrator a plat of the proposed division, or other documents, plats, or evidence satisfactory to the Zoning Administrator, and if in the opinion of the Zoning Administrator the division is excepted, he shall so certify on said plat or on the deed of conveyance by which the property is to be divided. The Zoning Administrator's certificate shall state that the division is excepted under (a) **or** (b), ~~or (c)~~ above, and shall be signed by the Zoning Administrator. ~~All persons proposing to divide land in an AOC or FOC zoning district pursuant to the provisions of subsections (a), (b), or (c) above, shall submit to the Board of Supervisors of Clarke County, Virginia, a duly sworn affidavit setting forth the allocation of rights for new single family detached dwellings, as provided in Sections 4-G-2, 4-G-3, and 4-G-7 of the Clarke County Zoning Ordinance, to each of the parcels resulting from the division of the tract. Said affidavit shall further state that prior to conveyance or transfer of any such parcels, the grantor shall furnish a copy of the affidavit to the grantee. No person shall record a plat or conveyance for the division of land without complying with the provisions of this Ordinance or without the Zoning Administrator's certificate as aforesaid.~~

2-B-52 SUBDIVISION: The act or process of subdividing as herein defined. ~~All parcels of less than 100 acres resulting from the act of subdividing a tract of land shall be a part of the~~

~~subdivision and the requirements of this Ordinance, including platting requirements, shall apply there to.~~

- 2-B-53 (9/18/90) SUBDIVISION, MAJOR: A subdivision meeting any of the following conditions:
- 2-B-53-(a) Three or more lots are proposed, *at least three of which are less than 100 acres.*
  - 2-B-53-(b) A lot will be used for commercial or industrial purposes.
  - 2-B-53-(c) A right of way in the subdivision will be proposed for acceptance into the Virginia Department of Transportation's road system.
  - 2-B-53-(d) Public water or public sewerage are proposed to serve any lot.
  - 2-B-53-(e) Homeowners association to be created for this subdivision.
- 2-B-54(9/18/90) SUBDIVISION, MINOR: A subdivision containing ~~less than 3~~ *one or two* lots, *that are each less than 100 acres, and*  
**2-B-54-a** meets none of the conditions set under Section 2-B-53, Subsections (a), (b), (c), (d), and  
**2-B-54-b** (e) for major subdivisions.

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### 3 ADMINISTRATION

#### 3-A ADMINISTRATION BY PLANNING COMMISSION

- 3-A-2 The Commission may act through its Zoning Administrator and/or Planning Staff duly appointed as provided in Section 15.2-2217 of the Code of Virginia, to the extent that the Commission finds appropriate for the administration of this Ordinance; provided, however, that no person may act for the Commission in approving, conditionally approving, or disapproving any Preliminary Plat or Record Plat, *except the Zoning Administrator shall act for the Commission in approving, conditionally approving, or disapproving any Preliminary Plat or Record Plat in which all lots proposed are 100 acres or greater in area.*

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### 5 ENVIRONMENTAL INVENTORY AND IMPACT STATEMENT

- 5-A Every application for subdivision of land shall include as a part of said application an Environmental Inventory and Impact Statement; provided, however, that this requirement may be waived or modified in whole or in part, in writing by the Zoning Administrator where he does not deem such statement to be material. The Inventory and Impact Statement shall cover the area of proposed subdivision ~~or development~~, and areas within *500 feet two miles* of the nearest boundary of the proposed subdivision ~~or development~~. Included in the Inventory and Impact Statement shall be the following:

- 5-A-1 INVENTORY: Existing characteristics and conditions of the *natural and cultural* environment *shall be addressed in the Statement*, including, but not limited to, the ~~following topics listed below~~. *The applicant shall be responsible for contacting the agencies or resources where listed for each topic and provide written documentation to the Planning Commission of existing (or lack of) these characteristics and conditions.*
- i) *Endangered Species or Habitats*  
*Virginia Department of Conservation and Recreation – Division of Natural Heritage: A site map shall be provided to DNH in order that they may compare the location to existing data regarding threatened or endangered species or habitat.*
  - ii) *Appalachian Trail*

***Appalachian Trail Conference/Potomac Appalachian Trail Club:***

***Provide site map for evaluation of access, sensitive features, proximity to trail, and other issues related to the Appalachian Trail (re: property in the FOC Zoning District).***

