
Final Report

PRIVATE LANDOWNERS AS STEWARDS OF BIODIVERSITY

**AN ANALYSIS OF THE
ECOLOGICAL VALUE & SOCIOECONOMIC FEASIBILITY IN VIRGINIA**

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National Gap Analysis Program

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EXECUTIVE SUMMARY

Traditionally, state and federal land management agencies have been largely responsible for the protection of critical natural resources. However, in light of the political and financial insecurities these agencies often face, combined with the increasing urban sprawl and highly dissected private land ownership patterns that exist in many parts of the country, it is uncertain how easily they will be able to acquire additional significant tracts of land in the future to protect currently unprotected, at-risk lands identified by the gap analysis process (i.e., the “gaps”). It is therefore becoming important to strengthen this conservation land base and diversify the options available for filling these gaps.

The most recent trend in land management is for private, individual property owners to take an initiative and participate voluntarily in land trust and easement programs. A conservation easement places a legally binding, voluntary development and land use restriction on privately held land, generally in perpetuity. There are many benefits to this system - to the landowner, the conservation profession, and the resource. In this study we examined the conservation easement programs in Virginia and explored two questions:

1. What is the *ecological potential* of easement programs to enhance and build the existing conservation estate, and
2. Is such dependence *socioeconomically feasible*?

The Virginia General Assembly created the primary Virginia land trust organization, the Virginia Outdoors Foundation (VOF), in 1966 with a mandate to “promote the preservation of open space lands and to encourage private gifts of money, securities, land or other property to preserve the natural, scenic, historic, open-space and recreational areas of the Commonwealth”. Other organizations can also hold land easements (the Land Trust Alliance identifies 34 currently operating private and public land trust organizations that operate in Virginia), but the VOF holds approximately 95% of easement lands in Virginia.

We approached this study with a 2-phased approach, reflected by the above objectives. The ecological potential of conservation easements as a strategy for protecting critical natural resources was explored through the use of ArcGIS, and built upon the products of Virginia’s Gap Analysis (VA-GAP). In short, we examined the resources on existing conservation easements and compared them to the list of critical resources identified by VA-GAP. The socioeconomic feasibility was examined in 2 ways: 1) through a literature review of previous surveys and studies that examined landowner motivations for participating in conservation easement programs, and 2) by coordinating and conducting 2 informational public meetings for landowners in counties identified as high priority by the GIS analysis.

Ecological Potential

Critical Biodiversity

Ecological potential was broken down into 2 criteria – critical biodiversity protection and critical land cover type protection. In examining biodiversity, we found that critical

biodiversity lands make up 27% of the state, mostly located in the mountains of western Virginia and along the coast in eastern Virginia. When protected lands (including National Forests, National Parks, etc.) are removed from this figure, critical biodiversity lands comprise only 21% of currently unprotected lands, reflecting the fact that currently protected lands have already targeted these biodiversity resources to a certain degree. In fact, approximately half of the protected lands in Virginia qualify as critical biodiversity features. However, 78% of the critical biodiversity lands in Virginia (21% of the state overall) remain unprotected and potentially at risk.

Looking specifically at conservation easements, easements in western Virginia (where a large concentration of high biodiversity lands occur) also appear to have targeted critical diversity features very well; over 73% of easement lands in that region are high priority. Nearly 30% of easement lands in central Virginia and the Shenandoah Valley are high priority, and most likely these lands are concentrated in parts of those regions that overlap the mountain and/or coastal regions. In the coastal region, approximately 25% of easement lands protect critical biodiversity features, and 20% of easement lands protect lands ranked 10. Overall, 24% of easement lands statewide protect critical biodiversity features.

