

Mount Airy Environs Community Comprehensive Plan

Chapter 8: Natural Resources Goal

Goals

- To protect environmentally sensitive areas and preserve open spaces
- To preserve the scenic views and natural landscape of the area
- To preserve agricultural land around the community to provide distinction between the built environment and the rural landscape
- To foster alternative agricultural uses to help insure sustainability of agriculture within the area

Current Conditions

1 Environmental Resources

A ⇨ Environmental Resources Description

The environmental resources which are required to be protected under the Planning Act are streams, stream buffers, steep slopes, 100-year floodplains, and habitats of threatened and endangered species. The Planning Act of 1992 does not specify the extent or degree of protection to be accorded to each environmental resource. Therefore, the definitions developed for each environmental resource identify this level of protection. To adequately provide consistent protection, the best course of action suggests adoption of uniform definitions among the County and the municipalities. Definitions are included for both the sensitive areas required to be protected under the Planning Act as well as the additional environmental resources the jurisdictions are addressing. They are defined as follows:

Stream means part of a watercourse, either naturally or artificially created, that contains intermittent or perennial base flow of groundwater origin. Ditches that convey surface runoff exclusively from storm events are not included in this definition.

Stream buffers are areas which extend a minimum of 100 feet from the top of each stream bank along both sides of a stream unless modified by the Planning Commission.

Steep slopes are defined as areas with slopes greater than 25 percent.

One hundred-year floodplains are those areas which, after ultimate development of their watershed based on current zoning, would be inundated by water runoff from the 100-year storm.

Habitats of threatened and endangered species are areas which, due to their physical or biological features, provide important elements for the maintenance, expansion, and long-term survival of threatened and endangered species listed in COMAR 08.03.08. This area may include breeding, feeding, resting, migratory, or over wintering areas. Physical or biological features include, but are not limited to, structure and composition of the vegetation; faunal

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community; soils, water chemistry and quality; and geologic, hydrologic, and microclimatic factors.

The County and towns have identified additional environmental resource areas which they feel are worthy of protection under the Environmental Resources Element as well. These resources include wetlands, wellhead buffers, carbonate rock areas, reservoir watersheds, and Use III waters.

Wetlands (defined under COMAR, Title 08.05.04.01) are generally areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Wellhead buffers are areas which extend a minimum of 100 feet around any existing or proposed community water supply well or well site, unless modified by the Planning Commission, as may be designated on the adopted Water and Sewer Master Plan or the County Comprehensive Plan, or identified during the development process.

Carbonate rock areas are areas which are currently known or suspected to be underlain by carbonate rock. This includes the Wakefield Marble and Silver Run Limestone geologic units, as well as unnamed calcareous zones within schist and phyllite areas.

Reservoir watersheds are areas which drain into an existing or proposed water supply reservoir.

Use III waters (defined under COMAR, Title 26.08.02) are protected for the propagation of natural trout populations. These waters are governed by more stringent dissolved oxygen, chlorine, and temperature standards than other waters.

B ⇔ Current Environmental Resources Protection Measures

Carroll County currently provides a great deal of protection to the area's environmental resources. Substantial revisions and additions to existing regulations were not needed to meet the requirements of the 1992 Planning Act, since environmental resources are already being afforded significant protection under existing ordinances. The Planning Commissions have also been given the ability to require further protection measures where appropriate. However, to address any inconsistencies of protection and lack of protection in some areas, some revisions and text amendments may be necessary.

Environmental resources are currently protected during the development process in Carroll County under several different regulations, ordinances, and authorities: Ordinance No. 22-C: Stormwater Management; Ordinance No. 98A: Floodplain; Ordinance No. 100: Grading and Sediment Control; Ordinance No. 106: Forest Conservation; Design Manual for Roads and Storm Drains; Subdivision Regulations; Conditions for Subdivision Approval; Ordinance No. 52B: Carroll County Building Code; the County Zoning Ordinance No. 1E; and the County Landscape Manual. There are many provisions in these authorities which specifically provide protection to environmental resources.

