

**Albemarle County Natural Heritage Committee**

# **Annual Report**

**FY2007-2008**



**Toward A Sustainable Approach  
To Biological Conservation  
In A Growing Community**

## Executive Summary

This second Annual Report retraces progress achieved during the period Summer 2007 to Summer 2008. It contains summaries of four subcommittees during this period, a proposed Biodiversity Action Plan (as called for in the County Comprehensive Plan), and a request for support to fulfill the Committee's mandate.

Our strategy is reflected in the incorporation of land-use assessment and monitoring, public education, and demonstrated principles of resource sustainability. Our scope of work has expanded from proposals for protection of specific sites to conservation of landscape corridors and healthy, diverse functional ecosystems. However, the NHC is a volunteer advisory committee that lacks the capacity to implement the considerable tasks that we were appointed to accomplish. To make significant progress, more County resources will be needed for biodiversity protection and ecosystem management and should parallel that for growth management.

Not only is additional County support urgently needed for the Committee, Community Development Department, and its rural-area conservation efforts, but more partnerships are required between governmental and non-governmental organizations, and Albemarle's citizens to meet the County's stated policies and goals.

We request 0.25 FTE for the Planning & Community Development staff beginning October 2008, and a 0.50 FTE for a GIS and resource specialist in 2009. We also request \$3000 to support a partnership workshop on landowner management practices, and for an educational brochure on biodiversity.

*Cover image: Beautiful but fragmented Albemarle County landscape in fall.  
Photo © G. Carleton Ray.*

## I. Mission, Goals, and Strategies

In July 2006, the NHC issued its “Strategic Conservation Plan Outline” containing as its overall **Mission: The Albemarle County Natural Heritage Committee (hereafter NHC) will develop a biodiversity action plan and subsequent implementation measures that provide means for sustaining the landscape states and ecological integrity required for important ecological services and healthy populations of native plants and animals.”**

As an initial set of **goals**, the NHC reviewed those from the Biodiversity Working Group report (2004 – Table B; with some modification):

- Preserve large blocks/contiguous habitats of forested lands and aquatic resources, respectively.
- Seek connectivity of terrestrial and aquatic habitats.
- Identify and implement multiple representatives of native Ecologically Valuable Areas (EVAs) and communities among subwatersheds (from Table N in BWG report).
- Develop management plans for selected ecological valuable areas (Table N in BWG report).
- Assist in restoration planning for key County-owned lands with natural- resource potential.
- Develop monitoring plans for key natural resources in the County that are important for carrying out ecosystem services.
- Disseminate information to the public about the value and significance of biodiversity, natural areas, and ecosystem services.

The NHC has adopted the following **strategies** to achieve these goals:

- A. Evaluate current state of natural resources and build databases:
  - spatial data of known important resources
  - current land use/land change imagery-high resolution as a spatial baseline for change
  - information from local resource experts
- B. Prioritize key resources and changes through space and time using current monitoring methods.
- C. Support construction of a “green infrastructure” within the County by connecting large forest blocks, wetlands, stream corridors, parklands, large private parcels; identify mechanisms to achieve protection and/or opportunities for restoration.
- D. Develop implementation/management plans for the initial list of sites (Appendix A, BWG Appendix A); identify mechanisms to achieve protection.
- E. Coordinate land protection, acquisition, restoration concepts with State (Div. Natural Heritage), County (ACE program, Dept. of Parks and Recreation) and non-governmental organizations (The Nature Conservancy, Piedmont Environmental Council, Thomas Jefferson Planning District) as a means of complementing the work of others; identify strengths and weaknesses of existing programs.
- F. Develop public education to inform citizens, policy makers on the values of biodiversity, natural resources, and ecosystem services so our efforts will be complementing and partnering with other groups rather than duplicating their efforts.
  - Develop web site to highlight NHC activities and promote awareness of important environmental education principles and issues with links to important ecological concepts from the 2004 BWG report and other important programs.

- Evaluate environmental education ongoing in County, complementing, not duplicating, other efforts.
- Develop web site on NHC activities, with links to other important programs.
- Disseminate information about activities listed in A-E above by means of local and regional media, workshops, and conferences as appropriate.
- Include important ecological concepts from the 2004 BWG Report.