Critical Land Cover

The second ecological criterion we examined was the Critical Land Cover Criterion where the goal is to have each land cover type sufficiently represented in the protected lands network to ensure habitat for all wildlife, fish, and plant species. Given the distribution of protected lands in Virginia, it is clear that the cover types most often represented include mountain forests and coastal wetlands. Conversely, the most under-represented cover types (the critical cover types) include open habitats (fields and other herbaceous cover types) and non-montane forests (including riparian habitats and forests types that occur in both central and eastern Virginia). Species that depend on these cover types, and that are currently unprotected, include the willow flycatcher (*Empidonax traillii*), river otter (*Lontra canadensis*, state special concern), eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*, federal species of concern, state special concern), Bachman's sparrow (*Aimophila aestivalis*, federal species of concern, state threatened), Eastern river cooter (*Pseudemys concinna concinna*), Pine grosbeak (*Pinicola enucleator*), Delmarva fox squirrel (*Sciurus niger cinereus*, federal endangered, state endangered), and the Southeastern crown snake (*Tantilla coronata*).

Overall, 52% of easement lands protect critical land cover resources – more than twice the proportion of easement lands that protected critical biodiversity resources. Easement lands in central and eastern Virginia and the Shenandoah Valley have targeted critical diversity features very well, with over 50% of easement lands in each region considered to be high priority land cover types. Similarly, just under 50% of northern Virginia easements protect high priority cover types. In fact, the region with the lowest percentage of high priority land cover types on easement lands, western Virginia with only 22% protecting critical land cover types, was the most important region for protecting biodiversity (73% of easement lands in this region protect high priority biodiversity features).

Clearly, one of the greatest ecological values of conservation easements is in their ability to target these critical land cover resources and round out the conservation network. When the two criteria are combined, between 50% and 75% of conservation easements lands protect critical natural resources. Although the total volume of land protected under privately owned conservation easements (1% of the state) is small compared to the amount of land protected through ownership by governmental agencies or private conservation organizations (12% of the state), what they **do** protect is usually a valuable addition to the conservation network whether due to the biodiversity or land cover features that are present.

Socioeconomic Feasibility

When a landowner donates a conservation easement, certain tax benefits become available to him, based on the value of the easement (the difference between the market value of the land before and after easement restrictions). Federal incentives include an income tax deduction (up to 30% of adjusted gross income) from tax code section 170(h), a reduction in the value of the land for estate tax purposes, and an additional estate tax exclusion from tax code section 2031(c). State conservation easement law varies significantly from state to state. In Virginia, a 2000 law allows easement donors to earn a state income tax credit (credited to taxes due – NOT deducted from income) of up to 50 percent of the fair market value of the easement. The income tax credit can be spread over 6 years by the landowner or can be sold to other taxpayers. This Virginia legislation is one of the best state-level incentives for conservation easement donations in the nation, and the ability to spread benefits out over 6 years and/or sell unused tax credits to other taxpayers allows even low income landowners with very little state income tax liability can earn valuable benefits.

Many studies have been performed to analyze landowner motivations for participating in conservation easement programs. In every study we looked at, the majority of landowners take part in easement programs in order to preserve the land rather than reap financial gains. For instance, 54% of Vermont donors stated their primary reason for participation was to preserve the land, with the second most popular primary motives being to pay off debts or expand their operations (21% each). Similarly, 89% of North Carolinian participants stated that protecting land from development was an important motivation for them and 86% stated that the protection of green space was an important motivation. Wildlife habitat protection and recreational motivations were important for 77% and 63% of respondents respectively. Interestingly, income or estate tax advantages fell into fifth place with only 54% of respondents indicating financial concerns as an important motivational factor.