- iii) ***Historic/Archeological Resources***  
***Virginia Department of Historic Resources: Identification of archeologic/historic resources more than 50 years old, including resources on, or determined eligible for, the Virginia Landmarks Register and/or the National Register of Historic Places.***
- iv) ***Conservation Easements***  
***Virginia Outdoors Foundation/Virginia Department of Historic Resources/ Clarke County Conservation Easement Authority/Lord Fairfax Soil and Water Conservation District: Easements held by the above referenced entities shall be identified.***
- v) ***Soils***  
***Clarke County Soil Survey and National Wetlands Inventory: The following soils shall be identified:***
  - Slippage soils*** -soil type 54C;
  - Groundwater Recharge Areas*** -soil types 19D, 20D, 22C, 22D, 49B, 50B;
  - Wetlands*** -hydric soil types 6B, 6C, 7D, 16B, 23, 24, 54C.
- vi) ***Water features***  
***All features shall be shown*** including springs, intermittent streams, perennial streams, or ponds;
- vii) ***Sinkholes***  
***Clarke County Soil Survey and on-site research;***
- viii) ***Ridgelines***  
***Prominent ridgelines (watershed divides or slopes exceeding 15% over 800 feet elevation) shall be identified;***
- ix) ***Slopes***  
***Slopes (in categories of 15% up to 25% and 25% and greater) shall be identified;***
- x) ***Pollutions Sources***  
***Known pollution sources (including without limitation dump sites, drainfields, buried fuel tanks, solid and liquid disposal sites, etc.) shall be identified;***
- xi) ***Large Trees***  
***Trees or clusters of trees greater than 6 inches diameter at breast height (DBH) shall be shown in the areas to be cleared; the areas and acreage to be cleared of such trees for construction activities shall also be shown.***

- ~~5 A 1 (a) Earth Mineral Resources, construction material, soils, permeability, land form, geology, unique physical features;~~
- ~~5 A 1 (b) Water Surface, underground, quality, temperature, recharge;~~
- ~~5 A 1 (c) Atmosphere Quality as to gases and particulates;~~
- ~~5 A 1 (d) Processes Floods, erosion, sedimentation, precipitation, solution, absorption, compaction and settling, stability as to slides and slumps, air movements;~~
- ~~5 A 1 (e) Flora Trees, shrubs, grass, crops, microflora, aquatic plants, endangered species, barriers, corridors;~~
- ~~5 A 1 (f) Fauna Birds, land animals including big game, small mammals and reptiles, fish and shellfish, benthic organisms, insects, microfauna, endangered species, barriers, corridors;~~
- ~~5 A 1 (g) Land Use Wilderness and open spaces, wildlife habitat, wetlands, forestry grazing, agriculture, residential, commercial, industrial, mining and quarrying;~~
- ~~5 A 1 (h) Recreation Hunting, fishing, boating, swimming, camping and hiking, picnicking, resorts;~~
- ~~5 A 1 (i) Aesthetics and Human Interest Scenic views and vistas, wilderness qualities, open space qualities, landscape design, unique physical features, parks and reserves, monuments, rare and unique species, historical or archaeological sites and objects;~~