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SUMMARY OF CARROLL COUNTY ENVIRONMENTAL RESOURCES PROTECTION MEASURES											
Ordinance	Protection Measures	Environmental Resources Protected									
		ST	F	WL	SL	H	WH	RW	U3	CR	
Ordinance 22-C: Stormwater Management	Reduced impervious surfaces	✓	✓	✓	✓			✓	✓	✓	
	Plan review for adverse impacts	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Stormwater management practices to control runoff volumes	✓	✓	✓	✓		✓	✓	✓	✓	
	Stormwater management plan consistent with Flood Hazard Management Act of 1976		✓								
	Water quality	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Ordinance 98A: Floodplains	Prohibit development in floodplains	✓	✓	✓	✓	✓		✓	✓		
	New structures prohibited	✓	✓	✓					✓		
	New individual sewage systems not permitted	✓	✓	✓				✓	✓		
	No filling allowed	✓	✓	✓				✓	✓		
	100-foot setback from top of bank	✓	✓	✓	✓	✓		✓	✓		
	Subdivisions permanently dedicate floodplain areas to open space	✓	✓	✓	✓	✓		✓	✓		
Ordinance 100: Grading and Sediment Control	Grading plans	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Erosion and sediment control measures	✓	✓	✓	✓	✓	✓	✓	✓		
	Structures prohibited closer than 20-feet from watercourse	✓	✓	✓				✓	✓		
	No land distributing activity which results in contamination of soil or water	✓	✓	✓		✓	✓	✓	✓	✓	
Ordinance 106: Forest Conservation	Prohibit disturbance of trees, shrubs, and plants in sensitive areas	✓	✓	✓	✓	✓		✓	✓		
	Establish and/or enhance forest buffers	✓	✓	✓	✓	✓		✓	✓		
	Reforest and afforest priorities	✓	✓	✓	✓	✓		✓	✓		
	Buffers for critical habitat					✓					
	Afforest and/or reforest simultaneously with removal of sediment control devices	✓	✓	✓	✓	✓	✓	✓	✓		
	Forest Conservation Fund	✓	✓	✓	✓	✓		✓	✓		

ST= streams and stream buffers	SL= steep slopes	RW= reservoir watersheds
F= floodplains	H= threatened/endangered species habitat	U3= use III waters
WL= wetlands	WH= wellhead buffers	CR= carbonate rock areas

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Ordinance	Protection Measures	Environmental Resources Protected								
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Subdivision Regulations	Easements for natural water courses	✓							✓	
	Reservations and/or acquisitions of land planned for public facilities		✓	✓			✓	✓		
	Preliminary Subdivision Plan showing site characteristics	✓	✓	✓	✓	✓	✓	✓	✓	
	Preliminary Subdivision Plan multiple agency review	✓	✓	✓	✓	✓	✓	✓	✓	
Conditions for Subdivision Approval	Compliance with other ordinances	✓	✓	✓	✓	✓	✓	✓	✓	
	Water Resources Protection Easements	✓	✓	✓	✓			✓	✓	
	Subdivision or site plans in wetland subject to MDE approval			✓						
	Multiple agency review of various plans	✓	✓	✓	✓	✓	✓	✓	✓	✓
Design Manual for Roads and Storm Drains	Ditches on open section roads	✓	✓	✓	✓			✓	✓	
	Outfall protection at stormwater discharge points	✓			✓				✓	
	Identify 100-year floodplain limits if affected by development		✓							
	Require design speeds reduction		✓		✓					
	Open section roads allowed in more places	✓	✓	✓	✓		✓	✓	✓	
	Trees allowed in ROW	✓			✓		✓	✓	✓	
	Functional classification of roads rather than uniformity	✓	✓	✓	✓	✓	✓	✓	✓	
	Less closed storm drain systems	✓	✓	✓	✓		✓	✓	✓	
	Discharge points not directly in streams	✓							✓	
Stilling basins	✓	✓	✓	✓			✓	✓		