Public Meetings

Two counties in Virginia were selected as the sites of public meetings: Giles County in based on the Biodiversity Criterion and Mecklenburg County based on the Critical Land Cover Criterion. Giles County is located along the Blue Ridge Mountains, with the New River (a nationally designated Wild and Scenic River) running north-south through the center of the county. Giles County land cover is made up of a mix of montane forests,

riparian valleys, and small family farms averaging about 70 acres each. Giles County's population of just over 16,000 is under growing development pressure from the adjacent Montgomery County (population of approximately 80,000), where Virginia Tech and the rapidly growing towns of Blacksburg and Christiansburg are located. Based on our ecological evaluation, 66% of the unprotected lands in Giles County are high priority biodiversity lands and 30% are critical land cover types. In contrast, Mecklenburg County is located in south-central Virginia in the Piedmont physiographic province. It is made up of a mix of deciduous and coniferous forests and relatively large family and corporate farms averaging about 200 acres each. Although the county is slowly losing agricultural land, development pressure is minimal and economic activity is slow. The county is primarily a slow-paced agricultural community, with a total population of just over 30,000. Surrounding counties also have small populations, ranging from 14,000-35,000 people. Based on our ecological evaluation, 88% of the unprotected lands in Mecklenburg County are considered to be critical land cover types (the highest of any county in the state), primarily because very little land in the Piedmont region is currently being protected.

The Giles County meeting was held October 23, 2003. Speakers included representatives from the Conservation Management Institute, the Virginia Outdoors Foundation, and the New River Land Trust. Co-sponsors included the Giles Rural Development Alliance, the Skyline Soil and Water Conservation District, and the Giles County Farm Bureau. Twenty-three individuals participated in the Giles County public meeting, representing as least 16 properties. Two additional Giles County landowners requested that information be mailed to them after the meeting because they were unable to attend. Presentations informed participants of the valuable resources around them and of the costs and benefits of conservation easement options available to them.

Questions from participants during the meeting revolved primarily around requests to clarify the land use restrictions that go into place under conservation easements and what specific property rights are retained by the landowner (i.e., could the land still be subdivided for children?). Also, participants were concerned with the perpetuity of conservation easements and asked presenters to clarify the role of eminent domain when governmental activities encounter such easements. In short, participants wanted to be sure that if they placed land under easement, that it would prevent both private developers and governmental regulations from breaching the easement agreement in the future.

In the exit survey, 71% indicated that they attended the meeting in order to learn how to conserve natural resources. Forty-three percent (43%) indicated they wanted to learn about the tax credits involved and/or about how to prevent future development, and 28.6% attended in order to learn about estate planning options. Nearly all respondents (87.5%) were Very Satisfied with the amount of information provided to them, the quality of the presentations, the extent to which the meeting met their expectations, and the overall quality of the event. Seventy-five percent (75%) of respondents were Very Satisfied with the extent to which their questions were answered. When Very and Somewhat Satisfied responses were combined, each of these statistics jumps to 100%

satisfied. Further, 87.5% of respondents reported that they would recommend a similar meeting to their friends. At the end of the exit survey, respondents were asked to indicate how likely they were to pursue setting up an easement on their property. Two respondents indicated that they would be Very Likely to set up an easement in the near future, representing between 100-200 acres. An additional 4 respondents indicated that they would be Somewhat Likely to do so and that they would seek additional information before making a decision, representing 800-1250+ acres.

The Mecklenburg County meeting was held October 16, 2003. Speakers included representatives from the Conservation Management Institute and the Virginia Outdoors Foundation. Co-sponsors included the Lake County Soil and Water Conservation District, the Mecklenburg County Cooperative Extension Office, and the Mecklenburg County Farm Bureau. Twenty-two individuals participated in the Mecklenburg County public meeting, representing at least 14 properties. Three additional Giles County landowners requested that information be mailed to them after the meeting because they were unable to attend.

Questions from participants during the Mecklenburg meeting reflected a deep concern among participants for being compensated for their property rights. Most questions were asked to clarify the tax benefits and how they work in realistic situations. Questions were also asked about will provisions (i.e., can I leave my land to VOF when I die?), and the possibility for outright purchase of development rights (PDR) rather than donations. Although a few participants were interested in the conservation aspect of conservation easements, most were focused on the potential financial benefits. This is likely a reflection of residents not perceiving a significant development pressure.