- ~~5-A-1 (j) Cultural Status Cultural patterns and lifestyle, health and safety, employment, population density;~~
- ~~5-A-1 (k) *xii* Manmade Facilities and Activities - (Structures, transportation network including movement and access, utility networks, waste disposal, barriers, corridors) Any conditions existing in adjacent areas of the County which will or may adversely affect the use and enjoyment of all or any part of the subdivision.~~
- 5-A-2 **IMPACT: *Applicant shall show how the proposed subdivision will impact any items identified in Section 5-A-1, and how that impact will be remediated so as to reduce or eliminate the impact.*** ~~Impact upon area by proposed subdivision including, but not limited to, the following:~~
- ~~5-A-2 (a) Modification of Regime Introduction of exotic flora or fauna, biological controls, modification of wildlife habitat, alteration of ground cover, alteration of ground water hydrology, alteration of drainage, river control and flow modification, canalization, irrigation, weather modification, burning, surface or paving noise, and vibration;~~
- ~~5-A-2 (b) Land Transformation and Construction Urbanization, residential and vacation homes, industrial sites and buildings, airports, highways and bridges, roads and trails, railroads, cables and lifts, transmission lines, pipelines and corridors, barriers including fencing, channel dredging and straightening, channel revetments, canals, dams, impoundments, piers and marinas, offshore structures, blasting and drilling, cut and fill, tunnels and underground structures;~~
- ~~5-A-2 (c) Resource Extraction Blasting and drilling, surface excavation, subsurface excavation, well drilling and fluid removal, dredging, clear cutting and other lumbering, commercial fishing and hunting;~~
- ~~5-A-2 (d) Processing Farming, ranching and grazing, feedlots, dairying, energy generation, mineral processing, metallurgical industry, chemical industry, textile industry, automobile and aircraft, oil refining, food, lumbering, pulp and paper, product storage;~~
- ~~5-A-2 (e) Land Alteration Erosion and control and terracing, mine sealing and waste control, strip mining rehabilitation, landscaping, marsh fill and drainage;~~
- ~~5-A-2 (f) Resource Renewal Reforestation, wildlife stocking and management, ground water recharge, fertilization application, waste recycling;~~
- ~~5-A-2 (g) Changes in Traffic Railway, automobile, trucking, shipping, aircraft, river and canal traffic, pleasure boating, trails, cables and lifts, communication, pipeline;~~
- ~~5-A-2 (h) Waste Emplacement and Treatment Landfill, emplacements of tailings, spoil and overburden, underground storage, junk disposal, deep well emplacement, cooling water discharge, municipal waste discharge including spray irrigation, liquid effluent discharge, stabilization and oxidation ponds, septic tanks, stack and exhaust emission, spent lubricants;~~
- ~~5-A-2 (i) Chemical Treatment Fertilization, chemical de-icing of highways, chemical stabilization of soil, weed control, insect control with pesticides;~~
- ~~5-A-2 (j) Accidents Explosions, spills and leaks, operation failure.~~
- 5-B The Commission may require the subdivider to provide an Environmental Inventory and Impact Statement or to provide additional information or amplification with respect to the Statement, whether or not initially considered material by the Zoning Administrator, where the Commission considers such to be material.

6 CONSUMER DISCLOSURE STATEMENT

6-A-\* *the following notices:*

a. *for property located in the Agricultural-Open Space-Conservation (AOC)*

*Zoning District:*

**AGRICULTURAL OPERATIONS NOTICE**

This property is in the Agricultural-Open Space-Conservation (AOC) Zoning District. Agriculture is the primary economic activity of this zoning district. Owners, residents, and other users of property in the AOC District may be subjected to inconvenience, discomfort, and the possibility of injury to property and health arising from agricultural operations even though conducted in accordance with best management practices and/or in accordance with existing laws and regulations of the Commonwealth and the County. Such agricultural operations may generate noise, odors, and dust, may involve the operation of machinery, including aircraft, the storage and disposal of manure, and the application of fertilizer, soil amendments, and pesticides. Owners, occupants, and users of land in the AOC district should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a zoning district in a county with a strong rural character and an active agricultural sector.

b. *for property in the Forestal-Open Space-Conservation (FOC) Zoning*

*District:*

**EMERGENCY SERVICES NOTICE**

The rural location and limited access of this property, combined with adverse weather conditions, may delay or totally impede the timely response of emergency service agencies (police, fire, medical) despite their best efforts. The County of Clarke will be held harmless and not be subject to liability claims for damage to property, personal injury, or loss of life under such conditions.

**FORESTRY OPERATIONS NOTICE**

This property is in the Forestal-Open Space-Conservation (FOC) Zoning District. Forestry is the primary economic activity of this zoning district and is necessary for the health and viability of the forest resource itself. Owners, residents, and other users of property in the FOC District may be subjected to inconvenience, discomfort, and the possibility of injury to property and health arising from forestry operations even though conducted in accordance with best management practices and/or in accordance with existing laws and regulations of the Commonwealth and the County. Such forestry operations may generate noise, odors, and dust, and may involve the operation of machinery, including heavy equipment and chain saws. Debris such as tree-tops and limbs may be left on site at the conclusion of a forestry operation. Owners, occupants, and users of land in the FOC district should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a zoning district in a county with a strong rural character and an active forestal sector.

c. *for property in any zoning district:*

**FERTILIZERS AND PESTICIDES NOTICE**

Before fertilizers and pesticides are used for lawn or landscaping purposes, a soil test should be conducted. The application of such chemicals should be limited due to the potential for groundwater contamination and should not exceed that determined necessary by the soil test.