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Ordinance	Protection Measures	Environmental Resources Protected								
		ST	F	WL	SL	H	WH	RW	U3	CR
Ordinance 52B: Carroll County Building Code	Prohibit development in floodplains	✓	✓	✓	✓	✓		✓	✓	
	Prohibit activities affecting flood heights		✓							
	Prohibit new sewage systems in floodplains	✓	✓	✓				✓	✓	
Ordinance 77: Carroll County Landscape Manual	Promotes controlled stormwater runoff	✓	✓	✓	✓		✓	✓	✓	
	Helps with sediment control and containment	✓	✓	✓	✓		✓	✓	✓	
	Vegetation reduces overall ambient temperatures	✓	✓	✓		✓		✓	✓	
	Nitrogen-fixing plants put nitrogen back into soil	✓	✓	✓			✓	✓	✓	
Ordinance No. 1E: Zoning	Conservation Zoning District: maximum density of 1 unit per 3 acres	✓		✓	✓			✓	✓	
	Principle permitted uses include many sensitive areas		✓	✓		✓				
	Cluster Subdivision in Residential Zoning District: minimum of 15% open space	✓	✓	✓	✓	✓	✓	✓	✓	
	Up to 50% of open space can be sensitive areas	✓	✓	✓	✓	✓	✓	✓	✓	
	Cluster Subdivision in Conservative Zoning District: 300 feet from 100-year planned reservoir flood pool	✓		✓	✓			✓	✓	
	100-foot from tributary of public water supply	✓	✓	✓	✓			✓	✓	
	Conservation Easements	✓	✓	✓	✓	✓		✓	✓	
	Cluster conform to topography and minimize potential for environmental degradation	✓	✓	✓	✓	✓		✓	✓	
	Planned Unit Development: 25% of gross acreage to be dedicated to open space	✓	✓	✓	✓	✓	✓	✓	✓	
Dwelling units not concentrated in higher densities	✓	✓	✓	✓		✓	✓	✓		

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2 Mineral Resources

Article 66B of the Annotated Code of Maryland calls for the identification of mineral resources within a given study area in order to: identify undeveloped land that should remain in and undeveloped until the land can be used to provide or assist in providing a continuous supply of minerals, identify appropriate post-excavation uses for the land that are consistent with the county's land planning process, and incorporate land use policies and recommendations for

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regulations to balance mineral resource extraction with other land uses and to prevent the preemption of mineral resources extraction by other uses.

When developing the Mineral Resource Element of the Carroll County Master Plan (originally adopted February 27, 1992), mineral resources in the entire county were studied to determine what areas might be viable for future extraction. As a result, a Mineral Resources Overlay Zone was created. Areas currently owned by a mineral extraction company or already in use for that purpose were zoned Mineral Resource Recovery Area (MR). Areas for which the underlying mineral was economically viable for recovery, but not necessarily owned by a quarry company were zoned Viable Resource Areas (VRA). Both of these zones were meant to prohibit any preemptive development.

Although no viable or mineral resources exist within the study area, deposits of Wakefield Marble are located northeast of the study area. These deposits are concentrated within the Little Pipe Creek Watershed area, and tend to be thick and either, gray, white, or pink in color. Because of the irregular color and the presence of joints in much of the marble extracted, it is primarily used for crushed stone.

Even with the active quarrying of Wakefield Marble deposits in the area, numerous parcels that contain these resources remain unusable. With the presence of Agricultural Land Preservation Districts and Easements, high-density development, and areas listed on the National Register of Historic Places, a large portion of this Wakefield Marble resource has been deemed pre-empted from extraction.

3 Agricultural Resources

Although the Mount Airy Environs as a whole remains primarily rural in character, the overall landscape of the farming community has continued to evolve over time. In recent years, the County has seen a gradual decline in dairy operations. Although some dairy operations are becoming larger in size, their overall numbers are decreasing. Today, small grains and vegetables seem to be more marketable for both corporate and independent farmers in the area. The most common crops produced throughout the area are corn, soybeans, wheat, green beans, peas, and barley. Hay production, particularly alfalfa, is also on the rise due to better profit margins and the increasing number of horse farms and horse boarding facilities throughout the County and surrounding areas. Several beef herds also exist within the study area at this time, but they tend to be small in size.