When asked about their motivation for attending the public meeting, 50% indicated that they attended in order to learn about the tax benefits associated with conservation easements and 50% attended to learn about how to conserve natural resources. Forty percent (40%) indicated they wanted to learn about the estate planning benefits involved. Finally, only 20% of respondents attended in order to learn about how to prevent future development. Respondents expressed a high level of satisfaction with their experience at the meeting, though not as high as participants in Giles County. Seventy percent (70%) were Very Satisfied with the amount of information provided to them, 56% were Very Satisfied with the overall quality of the event, 44% were Very Satisfied with the extent to which the meeting met their expectations and the extent to which their questions were answered, and 40% were Very Satisfied with the quality of the presentations. However, 80% of respondents reported that they would recommend a similar meeting to their friends. When asked to indicate how likely they were to pursue setting up an easement on their property, one respondent indicated that he/she would be Very Likely to set up an easement in the near future, representing between 200-500 acres. An additional 3 respondents indicated that they would be Somewhat Likely to do so and that they would seek additional information before making a decision, representing 500-1200 acres.

As a first contact with landowners and potential conservation easement donors, these meetings were a success. However, it became apparent that the economic atmosphere,

level of development pressure, and overall lifestyle pace are critical factors to consider when presenting this material to landowners. Participants in Giles County were more receptive to the idea than Mecklenburg County participants. More specifically, Giles County participants had a greater focus on conservation needs and development prevention, with an associated interest in any financial benefits available to them. Conversely, Mecklenburg County participants appeared to be primarily focused on financial gains with a secondary focus on conservation. Either motivation can lead to the donation of conservation easements, but if landowners with financial concerns as a primary motivator do not perceive the financial gains as significant, then conservation easements will be dismissed as an option.

Implications

Ecologically, speaking, the conservation easements in Virginia do protect valuable resources – primarily because they are well suited to land cover types that are not well protected by other means. So, the simple answer to our first question in this study, “Can/Do conservation easements protect ecologically valuable land,” is “Yes.”

The issue, however, becomes more complicated when the question of socioeconomic feasibility is raised. Specifically, conservation easements in their current form are likely to be most feasible in areas that are already feeling significant development pressure, which unfortunately is what the concept of conservation easements is trying to prevent. First, these developing areas are most likely to have landowners interested in the conservation value of easements. Second, these developing areas will also yield the greatest financial (tax) benefits for donors because the fair market value of developable land will be at a premium and the resulting easement value will be maximized, therefore maximizing the potential tax benefits. Financially speaking, the tax benefits are simply not great enough for the majority of landowners to really benefit financially from the donation of a conservation easement. If a conservation motive is already there, the tax benefit can be a nice added incentive, but it probably is rarely the sole motivator, even in areas where development rights are sold at a premium.

In conclusion, conservation easements can be a valuable addition to the conservation network from an ecological value point of view, but the feasibility of such a program depends highly on community values, status, and growth trends. Unfortunately, it appears that lands must already be significantly threatened in order to benefit considerably from conservation easement programs, but at least this program is available to these communities at a time when other conservation options may have already been exhausted. Future expansion of easement programs, easement options, and financial benefits likely will allow this program to be applicable in a greater variety of communities, and we look forward to watching this transformation take place and perhaps being able to help shape the future of conservation easements with studies such as this.

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I. INTRODUCTION & METHODS

Traditionally, state and federal land management agencies have been largely responsible for the protection of critical natural resources, and manage a vast majority of currently protected lands in a relatively stable reserve system. However, in light of the political and financial insecurities these agencies often face, it is uncertain how easily they will be able to acquire additional significant tracts of land in the future to protect currently unprotected, at-risk lands identified by the gap analysis process (i.e., the “gaps”). Further, many parts of the country, including most of the eastern U.S is characterized by a combination of increasing urban sprawl and a highly dissected private land ownership pattern, creating a mosaic of small land parcels. These landscape characteristics make significant land acquisition by federal and state agencies extremely complex and costly, with such a transaction depending on the simultaneous cooperation of multiple landowners.