## 7-C RECORD PLAT

7-C-3-(p) *The following statement shall be shown on the Record Plat of property located in the Forestal-Open Space-Conservation (FOC) Zoning District*

**EMERGENCY SERVICES NOTICE**

*The rural location and limited access of this property, combined with adverse weather conditions, may delay or totally impede the timely response of emergency service agencies (police, fire, medical) despite their best efforts. The County of Clarke will be held harmless and not be subject to liability claims for damage to property, personal injury, or loss of life under such conditions.*

**FORESTRY OPERATIONS NOTICE**

*This property is in the Forestal-Open Space-Conservation (FOC) Zoning District. Forestry is the primary economic activity of this zoning district and is necessary for the health and viability of the forest resource itself. Owners, residents, and other users of property in the FOC District may be subjected to inconvenience, discomfort, and the possibility of injury to property and health arising from forestry operations even though conducted in accordance with best management practices and/or in accordance with existing laws and regulations of the Commonwealth and the County. Such forestry operations may generate noise, odors, and dust, and may involve the operation of machinery, including heavy equipment and chain saws. Debris such as tree-tops and limbs may be left on site at the conclusion of a forestry operation. Owners, occupants, and users of land in the FOC district should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a zoning district in a county with a strong rural character and an active forestal sector.*

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## 8 DESIGN REQUIREMENTS

### 8-A DESIGN PRINCIPLES

8-A-1-(c)  
(4/18/00) The arrangement of parcels in the Agricultural Open-Space Conservation and Forestal Open-Space Conservation Zoning Districts should be consistent with the design concepts listed below. These concepts are intended as guidelines to be used to preserve the rural character of these zoning districts. These design concepts are primarily intended to guide the location of parcels less than six acres in area, as the primary use of these parcels is residential, ***but they should also be considered for parcels of any size because of the interrelated nature of parcels and uses.*** Site specific circumstances may not allow application of all concepts, but, to the extent practical, these concepts should be followed when siting proposed parcels:

- 1) Parcels should not be arranged in a row along public roads;
- 2) Parcels should not be located as individual 'islands' in the middle of larger parcels to avoid hindering the use of a field for agricultural purposes;
- 3) Parcels should not be located immediately adjacent to property under permanent open space easement;
- 4) Parcels should not be located so that the most likely house location is on the top of an exposed or prominent ridge or hill;
- 5) Parcels should be located in or adjacent to wooded areas;
- 6) Parcel boundaries should follow natural features, fence lines, or hedgerows; ~~and~~
- 7) Parcels should be clustered,
- 8) ***Parcels should be located to minimize road length and maximize ease of emergency access, particularly in areas of steep slopes, and***
- 9) ***Large residual tracts should contain areas of steeper slopes and other environmentally sensitive features.***

## 8-G UTILITY EASEMENTS

- 8-G-1 Utilities shall be installed or easements for such utilities shall be provided and delineated on the Record Plat in the location and to the width designated by the Commission after receiving recommendations from the agencies responsible for the installation of same. In no case shall an easement be less than 10 feet wide.
- 8-G-2 ~~Wherever practical, utility and cable television transmission lines shall be placed underground.~~
- 8-G-3 Where ~~practical~~ **determined appropriate by the Planning Commission**, utility easements shall be provided on each side of all rear lot lines and along side lot lines where necessary for utility installation and maintenance.
- 8-G-4 Public utility installations should be so located as to permit multiple installations within the easements.
- 8-G-5 Where it is proposed to place public utilities within the rights-of-way shown for public streets on a Record Plat, such utility installations shall be coordinated with the street construction plans and profiles as approved by the Resident Engineer of the Virginia Department of Transportation, and such installation shall be performed in accordance with all requirements of said Department.

## 8-J PRIVATE ACCESS EASEMENTS(11/19/91)

### 8-J-1 General Regulations

- 8-J-1-(a) Except in the Agricultural-Open Space-Conservation (AOC) and Forestal-Open Space-Conservation (FOC) zoning districts, no subdivision shall be approved in which more than three lots are served solely by Private Access Easements.
- 8-J-1-(b) A proposed subdivision which includes a Private Access Easement shall comply with all provisions of this Ordinance.
- 8-J-1-(c) Construction of any Private Access Easement shall comply with all applicable provisions of the Clarke County Soil Erosion and Sedimentation Control Ordinance.
- 8-J-1-(d) No Private Access Easement approved pursuant to the provisions of this Ordinance shall provide thoroughfare to subdivisions of adjoining property, unless such adjoining property is a part of the original tract as it existed on the date of approval of such easement.
- 8-J-1-(\*)** *Before a building permit is issued for a residence, the grading and base shall be completed for that portion of a travel way accessing such a residence. Before a certificate of occupancy is issued for a residence, all construction shall be completed for that portion of a travel way accessing such a residence.*
- 8-J-1-(e)** *As stated in Zoning Ordinance Section 3-A-2-I, all private driveways longer than 150 feet shall comply with all Private Access Easement travel way standards in section 8-J-2-c below.*