In order to retain the overall character of the region, both the State and the County have taken significant steps toward the permanent preservation of farmland. In the past, Carroll County has had remarkable success in attracting landowners to participate in the Agricultural Land Preservation Program. As of December 2003, a total of 38,904 acres of farmland throughout the County have been permanently preserved through both the Maryland Agricultural Land Preservation Foundation (MALPF) and the Rural Legacy Program. An additional 10,876 acres are currently in MALPF agricultural districts, while 862 acres of farmland have permanent easements held by either the Maryland Environmental Trust or the Carroll County Land Trust. The majority of easements and districts are located in the northern half of the County, more specifically in the northwestern sector. The participation rate within the Mount Airy environs is

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much lower.

As stated previously, the study area consists of approximately 8,469 acres in total, with roughly 2,290 acres zoned Agricultural. However, about 3,229 acres are currently being used for agricultural or resource purposes. Of that amount, approximately 702 acres have some degree of protection associated with them. Within the study area, there are 3 permanent easements totaling 266 acres and 4 districts totaling 437 acres.

It is difficult to assess the worth of agricultural products in a specific area such as the study area due to the fact that statistics for individual farms or blocks of farms are not available through the Agricultural Census. However, it is possible to interpolate the relative worth of agriculture in the study area based on the total worth of agriculture countywide. The 1992 Agriculture Census estimated the total worth of agricultural products sold by farmers in Carroll County to be around \$66,966,000 per year. With 157,505 acres in farmland at that time, this equated to an approximate worth of \$425 per acre for agricultural products. When applied to the acreage currently in agricultural use in the Study Area (3,229 acres), this would estimate the value of all agricultural products there to be approximately \$1,372,325 per year.

Additionally, in 1995, it was estimated that, countywide, every dollar of agricultural sales generated 71.3 cents in additional spending and that approximately \$20 million in revenue is generated by tourism as a result of the County's rural character. Although attaching a dollar amount to the tourism generated within the Study Area is nearly impossible, the additional spending can be applied to the estimated worth of agricultural products for an additional \$978,468, or a total estimated value of \$ 2,350,793 per year for agriculture and its associated expenditures for the total study area.

However, the worth of agricultural products does not reflect some of the public benefit that can be derived from the agricultural industry. Soil and water quality can be profoundly affected by agricultural practices. Farmers throughout Carroll County have made significant contributions to maintaining a high quality of soil and water through participation in state and federal cost-share programs that encourage the implementation of soil and water conservation practices. Up to 87.5 percent of these cost-share expenses can be covered by the state and federal government, with the remaining difference being paid by the farmers themselves. Clearly, protecting land in the watershed will not only protect the economic returns that can be realized from the land, but will also protect the tremendous investment that has already been made in maintaining the viability of farming here for future generations.

Analysis of Community Needs

The loss of remaining productive agricultural land is a concern for many residents within the area. The preservation of rural areas was a leading issue in the community input process for this plan. There are only two Agricultural Preservation Districts, essentially temporary preservation agreements, and no permanent easements within the study area at this time. Few large landowners in the area are interested in current easement programs because of the high land values.

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Low-density residential development has also been prevalent throughout the unincorporated areas of the county. Maximizing lot sizes accounts for more grading and other resulting disturbances, such as runoff, to the natural environment. While clustering is required in the agricultural zone, conventional 2-3 acre lots are still permitted within the Conservation zone.

There is also a concern over the loss of rural atmosphere. Continued loss of the natural landscape and rural setting could eventually affect the character of the community and people's sense of place.

An adequate water supply is one of the most essential resources to a community. Adequate well yields have in the past been problematic and many private well systems within the study area have failed during recent drought conditions. The natural drainage of water due to Parr's Ridge effects many private wells ability to recharge in areas of higher elevation. Much of the rainwater runoff collects in lower elevations thus affecting the overall depth of the water table in much of the area. The soft phyllite rock formations throughout the area are also not conducive to water flow.

Recommended Actions

Based on Town Plan recommendations with additional County recommendations in bold.