An overarching outcome of these elements is to develop a long-term conservation plan, the **Biodiversity Action Plan (Appendix A)**. In that regard, we intend to assist Planning staff in revision of the Natural Resources Chapter of the Comprehensive Plan. Also, in cooperation with partners such as TNC, PEC, and the Green Infrastructure Program, we would like to help organize a workshop on biodiversity protection for landowners. The Committee also recognizes the necessity for an adaptive approach that can respond to changing circumstances, and that necessary prerequisites must first be accomplished, not the least of which include landscape-scale mapping and assessment, development of educational tools, and adequate staff and funding support.

## II. Annual Progress and Activities

The NHC has instituted four subcommittees to address the above six strategies: Strategic Planning, Biological Assessment, Rapid Conservation, and Education. Their activities during the 2007-2008 year are summarized below.

**Strategic Planning:** The Strategic Planning Subcommittee is charged with prioritizing the needs and scope of conservation for the County's natural biological and ecological heritage, and for articulating the scientific foundation for a long-term conservation plan. Preliminary work, as described in the NHC's 2006-2007 Report and NHC discussions during the past year, has made clear that a long-term conservation plan can only be achieved by the integrated efforts of the NHC's four subcommittees, and with a strong commitment and support of County staff. Several strategic questions illustrate this statement:

- How may priority areas be identified, implemented, and monitored?
- To what extent are current conservation mechanisms sufficient?
- How may the public better be informed and supportive?
- How may conservation decisions be more efficiently made?
- To what extent must County staff be involved both in work of the NHC and in efforts to protect natural resources more effectively?
- How will County policy shifts influence NHC strategies and recommendations?

### Accomplishments:

The Subcommittee met several times in the past year, and discussed contacting resource scientists and managers at local, state, and national levels to obtain their opinions on how to effectively conserve lands at regional scales. The chairman also contacted legal professionals to determine what "boundaries" and opportunities might exist at the County level in Virginia for innovative land conservation schemes. The committee met with the greenways planner of the Parks & Planning Department to determine ways for NHC to assist in improving newly acquired parklands. Two field trips were conducted.

### Plans for Next Year:

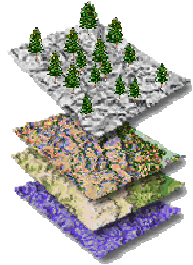
In 2008-2009 the Subcommittee will:

- request a legal study by the University of Virginia's Environmental Law Forum on the complex legal issues involved.
- explore the NHC's working relationship between Albemarle's Parks and Recreation Department in order to improve prospects for conservation areas within existing and proposed County parks.
- conduct a study (possibly an MS student) to evaluate the relative effectiveness of several land protection mechanisms in Virginia (TDRs, easements, federal USDA set-aside programs, etc.) in protecting biodiversity values.

**Biological Assessment:** The overall objectives of this Subcommittee are to: (1) Obtain information on the current status, trends, and threats to key natural resources in the County; (2) work with county planning staff to develop information and tools required to support better land use decisions at a landscape scale; and (3) help develop basic monitoring schemes for selected natural resources that can help reveal trends in resource quantity and quality.

Since the NHC began, this subcommittee has been involved in the following:

- 1.1. Initiate a high-resolution land cover mapping project with local partners.
- 1.2. Develop additional GIS data layers and analytical methods to support planning staff.
- 1.3. Explore biological assessment/monitoring programs that might be used to monitor biological resources in the county.



Accomplishments:

- 1.1. To obtain a recent (2006-07) high-resolution land cover map, a multi-agency project was formulated. Several meetings were held with local partners (Albemarle County, The Nature Conservancy, StreamWatch, Thomas Jefferson Soil & Water Conservation District and the Rivanna River Basin Commission) to discuss and create specifications for the project. Results to date:
  - 1.1.1. Alternative methodologies and preliminary cost estimates were developed by working with several vendors.
  - 1.1.2. Additional funding was obtained from the Rivanna River Basin Commission.
  - 1.1.3. An MOU was put in place regarding management of project funds.
  - 1.1.4. An RFP has been issued and a contractor will be selected by fall 2008.
- 1.2. The following GIS data layers have been developed
  - 1.2.1. Forest resources
    - 1.2.1.1. Forest patches > 250 acres
    - 1.2.1.2. Forest patches by size
    - 1.2.1.3. Forest patches by housing density
  - 1.2.2. Water resources
    - 1.2.2.1. Riparian zones (100' stream buffers + FEMA floodplains)
    - 1.2.2.2. Watershed road and structure density
    - 1.2.2.3. Stream segment quality (based on StreamWatch data)
    - 1.2.2.4. River bluffs
    - 1.2.2.5. Distance to streams
  - 1.2.3. Other
    - 1.2.3.1. Major soil groups (based on NRCS SSURGO data)
    - 1.2.3.2. Mesoscale landforms
    - 1.2.3.3. Slope aspect and steepness
  - 1.2.4. Several maps have been generated to facilitate group discussion and support public education activities
- 1.3. US Forest Service Forest Inventory & Analysis (FIA) database reviewed for potential use in the County; discussions held about creating a forest monitoring network similar to StreamWatch, potentially utilizing master naturalists as volunteers.

### Plans for Next Year:

In 2008-2009 the Subcommittee will:

- meet with the contractor of the high-resolution land cover mapping project to make sure that the goals of the NHC are met in addition to those of other County participants (e.g. The Nature Conservancy, etc.).
- continue work on the “flag layer” to make sure that sensitive areas (steep slopes, bluffs, wetlands) are mapped into a GIS system and that data are mapped at consistent projections; i.e., forest stands will need to be differentiated between hardwoods, mixed types, and evergreen (mostly pine plantations) as these have very different biodiversity values.
- explore opportunities there for a prototype forest or upland monitoring project.

**Rapid Conservation:** The primary purpose of this Subcommittee is to propose sites with important unprotected biological resources as targets for protection, potentially including proposals for conservation plans and mechanisms. The subcommittee also will help in development and public promotion of tools for protection of sites with important biological resources. The Rapid Conservation Subcommittee will propose actions in response to particularly acute, emerging invasive species threats. Multiple cycles of conservation target site proposals to the Board of Supervisors and protection implementation are planned.

In early 2007, the subcommittee developed a proposal that called for recognition of six sites in the county with important biological resources as targets for conservation efforts. Sites included wetlands (Campbell, Pinkerton Slash, Preddy Creek), river bluffs (Key West-North Fork Rivanna, Rivanna below Buck Island) and a large forest block (Southern Mountains). These sites exemplify critical site and landscape features identified in the 2004 Biodiversity Work Group Report (Summary Report, p. 10, Table N). Supervisors were receptive to the conservation site proposal and asked the Committee to work on next steps.

### Accomplishments:

In 2008, the Rapid Conservation subcommittee examined several issues related to the 2007 proposals, including transfer of development right programs, the role of core areas in conservation plans and impacts of invasive exotics. Reduced staff support for the Natural Heritage Committee has hampered progress at times. The subcommittee did make significant progress on developing a list of invasive species that threaten biodiversity and have made plans for a brochure to be prepared, in concert with the Education subcommittee.

### Plans for Next Year:

In 2008-2009 the Subcommittee will:

- follow up on implementation of the 2007 conservation site proposals.
- complete development of a draft letter to landowners (Appendix B).
- develop mechanisms for conservation-area land owners regarding conservation goals, sources of technical and financial assistance, and land management guidelines.
- begin selection of a second set of conservation sites that further accomplishment of the landscape scale conservation plan.
- facilitate development of conservation easements.

- provide assistance to Planning staff as a liaison between the public and the County for enhancement of biodiversity conservation

**Education:** The Education Subcommittee was tasked with determining how natural heritage information and activities should best be communicated with the public, and with developing an initial communications plan. Its focus has been to educate citizens about complex biological concepts and conservation strategies using straightforward language. To this end this subcommittee has continued efforts to develop materials that can increase public knowledge about our county's natural resources

Accomplishments: This Subcommittee has launched a Natural Heritage website that contains a glossary of pertinent biological terms and concepts, and information for empowering people to support the county's goals to protect its natural resources.