### 8-J-2 Design Standards

- 8-J-2-(a) All Private Access Easements shall have a minimum **width of 30 foot** right-of-way, and any additional right of way necessary to include the travel surface and the drainage facilities necessary to carry the 2-year storm event. ***The maximum right of way width shall be 40 feet with 50 feet allowed for short distances when the Planning Commission determines there are unique site-specific circumstances.***
- 8-J-2-(b) No telescoping, stacking, paralleling, or similar design configuration of Private Access Easements shall be permitted.
- 8-J-2-(c) All Private Access Easements serving three or more parcels shall have travel ways with:
- 1) a minimum design speed of 15 miles per hour;
  - 2) a minimum radius of 40 feet, measured along the centerline

- of the travel way;
- 3) the following maximum grades, measured along the centerline of the travel way:
    - a) 4% within 25 feet of a public right of way,
    - b) a vertical curve providing a transition between the above grades in the area between 25 feet and up to 125 feet from a public right of way, and
    - c) 8% for any portion of the travel way more than 125 feet from a public right of way, however up to 12% may be allowed for short distances if specifically approved by the Planning Commission based on site-specific circumstances;
  - #) ***not more than 100 linear feet, measured on the centerline, that crosses pre-development slopes of 25% or greater;***
  - 4) a minimum stopping sight distance of 65 feet (distance is based on a 3.5 foot height of eye and a 0.2 foot height of object);
  - 5) a minimum intersection sight distance of 100 feet (distance is based on a 3.5 foot height of eye and a 4.25 foot height of object);
  - 6) a travel way crown with a maximum of 1/2 inch per foot and a minimum of 1/4 inch per foot;
  - 7) a minimum travel way surface width (graveled or paved) of 14 feet ***and a maximum travel way surface width of 18 feet;***
  - #) ***no obstruction (such as posts, pillars, walls, or fences) erected within 10 feet of the centerline a travel way or within a public right of way.***
  - #) ***a pull-off area(s) not further than 900 feet from a public right of way or other pull-off area to accommodate emergency vehicles;***
  - #) ***a turn around area (either circular or 'T' shaped) at the end of a travel way;***
  - #) ***all travel ways, pull-offs, and turn-arounds constructed to the VDOT vertical construction standards for a gravel road.***
  - 8) drainage facilities to allow a 14-foot wide travel way on the roadway during the 2-year storm event.
  - 9) a minimum travel way side slope of 4:1 ***3:1*** (horizontal: vertical) to the flow line of the ditch or the limit of the easement, ***however a slope of 2:1 may approved by the Planning Commission if there are unique site-specific circumstances;***
  - (6/17/03) 10) storm drain culverts shall meet VDOT standards; and
  - (6/17/03) 11) a minimum 100 foot setback for travel ways and drainage facilities from sinkholes and perennial streams (except for approved stream crossings).
  - (6/17/03)

10-D  
10-D-5

#### **BOUNDARY LINE ADJUSTMENTS**

***See Zoning Ordinance section 3-D-8, which addresses the reallocating of dwelling unit rights with a boundary line adjustment.***

**AMENDMENT 3.**  
**PROPOSED COUNTY CODE TEXT AMENDMENT**

Sections to be added shown in *bold Italics* Section to be deleted shown ~~struck through~~

**CHAPTER 148 - Soil Erosion And Sedimentation Control**

**§ 148-4. Definitions.**

***EROSION AND SEDIMENT CONTROL SKETCH PLAN*** - ***A plat or drawing of the property detailing the proposed areas of disturbance, including but not limited to the driveway, house site, and clearing, and identifying the location and type of proposed erosion and sediment control practices to be installed prior to land disturbance.***

Land disturbing activity shall not include the following activities:

- G. Tilling, planting or harvesting of agricultural, horticultural or forest crops, or livestock feedlot operations, including engineering operations as follows: construction of terrace, terrace outlets, check dams, desilting basins, dikes, ~~ponds~~, ditches, strip-cropping, lister furrowing, contour cultivating, contour furrowing, land drainage and land irrigation.