- Consider adoption of stream buffer standards based on the Carroll County Water Resource Management Standards and other available resources.
- Facilitate goals of the Forest Conservation Act by identifying priority forestation areas in the town and making available appropriate additional public property for offsite forestation.
- Consider adoption of the Water Resource Management Standards developed by Carroll County or other legislation to better protect groundwater resources.
- Support Carroll County efforts to develop the Gillis Falls Reservoir.
- Follow the guidelines for the State NPDES program and track the sources of local illicit discharge points.
- Require additional well exploration and development for any future expansion of the Town boundaries because the current well system is obligated to existing planned development.
- **Complete land acquisition for and preserve the Gillis Falls Reservoir site as a potential future water supply.**

Given the planned growth of the Mount Airy Environs area and the scarcity of reliable groundwater sources, continued planning for a surface water source remains as a viable option in meeting the area's future water demands. Given the underlying rock formations, private wells in the area are susceptible to failure during drought conditions. Federal and state policy toward the construction of man made reservoirs may not continue in perpetuity, so land acquisition and planning should continue in conjunction

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with well exploration.

- **Work with the Town on adoption of the environmental ordinances and associated manuals adopted in the Spring of 2004 by the Board of County Commissioners and identify enforcement responsibilities.**

The Town is encouraged to consider adoption of the County's water resource management, floodplain management, and landscape manual. County staff should also continue frequent dialog with the Town and offer any future changes or enhancements to development guidelines, water resource management, stormwater management, floodplain management, forest conservation, grading and sediment control, and landscape regulations to ensure the highest possible level of resource protection.

Fiscal Implications

The recommendations contained in this plan may be policy-oriented or action-oriented, and their implications may be the responsibility of the County, other public agencies, private landowners and developers, or a combination of these. This section is designed to identify the potential fiscal impacts to the County of each of the recommendations. There could be "No Fiscal Impact" meaning the County would not incur direct or predictable expenses as a result of implementing the recommendation, an "Undetermined Impact". Meaning there likely would be a cost associated with implementing the recommendations, but that cost can not be determined at this time for various reasons, or a "Fiscal Impact," which likely would be incurred by the County if the recommendation were implemented. For recommendations that have an identified fiscal impact, the cost of implementing that recommendation is estimated to the best degree possible.

- Consider adoption of stream buffer standards based on the Carroll County Water Resource Management Standards and other available resources.

No Fiscal Impact

- Facilitate goals of the Forest Conservation Act by identifying priority forestation areas in the town and making available appropriate additional public property for offsite forestation.

No Fiscal Impact

- Consider adoption of the Water Resource Management Standards developed by Carroll County or other legislation to better protect groundwater resources.

No Fiscal Impact

- Support Carroll County efforts to develop the Gillis Falls Reservoir.

No Fiscal Impact

- Follow the guidelines for the State NPDES program and track the sources of local illicit discharge points.

No Fiscal Impact

- Require additional well exploration and development for any future expansion of the Town boundaries because the current well system is obligated to existing planned development.

No Fiscal Impact

- **Complete land acquisition for and preserve the Gillis Falls Reservoir site as a potential future water supply.**

Fiscal Impact: Approximately 83- acres remain to be acquired for the Gillis Falls Reservoir to meet the minimum acquisition line. At an average land acquisition cost of \$32,750 per acre for Conservation zoned land, this amounts to \$2,718,250 to purchase the remaining land.

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- Work with the Town on adoption of the environmental ordinances and associated manuals adopted in the Spring of 2004 by the Board of County Commissioners and identify enforcement responsibilities.

No Fiscal Impact

Anticipated CIP Projects

Anticipated CIP Projects Related to Natural Resources Mount Airy Environs Community Comprehensive Plan 2005			
Project	Description	Cost Estimate	Anticipated Funding Source
Agriculture Land Preservation	Available funds for the sale of preservation easements to be held by the County and/or State of Maryland	\$10,333,317 (FY 06)	Carroll County Government, Bonds, Ag Transfer Tax, MALPF

Maps

Environmental Resource Areas