Introduction to the Natural Resources and Cultural Assets Component of the Comprehensive Plan

This Comprehensive Plan recognizes that both the Rural Area and the Development Areas are subsets of the overall environment of Albemarle County, upon which the developed environment and its people depend. The maintenance and enhancement of our quality of life, our economic wealth, and the health of our citizens are dependent on our natural environment and the ecological services it provides. Ecological services are ways in which nature meets and fulfills human needs.[1]

The ecological functions provided by the County's environmental resources are critical to our economy, health, safety, and welfare, and quality of life. These functions include:

- purification of air and water
- mitigation of floods and droughts
- detoxification and decomposition of wastes
- generation and renewal of soil fertility
- pollination of crops
- control of pests
- maintenance of biodiversity for human needs
- moderation of climate, including temperature extremes, wind, etc.
- aesthetic beauty and intellectual stimulation
- recreation

This Natural Resources and Cultural Assets Chapter applies to both the Development Areas and the Rural Area. It discusses the concept of sustainability; the physical setting of Albemarle County; open space resources, including natural, scenic and historic resources; and open space planning. Water resources (including surface water, surface drinking water and groundwater) and agricultural and forestry resources are discussed in this chapter under "Natural Resources."

This chapter incorporates as part of the Comprehensive Plan the following freestanding documents: the *Open Space and Critical Resources Plan* adopted in 1992, the *Historic Preservation Plan* adopted in 2000, and the *Stormwater Master Plan* adopted in 2005. ***Amended 02/09/05***

Included as Appendix A is the detailed *Greenways Plan*. The *Mountain Protection Plan*, prepared by the Mountain Protection Committee in 1996, is Appendix B. The *Open Space and Critical Resources Plan*, the *Historic Preservation Plan*, and the *Stormwater Master Plan* are located under separate cover. ***Amended 02/09/05***

1 As defined by Gretchen Daily in her book, *Nature's Services: Societal Dependence on Natural Ecosystems*, 1997, "ecological services" are "the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfill human life."

Sustainability

GOAL: Achieve a sustainable community that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainability is a concept that recognizes that natural systems are essential to providing both economic needs and quality of life. Sustainability gained international attention at the 1992 United Nations' Conference on Environment and Development. In 1993, the Virginia General Assembly passed House Joint Resolution No. 653, encouraging the Governor, state and local officials, and the leaders of educational institutions and civic organizations to work together to prepare a Virginia strategy for sustainable development.

The Thomas Jefferson Sustainability Council was created in 1994 by the regional Thomas Jefferson Planning District Commission. The Council grew out of the 1990-92 Thomas Jefferson Study to Preserve and Assess the Regional Environment (TJSPARE). It is a 34-member council with representatives from the six member localities: Albemarle, Fluvanna, Greene, Louisa and Nelson counties, and the City of Charlottesville. The diverse group of farmers, business people, foresters, environmentalists, developers and elected officials was given the charge to "describe a future where our economic, human, social, and environmental health are assured." The Council addressed the areas of: human population, basic human needs, economic development, transportation, land development, waste, values/ethics, community awareness, interdependence/balance, government, natural environment, and agriculture/forestry.

The Council has developed a mission statement, principles that govern a sustainable community, and the goals, objectives, indicators and benchmarks of a sustainable region. These conclusions stress the importance of taking the long view and the interdependence of all aspects of a community.

> The Mission of the Thomas Jefferson Sustainability Council is to provide citizens throughout the Region with information and encouragement to meet the needs of the present without compromising the ability of future generations to meet their own needs.[†]

The final product of the Council's work is development of 15 Statements of Accord. Through the Accords and the State of the Region Report the Council now seeks to develop a consensus in the localities, within local governments and among the diverse interests of the community to work together for a sustainable future in the Region.

† Thomas Jefferson Sustainability Council, "1998 Sustainability Accords and Vision of Sustainability."

Strategy: Review and support as appropriate the following Sustainability Council's Statements of Accord:

- Encourage and maintain strong ties between the Region's urban and rural areas, fostering healthy economic, environmental, social and political interactions.

- Strive for a size and distribution of human population that will preserve the vital resources of the Region for future generations.

- Retain the natural habitat required to support viable plant and animal communities that make up the Region's biological diversity.

- Ensure that water quality and quantity in the Region are sufficient to support the human population and ecosystems.

- Optimize the use and reuse of developed land. Promote clustering in residential areas and the integration of business, industry, recreation, residential and open space.

- Promote the consideration of appropriate scale in all development and land use decisions.