It is therefore becoming important to strengthen this conservation land base and diversify the options available for filling these gaps. In recent years, private, non-profit conservation organizations (NGOs) such as the Nature Conservancy have increased their efforts to purchase private lands for conservation purposes and complement publicly held lands. Even this option, however, has limited potential due to the typical large-scale nature of the purchases, the time it takes to complete a conservation transaction, and their narrowly focused missions (i.e., endangered species, unique communities).

The most recent trend in land management is for private, individual property owners to take an initiative and participate voluntarily in land trust and easement programs. A conservation easement places a voluntary development and land use restriction on privately held land, generally in perpetuity¹. A land trust or other government or nonprofit organization holds the easement and assures that the terms of the easement are being maintained. Benefits to private landowners of establishing an easement include tax benefits, estate planning assistance, and the ability to play a part in preserving the rural nature of one’s community. Benefits to the land trust and the conservation community as a whole include a valuable addition to the conservation estate, the chance to protect species and communities that may never otherwise be protected (and hence subject to loss), and a reduced investment of state, federal, and non-profit dollars in the management and maintenance of protected lands. Since private property rights and responsibilities are maintained, the management of the land and its resources remain in the hands of a private landowner with a vested interest in its conservation.

Objectives

In this study we examined the conservation easement programs in Virginia and seek to answer two questions:

¹ Gustanski, J.A. 2000. Protecting the land: conservation easements, voluntary actions, and private lands. In: J.A. Gustanski, R.H. Squires, eds. Protecting the Land: Conservation Easements Past, Present, and Future. Island Press, Washington, DC: 9-25.

3. What is the *ecological potential* of easement programs to enhance and build the existing conservation estate (i.e., Can/do conservation easements protect critical lands?), and
4. Is such dependence *socioeconomically feasible* (i.e., Will enough private landowners participate to really make a difference and make this process efficient?)?

This study was performed in the Commonwealth of Virginia, but is likely to reflect features and attitudes that are similar in other parts of the eastern U.S. with similar land use and socioeconomic characteristics, particularly those states in the Mid-Atlantic and northern Southeast.

Conservation Easements in Virginia

The Virginia General Assembly created the primary Virginia land trust organization, the Virginia Outdoors Foundation (VOF), in 1966. VOF's mandate is to "promote the preservation of open space lands and to encourage private gifts of money, securities, land or other property to preserve the natural, scenic, historic, open-space and recreational areas of the Commonwealth"². While any organization, private or public, may hold a conservation easement, Virginia's easement enacting legislation requires land trusts or organizations to have been in existence for at least 5 years before they can hold easements. Younger organizations participate in outreach, and often work as mediators between landowners and VOF in the negotiation of easement agreements. For example, the New River Land Trust's initial goal is to help secure easements for VOF within the New River watershed located in southwest Virginia with the eventual goal of holding easements on its own³. Further, easements held by any organization that ceases to exist for any reason, default to the management of the Virginia Outdoors Foundation to ensure the perpetuity of the easement. Consequently VOF holds the majority of the easements in Virginia, with responsibility for approximately 230,000 acres (on over 1,300 properties) of the 260,000 acres currently under easement in Virginia.

The Land Trust Alliance (LTA) identifies 34 currently operating private and public land trust organizations that operate in Virginia, including the Virginia Outdoors Foundation⁴. These organizations have missions that vary from natural resource preservation to "open space" preservation to historical and cultural resource (e.g., battlefield) preservation.

Methods

We approached this study with a 2-phased plan, reflected by the above objectives. The ecological potential of conservation easements as a strategy for protecting critical natural resources was explored through the use of ArcGIS, and built upon the products of

² <http://www.virginiaoutdoorsfoundation.org>

³ Beth Obenshain, New River Land Trust Executive Director, Personal communication.