The website can be found at URL: <http://www.albemarle.org/naturalheritage>. The Subcommittee created and distributed educational materials at the 2008 Earth Day Eco-Fair. It also met with County staff to discuss how the Education Subcommittee can better support county efforts to protect and restore its natural resources

Plans for Next Year:

In 2008-2009 the Subcommittee will:

- update the Natural Heritage website as new information becomes available.
- compile and assess educational materials already available that support the County's goals for biodiversity protection.
- create at least one new brochure or pamphlet that supports the County's goal for protecting biodiversity

### III. Current Funding Situation in the County

Given the limited support the NHC has received this year, with no support forthcoming in 2008-2009, the NHC has severe constraints on its plans.

#### Actions that the NHC can perform with no funding support from the County:

1. Consult and advise County staff on key functions that affect natural heritage such as ACE, Parks & Recreation management planning and policy, County ordinances such as stream buffers;
2. Continue development and expansion of NHC web site as an educational tool to the public;
3. Consult with other organizations such as TNC, PEC, TJSWCD to assist in identifying areas for protection.

#### Critical functions that the NHC cannot be perform sufficiently due to lack of support:

1. Add information to the developing GIS layers to indicate local and landscape scale features of resource interest;
2. Progress toward land protection even if critical areas/parcels are identified; this demands significant commitment of Planning staff time to serve as a point of contact for willing landowners;
3. Conduct required spatial analyses to reveal critical areal habitat requirements (minimum area concept for certain species);
4. Conduct a study to evaluate relative effectiveness of land-use policies already being applied in Virginia (e.g. Phasing and clustering, Transfer of Development Rights, Purchase of Development Rights, Conservation Easements, Land Trust acquisitions, etc.);
5. Design and implement a monitoring program for selected resources, such as a forest health scheme, expanding the water quality monitoring program of the Rivanna and tributaries, or critical pollinating species;
6. Assess the value of the County's parks and conservation areas key natural resources under different recreational-use schemes (e.g. hiking trails, designated ATV areas, mountain bike trails, exclusion zones);
7. Conducting workshops and publish information to inform citizens about land-use practices in the rural area that enhance biological diversity.

In order for the Natural Heritage Committee to fulfill its responsibilities, a minimum level of support is requested to include:

1. a 0.25 FTE in the Community Development Department to serve as a liaison with the public, the NGOs, and the NHC beginning October 2008; e.g., when key resource areas on private lands are identified for conservation, a staff person needs to be the point of contact for information and to facilitate easements or other mechanisms for conservation;
2. a 0.50 FTE in the same Department to maintain and update the biodiversity database as an important ongoing "resources state of the County";
3. conduct GIS assessments and analyses to determine optimal strategies for protecting landscape integrity and ecosystem services functioning;
4. Funding support (~\$2000) to facilitate a workshop among partnering organizations aimed at landowner management to enhance natural resources and biodiversity;
5. Funding (~\$1000) for publication of a brochure on biodiversity enhancement and/or managing invasive species.

As funding levels permit in the future, the NHC will require substantially more support – equivalent to that dedicated to growth management in the County – to conduct more intensive analyses of landscape conditions and change, design and implement monitoring schemes, research key areas and resource “hotspots” and become involved in more outreach activities.

## IV. Committee Members and Officers

Name	Affiliation
<b>Anne Bedarf</b>	Member, EAT Local Project; Project Manager, Green Blue Institute
<b>Mike Erwin (Chair)</b>	Professor of Environmental Science University of Virginia
<b>Jan Ferrigan (Secretary)</b>	Free-lance writer
<b>Diana Foster</b>	Educator, New Venture Directions, Inc.
<b>John Murphy</b>	Director, StreamWatch
<b>Richard Odom</b>	Consulting Ecologist/GIS Specialist
<b>Tom Olivier</b>	Green Creek Paradigms, LLC; Poplar Branch Farm
<b>G. Carleton Ray (Vice Chair)</b>	Research Professor of Environmental Sciences, University of Virginia
<b>Hank Shugart</b>	Professor of Environmental Sciences, University of Virginia
<b>Phil Stokes</b>	President, Jefferson Chapter, Virginia Native Plant Society
<b>Peter L. Warren</b>	Extension Agent, Agriculture & Natural Resources Virginia Cooperative Extension
<b>Jason Woodfin</b>	Director, Virginia Forest Watch
<b>Scott Clark</b> (Staff Liaison)	Senior Planner, Albemarle County Community Development

## Appendix A. Biodiversity Action Plan

This document describes major features of a proposed Biodiversity Action Plan for the biological resources of Albemarle County. The Natural Heritage Committee (NHC) urges that this plan be accepted by the Board of Supervisors. We also ask this proposal be adopted as part of the Albemarle County comprehensive plan during the 2009 update of the natural resources chapter of the comprehensive plan.