- Retain farmland and forest land for the future.

- Broaden the use of sustainable forestry practices among loggers and landowners.

- Promote the sale of locally produced farm and forest products in local, national and international markets.

- Develop attractive and economical transportation alternatives to single occupancy vehicle use.

- Promote the conservation and efficient use of energy resources.

- Provide, at all levels, educational opportunities open to every member of the community.

- Ensure that every member of the community is able to obtain employment that provides just compensation, mobility, and fulfillment.

- Increase individual participation in neighborhood and community organizations.

- Encourage greater understanding of sustainability issues as they affect individuals and the Region, using formal and informal education and local media coverage.

Sustainable Design in Buildings and Planning

Amended July 11, 2007 (CPA 07-03, Green Building and Sustainability)

In September 2006, as a response to interest in green building among Board and Planning Commission officials, from citizens, and continued pursuits by staff regarding sustainability, the Board directed Staff to develop strategies to increase sustainability and expand the County's commitment to implementing and supporting the Accords.

Nearly ten years old, the Sustainability Accords increase in relevance with the expanded understanding of the potential local and regional results of global climate change. The Accords are furthered through applying specific green building objectives and strategies to the construction, planning, and renovation of County facilities. Increasingly, green buildings are proving to be ideal learning and productive work environments that generate less airborne carbon associated with climate change. Decreased utility outlays associated with green buildings allow more revenue to be retained each year to further the County's Strategic Plan.

To Implement the Thomas Jefferson Sustainability Council's Statements of Accord, to promote green building and to protect the fiscal and civic health of the community generally, the County establishes the following Objectives and Strategies for green building, site design, innovation, grants and incentives, education, and preparedness.

The Strategies support the County's EnergyStar Courthouse partnership, initiated by the County Executive in 2006, through reducing daily energy use with technology, awareness, and systematic elimination of inefficient facilities and systems.

To achieve a high level of knowledge of green building and environmental issues, the strategies encourage and support citizens and developers toward furthering the Sustainability Accords with educational support and public outreach. An aligned effort seeks to reduce collective demand and dependence on costly conventional energy sources that have negative environmental impacts.

INTERNAL OPERATIONS AND MANAGEMENT

Strategy: Participate in the EnergyStar Courthouse Campaign (ESCC) to reduce local government's consumption of energy. (Begun 12/06 by County Executive)

Strategy: In keeping with (ESCC), create a policy for County buildings and operations to reduce energy consumption by 30% in keeping with EnergyStar guidelines.

Strategy: For new County projects, perform energy modeling during the design-development phase to assess long-term economic benefits of green upgrades.

Strategy: Achieve U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) basic level certification on new public buildings so long as planning and energy modeling determine that the upfront expense does not unreasonably exceed the long-term savings.

Strategy: Develop and adopt criteria (e.g. square footage / project cost) for pursuing LEED certification for new construction.

Strategy: Recognize and respond to the significant role that site characteristics play in sustainable design.

Strategy: Locate and apply for grants related to improving the energy efficiency and environmental aspects of existing or proposed County facilities. Actively pursue EnergyStar tax credits.

Strategy: Investigate and pursue the purchase of energy credits for renewable energy.

ADVANCE SUSTAINABILITY WITHIN THE DEVELOPMENT COMMUNITY

Strategy: Offer, facilitate, and/or support green building training for builders and provide information on programs and organizations which will help facilitate this strategy.

Strategy: Engage Blue Ridge Home Builders Association and other similar local groups in conjunction with local government legislative issues.

Strategy: Make changes to the Zoning Ordinance to ensure it does not create obstacles to green building.

Strategy: Assist developers in locating and applying for EnergyStar tax credits for energy efficient projects.

Strategy: Encourage builders and developers to seek LEED, Earthcraft, EnergyStar or other comparable certifications.

ADVANCE SUSTAINABILITY AMONG RESIDENTS

Strategy: Develop and maintain links and/or pages on the County website that provide information and strategies to help residents reduce their consumption of resources and resulting pollution.

Strategy: Assist residents in locating and applying for EnergyStar tax credits for energy efficient projects.

CONTINUE RESEARCH AND UPDATES TO THE COMPREHENSIVE PLAN

Strategy: Continue investigating aggressive and viable strategies for green building, energy efficiency, and the following:

- Recycling

- Alternative Energy

- Local Food Production

- Protection of Water Resources

- More efficient Wastewater Treatment

- Enhanced Transit, Sidewalks, Bicycle Facilities, Trails and Greenways