**§ 148-6. Approval required for proposed land disturbing activity.**

- E. Land disturbing activity adjacent to streams or springs. Any person whose land disturbing activity involves lands that are within 100 feet of a perennial stream, or perennial spring, or 50 feet of an intermittent stream shall have an approved erosion and sediment control plan.
- F. ***Land disturbing activity involving pond construction. Any person whose land disturbing activity involves construction of a pond that exceeds 10,000 square feet shall have an approved erosion and sediment control plan. Ponds specifically related to agricultural activities where the Owner has a Conservation Farm Management Plan approved by the Zoning Administrator and by either the regional Soil and Water Conservation District or the federal Natural Resources Conservation Service and qualifies for use-value taxation for agriculture shall be exempt from this requirement.***
- G. Person engaging in land disturbing activities. A person engaging in land disturbing activities must receive a Land Disturbance Permit from the Program Administrator. A Land Disturbance Activity of more than 10,000 square feet will require an erosion and sediment control plan ***or an Erosion and Sediment Control Sketch Plan (as determined by the Program Administrator)*** before issuance of a Land Disturbance Permit. A Disturbance of 2,500 to 10,000 square feet may require an erosion and sediment control plan ***or an Erosion and Sediment Control Sketch Plan*** before issuance of a Disturbance Permit, as determined by the Program Administrator based on site-specific conditions.
- H. Land Disturbance Permits. All land disturbance permits issued for the construction of a single family residence, which do not require an approved erosion and sedimentation control plan, must also include an ***Erosion and Sediment Control Sketch Plan and an Agreement in Lieu of a Plan*** that is signed by the applicant or his/her agent and is approved by the Program Administrator.

**CLARKE COUNTY  
PLANNING COMMISSION**

**RESOLUTION  
6 May 2005**

**WHEREAS**, Goal 1 of the Clarke County Comprehensive Plan states: “Preserve and protect the natural, rural, and open-space character of unincorporated areas;”

**WHEREAS**, the Clarke County Comprehensive Plan, Objective 2, states: “Preserve the natural beauty and protect the ecology of forested areas to ensure that development in those areas is in conformance with their environmental limitations;”

**WHEREAS**, policies for Objective 2 of the Clarke County Comprehensive Plan state:

- “1. Promote multiple uses of forested land that are non-intensive and compatible such as outdoor recreation, wildlife habitats, watershed protection, and timber harvesting.
2. Ensure that development on forest land is compatible with the environmental features of that land and does not diminish natural and scenic values. Foster respect for environmental limitations and protection of natural features during and after the development process through incentives and regulations.
3. Ensure that timber harvesting is conducted in accordance with an approved forest management plan and such that sedimentation of streams and other environmental impacts are minimized.”;

**WHEREAS**, the Clarke County Comprehensive Plan, Objective 3, states: “Protect natural resources, including soil, water, air, scenery, and fragile ecosystems.”;

**WHEREAS**, policy 2 for Objective 3 of the Clarke County Comprehensive Plan states: “Require that adverse environmental impacts of activities directly or indirectly related to new construction (including removal of vegetation, cutting of trees, altering drainage ways, grading, and filling) are minimized.”;

**WHEREAS**, the Clarke County Comprehensive Plan states: “To achieve these Goals, Objectives, and Policies, implementation of the Clarke County Comprehensive Plan has been divided into seven components pertaining to specific geographic and policy areas. It is through these implementing components that the aspirations of the citizens are achieved and the elements of the Plan are realized.”

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

**WHEREAS**, the last Mountain Land Plan was adopted on 16 August 1994, Clarke County Comprehensive Plan identifies

**WHEREAS**, Code of Virginia section 15.2-2230 states: “At least once every five years the comprehensive plan shall be reviewed by the local planning commission to determine whether it is advisable to amend the plan.”

**WHEREAS**, on 5 December 2003, the Clarke County Planning Commission adopted a resolution initiating an update of the 1994 Mountain Land Plan to ensure the implementation of the goals, objectives, and policies of the 2001 Clarke County Comprehensive Plan in the Mountain Land Area of the County.

**WHEREAS**, on 9 January 2004, the Clarke County Planning Commission Chair appointed the following persons to the Mountain Land Plan Committee to recommend an updated Plan: Robert Wade, Chairman

(Planning Commission Rep), Anne Caldwell (Planning Commission Rep), Pat McKelvy (Planning Commission Rep.), Jon Erickson, David Jelinek, Frank Journey, Betsy Lesley, Sigrid Pollari, Erika Shriner, and Sid Stern.