### Comprehensive Plan Basis

Albemarle County committed to protect its biological resources in the 1999 update of the natural resources and cultural assets chapter of its comprehensive plan. A stated goal in this chapter is to recognize the importance of protecting biological diversity in both the Rural Area and Development Areas for the ecological, aesthetic and economic benefits of the community. The chapter calls for development of an action plan for protection of biological resources (pages 84-85).

### Biodiversity Work Group Recommendations

The Albemarle County Biodiversity Work Group (BWG), created in 2002, reviewed the state of County biological resources and made broad recommendations for biodiversity protection. The 2004 Report of this group provides a general foundation for the work of the Natural Heritage Committee. BWG recommendations about the plan proposed here are summarized below.

The Work Group recommends (Report, p. 74): "the County should develop a biodiversity action plan and subsequent implementation measures that provide means for sustaining the landscape states and ecological integrity required for important ecological services and healthy populations of native plants and animals". Recommended strategies for the biodiversity action plan include:

1. Protect and restore large blocks of contiguous terrestrial ecosystems (especially forests) and extensive aquatic ecosystems.
2. Protect and restore the connectivity of terrestrial and aquatic habitats.
3. Maintain and reestablish multiple representative examples of native ecological community types and sites with physical characteristics necessary for those communities to exist.
4. Protect and buffer ecologically valuable areas and known occurrences of rare species and community types.
5. Recognize and convey the importance of biodiversity and ecosystem services. Provide community education and foster awareness of biodiversity and understanding of its importance.
6. Manage protected areas.
7. Identify opportunities and act on them, or facilitate action by others.
8. Anticipate and address threats.

The report identifies possible implementation measures for each of these strategies.

Protection of certain landscape features is essential to accomplishment of biodiversity conservation. The BWG report provides a list of such features (Report, p. 78, Table N, Critical Site and Landscape Feature Types for Comprehensive Plan Recognition):

1. wetlands
2. large areas of unfragmented forests
3. steep bluffs
4. lengthy, connected stream/river ecosystems
5. riparian corridors
6. known breeding and roosting areas
7. migration movement routes
8. rock outcrops and barrens
9. sites with known occurrences of rare/out of range species and intact native communities
10. potential native grassland restoration areas.

The Albemarle County Natural Heritage Committee is charged with developing a Biodiversity Action Plan (BAP) based on findings of the BWG. The following section is intended as a draft of a policy that could be adopted into the Natural Resources and Cultural Assets plan, in order to establish a clear conservation-planning process for the County.

## **Biodiversity Action Plan**

**GOAL: Develop, adopt, and implement a Biodiversity Action Plan in order to sustain the landscape states and ecological integrity required for important ecological services and healthy populations of native plants and animals.**

### **Key Elements in a BAP**

A conservation plan for Albemarle County should include the following elements:

#### **Scientific Basis**

The most successful biodiversity plans are those that are solidly based in scientific understanding. Although much research has been done on many species of vertebrates (especially birds and mammals), there is still much to learn about properly managing or restoring plants, and a host of other animal species and their communities.

**Objective:** Improve the scientific basis of ecological sustainability, restoration, and management of critical communities and species.

#### **Strategies:**

- 1) Undertake research with partner organizations to address specific local management issues regarding biodiversity. Partner academic institutions could include the University of Virginia, Virginia Tech, University of Mary Washington, and Piedmont Virginia Community College. Potential partners among nonacademic NGOs include StreamWatch and Advocates for a Sustainable Albemarle Population.
- 2) Solicit funds from local government, NGOs, and scientific funding organizations to support studies of 1-3 years duration that support research needs of the BAP.