⁴ <http://www.lta.org>

Virginia's Gap Analysis (VA-GAP). In short, we examined the resources on existing conservation easements and compared them to the list of critical resources identified by VA-GAP. The socioeconomic feasibility was examined in 2 ways: 1) through a literature review of previous surveys and studies that examined landowner motivations for participating in conservation easement programs, and 2) by coordinating and conducting 2 informational public meetings for landowners in counties identified as high priority by the GIS analysis. These methods are described in more detail below.

Ecological Potential

In looking at the ecological potential of conservation easements to protect critical lands, we defined 2 primary criteria for the identification of these "critical lands". These criteria are referred to in this report as the Biodiversity Criterion and the Critical Land Cover Criterion, and closely resemble the factors examined during Virginia's Gap Analysis Project⁵. The Biodiversity Criterion identifies areas containing the highest level of overall diversity, while the Critical Land Cover Criterion identifies land cover types that are underrepresented in the existing conservation estate. The Critical Land Cover Criterion was designed as a safety net to ensure that species with limited distributions or specific habitat needs (i.e., those species that may or may not occur in biodiversity "hotspots") have suitable habitat represented in the conservation estate. When the protected lands network satisfies each of these criteria, then biodiversity hotspots will be protected along with the complete suite of land cover types. This two-pronged approach ensures that the greatest number of animal and plant species is protected along with sufficient habitat to support them.

Biodiversity Criterion

Biodiversity was measured in VA-GAP as the number of reptile, amphibian, bird, and mammal species predicted to occur at any given point in Virginia. A higher number of predicted species results in a greater predicted biodiversity for the area. We used the overall species diversity database in this project, which included predicted occurrences of all terrestrial species modeled in VA-GAP.

The overall predicted species diversity for the state was obtained from the VA-GAP results for each 30x30m cell in Virginia. We classified these diversity values into 10 quantiles using ArcGIS 8.2. This quantile method defined the classes by dividing the diversity values into 10 equally sized groups so that approximately 10% of the values (representing approximately 10% of the area of Virginia) fell into each of the 10 classes (ArcGIS 8.2 Desktop Help). These classes were then labeled 1 through 10, with 10 representing the most diverse sites in the state.

In order to assess only those lands available for conservation easements (i.e., those lands not already owned and protected by a governmental or non-governmental conservation agency), we removed currently protected lands from the original biodiversity database, and applied the overall ranking scheme to the unprotected diversity values. These classes used the same 1-10 ranking system, with 10 representing the most diverse unprotected

⁵ S.D. Klopfer and J. McClafferty. 2001. A Gap Analysis of Virginia: Final Report. Conservation Management Institute, Virginia Polytechnic Institute and State University. Blacksburg, Virginia.

sites in the state. The resulting database included a rank of 1-10 for each pixel in the raster. We then summarized the unprotected lands in Virginia by county (Appendix A) to determine where Critical Biodiversity sites are concentrated (see Figure 2 on page 9).

Critical Land Cover Criterion

Using the results of Virginia's gap analysis, we identified critical land cover types as those cover types that are currently underrepresented in Virginia's conservation network. We used the land cover map produced by VA-GAP classified under the Anderson Level 4 system⁶. A new stewardship layer was created using data from Virginia Department of Conservation and Recreation (DCR), Division of Natural Heritage and The Virginia Chapter of The Nature Conservancy. This layer contains information for far more conservation properties than did the VA-GAP product and includes National Forests, National Parks, National Wildlife Refuges, Department of Defense lands, State Parks and Preserves, State Forests, State Wildlife Management Areas, Virginia Outdoors Foundation property and easements, The Nature Conservancy preserves and easements, locally managed conservation easements, locally managed conservation lands, and privately owned conservation lands. Shapefiles or coverages for each of these stewardship types were obtained, combined, and converted to grid format.