**WHEREAS**, the Mountain Land Plan Committee held public hearings on the 18<sup>th</sup> and 26<sup>th</sup> of February 2004 and the 8<sup>th</sup> and 16<sup>th</sup> of September 2004, met 25 times in open session from 20 January 2004 to 26 January 2005, and held numerous subcommittee meetings to develop a recommended Mountain Land Plan and amendments to the County Code, the County Subdivision Ordinance, and the County Zoning Ordinance.

**WHEREAS**, the Clarke County Planning Commission has held public hearings on the 15<sup>th</sup> and 16<sup>th</sup> of March, 1<sup>st</sup> of April, 2<sup>nd</sup> and 6<sup>th</sup> of May, 2005 on the proposed Mountain Land Plan and amendments to the County Code, the County Subdivision Ordinance, and the County Zoning Ordinance.

**NOW THEREFORE BE IT RESOLVED**, the Clarke County Planning Commission recommends to the Clarke County Board of Supervisors the updated and revised Mountain Land Plan and does certify a copy of the Plan to the Board of Supervisors.

**Attest:**

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Charles Johnston, Clerk to the Commission

## PUBLIC HEARING NOTICE

The Clarke County Board of Supervisors will hold public hearings at the following time and place:  
6:30 p.m., Tuesday, 21 June, 2005  
at the Clarke County Board of Supervisors Room, 102 N. Church Street, Berryville, VA

on the following matters:

### I. AMENDMENTS TO THE MOUNTAIN LAND PLAN COMPONENT OF THE CLARKE COUNTY COMPREHENSIVE PLAN

The Clarke County Planning Commission recommends to the Board of Supervisors amendments to the Mountain Land Plan component of the Clarke County Comprehensive Plan to update and revise the Mountain Land Plan as to statistics, data, and development trends; to set forth general and long-range policies to guide public land use policy in the Mountain Land area; and to recommend specific ordinances and code amendments to implement those policies.

### II. AMENDMENTS TO THE ZONING ORDINANCE

The Clarke County Planning Commission recommends to the Board of Supervisors amendments to the following sections of the Clarke County Zoning Ordinance:

1. Amendments to the Forestal-Open Space-Conservation (FOC) Zoning District (FOC District only)
  - A. 3-A-2-b-(1)-(a) (Lot Requirements) - To increase the minimum lot area for single family detached dwellings from 2 acres to 3 acres for each dwelling unit right.
  - B. 3-A-2-(b)-(3) (Required Residual Parcel) - To add a section to establish minimum acreage in a residual parcel upon the subdivision of a parcel of 40 acres or more.
  - C. 3-A-2-f (Vegetated Property Buffer and Clearing Limits) - To establish regulations for required vegetated property buffers along property lines along public rights of way, on parcels with average slopes over 7%, and on slippage soils; for limitations on clearing; for limitations on thinning and pruning of trees; for tree protection during construction; for revegetation and tree replacement; and for clearing for agricultural uses.
  - D. 3-A-2-g (Private Driveway Standards) - To add a section to require all private driveways longer than 150 feet on parcels created after the adoption of this amendment to comply with Private Access Easement standards.
2. Amendments to the Agricultural-Open Space-Conservation (AOC) Zoning District (AOC District only)
  - A. 3-A-1-i (Private Driveway Standards) - To add a section to require all private driveways longer than 100 feet on parcels created after the adoption of this amendment to comply with Private Access Easement standards.
3. Amendments to Zoning Ordinance (applicable to all districts)
  - A. 3-C-2-l (Supplementary Regulation - Forestry Uses and Structures) - To require the submission of a Pre-Harvest Plan, which includes Virginia Department of Forestry Best Management Practices, for cutting or logging of trees for profit that exceeds one acre of harvested area, to be reviewed by the Zoning Administrator or FORESTRY CONSULTANT ~~certified arborist~~ for compliance with County ordinances; to establish requirements and minimum standards for the Pre-Harvest Plan; to prohibit a Pre-Harvest Plan within three years of an approved subdivision on the property; to establish buffers for commercial forestry activities; to establish requirements in the buffer areas; and to provide for revegetation for cleared areas in excess of standards for required vegetative buffers.
  - B. 3-C-2 (Supplementary Regulations - Propane Tanks) - To require propane tanks of 500 gallons or larger to be placed underground.
  - C. 3-D-8 (Allocation of Dwelling Unit Rights - Boundary Line Adjustments) - To permit the reallocation of dwelling unit rights between parcels in certain boundary line adjustments; to limit the resulting dwelling unit rights on a parcel; and to limit boundary line adjustments that reallocate a dwelling unit right to one in any two year period. (Current section 3-D-8 to be renumbered.)
  - D. 9-B (Definitions) - To add ordinance definitions of the terms Slippage Soils, Certified Arborist, Consulting Forester, Tree, Tree Canopy, Tree Canopy Coverage, Tree Diameter at Breast Height (DBH), Tree Drip Line, ~~Mature~~ Large Tree, Tree Protective Barrier, Tree Pruning, and Tree Removal.