#### **Mapping and Prioritization**

Using criteria for prioritizing key ecological features (e.g., Citizens for Albemarle, 2001), the charge is to map and prioritize key ecological features that include unusual or rare biota or communities, areas of importance for ecosystem services, sensitive areas (wetlands, tributaries, steep terrain), large forested blocks, etc. Mapping of key features (such as the ten feature types identified by the Biodiversity Work Group) is a first step in this process and the NHC has made progress in that area. In addition, current land cover-land use maps are needed to provide current information before further analysis can be conducted. GIS expertise is critical to both map key elements and conduct spatial analyses to evaluate threats and conditions in the region. Change detection using GIS layers is necessary to determine trends in major landscape features over 5-10 year periods.

Good collaborative possibilities exist regarding identification of needed conservation lands. The Virginia Natural Heritage Program Green Infrastructure Project has identified biological core areas throughout the state using their GIS analyses and their records on rare species

occurrences. They also have identified possible locations for movement corridors. Project staff has encouraged use of their analyses by Albemarle County. These data already are in use in the Green Infrastructure project of the Thomas Jefferson Planning District Commission.

**Objective:** Identify and locate critical natural resource features, and assign conservation priorities.

**Strategies:**

- 1) Develop a map of landscape areas in Albemarle County necessary to sustain and conserve biodiversity.
- 2) Seek cooperation in conservation planning with TJPDC Green Infrastructure Project.
- 3) Support research with partners that would assist in developing or refining algorithms for selecting and prioritizing important conservation areas.
- 4) Provide at least 0.5 FTE in the Community Development Department to maintain and update the biodiversity database and to conduct spatial analysis in consultation with NHC.

**Plan Coordination**

The Virginia Natural Heritage Division Green Infrastructure Program, Albemarle County ACE program and the County Department of Parks and Recreation, The Nature Conservancy Central Piedmont program, Thomas Jefferson Soil and Water Conservation District, and Thomas Jefferson Planning District are some of the programs where close interaction with the NHC could benefit many of the goals of both the NHC and the partner organization.

**Objective:** Coordinate and collaborate with other organizations in the County and Region to successfully implement the Biodiversity Action Plan.

**Strategies:**

- 1) Facilitate informal meetings and public forums with selected groups to plan and coordinate efforts of mutual interest.
- 2) Provide technical services and help draft management plans that serve the overall mission of protecting biodiversity.
- 3) Sponsor workshops and public meetings, and help develop any new approaches to the easement or TDR programs.

**Education**

Much of the concern among the environmental organizations and citizenry is based on the lack of information in the news media on the relationships between biodiversity, the ecosystem services that rely on diversity, quality of life, and long-term sustainability. Expansion of the web site, additional public activities beyond Earth Week, sponsoring landowner workshops, and columns in local news media are some of the means to achieving better natural resource protection.

**Objective:** Educate the public on biodiversity and its value to the community, and on effective conservation.

**Strategies:**

- 1) Expand and support the NHC web site.
- 2) Sponsor or participate in outreach activities (workshops, the Rivanna Days event, Downtown Mall exhibits, news media and advertising) and help provide resources, materials and planning.

**Monitoring**

An essential component of a natural resource program is to determine the status and trends of key resources of interest. This may involve simple, volunteer-based efforts, using current programs such as StreamWatch, more intensive contracts with partners, as well as large-scale remote sensing assessments (e.g. Forest Inventory Analysis by the US Forest Service). Nonetheless, an inherent component in any resource plan is a periodic status assessment at intervals ranging from annual to 10-year. There is at present no large-scale program in the County directed at natural resources besides StreamWatch. Setting up any additional monitoring requires careful design and implementation. There are potentially a large number of volunteers who could be recruited to assist, through the Master Naturalist and Master Gardeners programs.

**Objective:** Effectively monitor the status and trends of key resources of interest.

**Strategies:**

- 1) Evaluate the geographic scope and extent of all programs in the County and region that attempt to monitor plant and/or animal populations or communities.
- 2) Convene a workshop at Ivy Creek to brainstorm the possibilities for setting up one or more prototype monitoring programs that can be useful in assessing terrestrial resources.
- 3) Meet with organizers of Master Naturalist and Master Gardener programs to determine the resources available and capabilities of the volunteer network in the County.