To establish a baseline, we calculated the land area represented by each cover type as a percentage of Virginia's total land area (i.e., X% of Virginia is classified as Riparian Forest). Next, we established current protection levels by determining the proportion of the protected lands made up by each land cover type (i.e., Y% of protected lands are classified as Riparian Forest). This second figure was calculated based only upon the stewardship layer. The Critical Land Cover Criterion states that, ideally, each land cover type should be protected at least in proportion to its occurrence (i.e., at least X% of protected lands should be classified as Riparian Forest). The difference in these two values (X%-Y%) corresponds to the degree to which a cover type is over- or under-represented on protected lands and allowed us to assign a relative conservation importance to each land cover type. Land cover types with the biggest discrepancy represent critical land cover types.

The land cover classes were then sorted and classified into 10 ranks according to the representation value, with the most under-represented land cover types (those with the largest positive difference in X%-Y%) ranking highest (10) and the most protected land cover ranking lowest (1). Using these rankings, the unprotected lands were summarized by county according to the percentage of each land cover rank present (Appendix B).

Ecological Values of Easements

Finally, existing conservation easements in Virginia were evaluated to determine how well they meet the needs identified by both the Biodiversity Criterion and the Critical Land Cover Criterion described above. Since we knew where the critical biodiversity

⁶ Anderson, J. R., E. E. Hardy, J. T. Roach, and R. E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Service. Professional Paper 964. Washington, D.C. 28pp.

areas and the critical land cover types were located, we were able to compare these locations to the distribution of conservation easements in Virginia.

Similar to the stewardship lands layer created earlier in this process, a separate easement shapefile was created that included only privately held conservation easements under agreement with the Virginia Outdoors Foundation, The Nature Conservancy, or other local land trusts. We then determined the proportion of these easements that protect the critical biodiversity and critical land cover sites identified above. The results of this analysis are described in detail in Chapter 2.

Socioeconomic Feasibility

Once the question of the ecological potential of conservation easements was addressed, the next step was to focus on the socioeconomic feasibility of relying on these private landowners to participate in the easement programs. Our first step in this process was to perform a literature review concentrating on recent surveys of easement programs and the private landowners who donate easements.

The second step of this study was focused on the critical lands in Virginia (as identified in this study) and the communities that exist there. Based on the results of the GIS analysis performed above, we identified 2 Virginia counties with high percentages of critical conservation lands and conducted public meetings in each county. One county was selected based on the Biodiversity Criterion, and the other county was selected based on the Critical Land Cover Criterion.

In selecting a site based on the Biodiversity Criterion, only lands ranked 8 or 9 on the scale of 1 (least diverse) to 10 (most diverse) were considered because the rank of 10 occurred exclusively on the coast and reflected a large number of transient and incidental shorebird species. We felt the ranks of 8 and 9 best reflected the diversity status of resident and seasonal species in Virginia. Ranks 8, 9, and 10 from the Critical Land Cover Criterion analysis were all used in the selection of the second site.

In each of these two areas, we coordinated and conducted a public meeting in order to bring information to local landowners about the conservation easements and other conservation options available to them and the ecological and financial costs and benefits that these options present. We sent flyers (Appendix C) to county landowners announcing the meeting and placed ads for 2 consecutive weeks in the local newspapers to ensure that as many people were reached as possible. We worked with the Virginia Outdoors Foundation, and local land trusts, Soil and Water Conservation Districts, Farm Bureaus, Extension Offices, and other local non-governmental organizations to plan the agenda (Appendix D) and provide a well-supported meeting to the participants. More detailed lists of meeting cosponsors are included in Chapter 3.

Each meeting was kicked off with a presentation from the Conservation Management Institute to familiarize participants with this study and explain our reasons for selecting that location for a public meeting. This presentation included a summary of the critical natural resources in the county and how conservation easements might contribute to the

protection of those resources. The introductory presentation was followed by an introduction of all the meeting's co-sponsors and a chance for each co-sponsor to tell the audience a little bit about what they do (about 5 minutes each). Finally, the Virginia Outdoors Foundation and any other speakers were introduced and the rest of the meeting was dedicated to a discussion about conservation easements and ecological, legal, and financial implications that donation of an easement holds for the landowner. Meeting participants were encouraged to ask questions throughout the evening, both during and after each presentation. Our goal was to provide as informal an atmosphere as possible to encourage participant participation and stimulate discussions between participants and presenters.