### III. AMENDMENTS TO THE SUBDIVISION ORDINANCE

The Clarke County Planning Commission recommends to the Board of Supervisors amendments to the following sections of the Clarke County Subdivision Ordinance:

- A. 2-B-50, 52, 53, and 54 (Definitions - Subdivision) - To amend the ordinance definitions of Subdivide, Subdivision, Major Subdivision, and Minor Subdivision as they relate to parcels of 100 acres or more.
- B. 3-A-2 (Administration) - To provide that the Zoning Administrator shall act for the Planning Commission on preliminary and record plats for subdivisions where all parcels exceed 100 acres.
- C. 5-A (Environmental Inventory and Impact Statement) - To amend the requirements of what to be included in an environmental inventory; to require written documentation from certain agencies as to certain environmental characteristics and resources;

and to require the applicant to show how the items identified in the environmental inventory will be impacted and how the impact will be addressed.

- D. 6-A (Consumer Disclosure Statement) - To require the Consumer Disclosure Statement to include, and to prescribe the form of, an Agricultural Operations Notice (for property in AOC District), Emergency Services Notice (for property in FOC District), Forestry Operations Notice (for property in FOC District), and Fertilizers and Pesticides Notice (for property in all zoning districts).
- E. 7-C-3-(p) (Record Plat) - To require that the Emergency Services Notice and Forestry Operations Notice be included on the Record Plat for subdivisions in the FOC zoning district.
- F. 8-A-1-(c) (Design Principles) - To include design principles for subdivision plats in the AOC and FOC zoning districts to address road length, emergency access, steeper slopes, and environmentally sensitive features.
- G. 8-G-2 and 3 (Utility Easements) - To require utility and cable television transmission lines to be placed underground, and to provide for location of utility easements as determined appropriate by the Planning Commission.
- H. 8-J-1 (Private Access Easements - General Regulations) - To add requirements for completion of a portion of a travel way accessing a residence before issuance of a building permit, and for completion of the travel way before issuance of an occupancy permit.
- I. 8-J-2 (Private Access Easements - Design Standards) - To require additional design standards for private access easements dealing with maximum width, slopes of 25% or greater, obstructions, emergency vehicle accommodations, turn around areas, VDOT vertical construction standards, and side slopes.
- J. 10-D-5 (Boundary Line Adjustments) - To include a reference to 3-D-8 of the zoning ordinance regarding reallocating dwelling unit rights in a boundary line adjustment.

#### IV. AMENDMENTS TO THE COUNTY CODE

The Clarke County Planning Commission recommends to the Board of Supervisors amendments to the following sections of Chapter 148 (Soil Erosion and Sedimentation Control) of the Clarke County Code:

- A. 148-4 (Definitions) - To add a code definition of Erosion and Sediment Control Sketch Plan.
- B. 148-6 (Approval Required for Land Disturbing Activities) - To add requirements for land disturbing activities involving pond construction; for the alternative of a Erosion and Sediment Control Sketch Plan in certain circumstances; and for an Erosion and Sediment Control Sketch Plan for certain land disturbance permits for single family residence construction.

Copies of the proposed Mountain Land Plan and the proposed ordinances and code amendments are available at the Clarke County Planning Department, 102 North Church Street, Berryville, Virginia; at the Clarke County Library; and on-line at [www.co.clarke.va.us](http://www.co.clarke.va.us). All persons affected may appear and present their views at the public hearings. Clarke County does not discriminate on the basis of handicapped status in admission to its programs and activities. Accommodations will be made for handicapped persons upon prior request. If the meeting is cancelled because of inclement weather or some other reason, the back-up hearing date is one week after the scheduled hearing date.

Charles Johnston  
Clarke County Planning Administrator

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**ADVERTISE: Clarke Times-Courier-**

**June 2, 2005**  
**June 9, 2005**

**CHARGE: Clarke County Accounts Payable**