**Management Planning of Natural Resources**

One of the challenges facing biodiversity conservation today is that landowners who support biodiversity conservation may have little understanding of how to manage their properties to support conservation goals. Conservation easements aimed at natural resource protection should establish some plan for uses of property that support conservation goals. However, even on eased properties there is no certainty that landowners will understand management needs. A strong need exists for educating County landowners on management of properties to promote biodiversity conservation. The management consists of a wide range of issues: controlling invasive species, using Best Management Practices, establishing stream buffers, and, on publicly owned lands, using effective law enforcement to prevent vandalism and illegal activities.

**Objective:** Support land management techniques that conserve biodiversity.

**Strategies:**

- 1) Work with the local, regional, and state (e.g. VA Cooperative Extension service) to organize forums and workshops aimed at habitat management to enhance biodiversity.
- 2) Initiate a program of certification to reward conscientious landowners for showing initiatives in conserving biodiversity. Such certificates could be presented in a public forum and the recipients announced in local news media.

**Implementation**

Various mechanisms for protection of biological resources exist. Perpetual easements are often favored because they provide lasting protection to resources on a property when the easement incorporates a sound conservation plan. Easements can be combined with purchase and transfer of development rights programs.

**Objective:** Protect identified critical natural resource features

- 1) Recognize the map of lands critical to biodiversity conservation and the need to protect areas identified in County comprehensive plan. Initially, focus on areas identified in the Biodiversity Work Group report, Albemarle Natural Heritage Committee and Virginia Natural Heritage Green Infrastructure Project proposals.
- 2) Expand the conservation easement acquisition program to protect lands recognized as critical to biodiversity conservation.
- 3) Explore local applicability of additional protection mechanisms.
- 4) Provide at least .25 FTE for a planner to work with easement holders and members of the public interested in establishing easements or other protection measures for biological resources in high priority biodiversity conservation areas identified by the NHC.

**Restoration**

A great deal of Albemarle County lands have been degraded since the 1800s due to farming impacts, and most recently, suburban and urban sprawl. Some areas recognized on the map of places important to biodiversity conservation may benefit from restoration activities. Especially on County lands acquired by Parks and Recreation, opportunities to restore are available. The NHC could play an important role in assisting and advising in this capacity in areas where streams have been degraded, in former agricultural areas, former industrial sites, poorly managed forest lands, etc.

**Objective:** Restore degraded habitats.**Strategies:**

- 1) Identify areas needing restoration and help develop management plans for newly acquired conservation areas for the County. Similar work should be conducted with other environmental organizations to help identify methods and areas for restoration.
- 2) Establish web-based and other (printed) materials that provide guidelines on proper restoration techniques for forests, fields, stream corridors and wetlands that would be useful to landowners.

**References:**

Albemarle County Biodiversity Work Group. 2004. *Albemarle County Biodiversity. A Report on its History, Current Conditions and Threats, with Strategies for Future Protection.* Charlottesville, Virginia.

Citizens for Albemarle. 2001. *Principles, Criteria and Guidelines for Ecologically Valuable Areas: Identification and Selection.* Charlottesville, Virginia.

## Appendix B: Draft Letter to Landowners

<date>

<landowner\_name>

<landowner\_address>

Dear <landowner\_name>:

Albemarle County recently recognized six areas of the County that are particularly rich in native biological resources. The recognition of these areas is part of a County effort to preserve our open spaces and the natural resources they contain. We encourage landowners in these six areas to manage their properties in ways that promote biological resource conservation. In addition, we urge landowners to consider placing their properties in conservation easements.

Our real estate records indicate that you are an owner of a parcel (parcel\_identifier) in the <conservation\_area\_name>, one of the areas recognized for its biological resources. We hope you will support the County's efforts to protect natural resources.

An enclosed pamphlet provides information on County biological resource protection goals and sources of information. If you like, visit the web site [www.albemarle.org/naturalheritage](http://www.albemarle.org/naturalheritage) or contact Scott Clark in the Department of Community Development ( [sclark@albemarle.org](mailto:sclark@albemarle.org) or 296-5832, ext. 3325 ). Information on management of parcels to protect biodiversity is available at <conservation\_management\_web\_link >

Sincerely,

< name of BoS chair>

Chairman

Albemarle County Board of Supervisors

Encl.