Finally, we analyzed participants' motivations and interests with a short exit survey handed out to meeting participants as they entered the meeting. Participants were asked to complete the survey and return it to a designated box before they left the meeting. Survey questions focused on how they learned of the meeting, what motivated them to attend the meeting, how satisfied they were with the meeting, and how likely they were to pursue setting up a conservation easement on their property as a result of the meeting. A copy of these surveys is included in this report as Appendix E.

II. ECOLOGICAL POTENTIAL

The Virginia Gap Analysis Project (VA-GAP) highlighted critical conservation needs in Virginia, and delineated these needs based on two criteria: biodiversity and land cover type. These two criteria are also used in this study to 1) identify critical conservation areas (i.e., where are they?) and 2) evaluate the ecological value of existing conservation easements (i.e., are easements located on critical conservation sites?).

Overall in Virginia, there are approximately 3.2 million acres of land (out of approximately 26 million acres) currently being protected through outright ownership by federal, state, and local governmental agencies or private conservation organizations. Most of these lands are distributed in the mountains of western Virginia and along the coast. An additional 260,000 acres are in privately owned conservation easements, distributed primarily in northern and north-central Virginia. Figure 1 below shows the location of these lands and lends some perspective to the discussions in this Chapter.

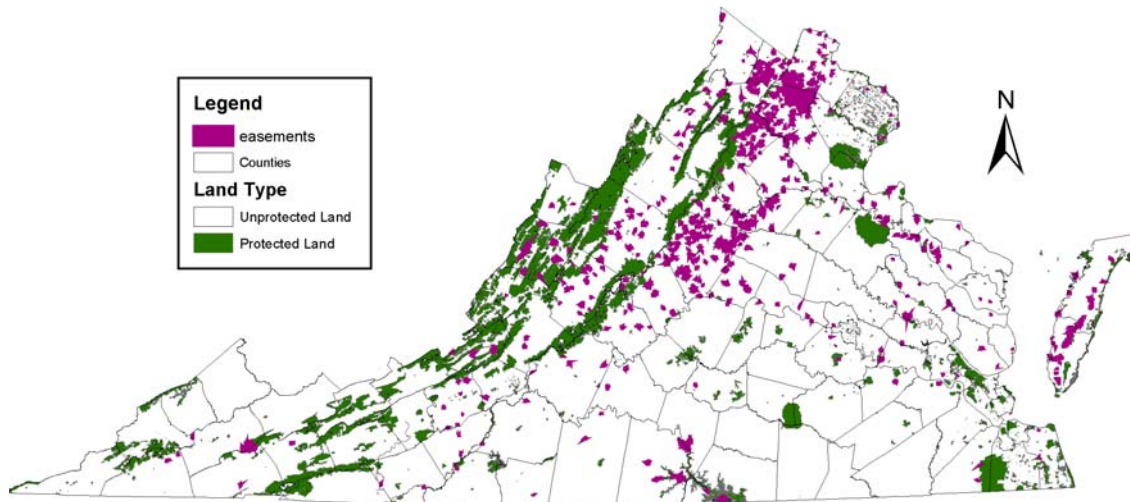


Figure 1. Distribution of protected lands (green, lands owned by federal, state, or local government or private conservation organizations) and privately owned conservation easements (purple) in Virginia. Easements appear larger than they actually are because boundaries have been emphasized to make them more visible.

Biodiversity Criterion

The first criterion we examined in order to identify high priority conservation sites was the Biodiversity Criterion. Table 1 lists the classification system that ArcGIS calculated based on the quantiles method for placing Virginia lands into a ranking system (10 = highest predicted diversity, 1 = lowest predicted diversity). We used the top 3 ranks (8, 9, and 10) to represent the critical biodiversity resources in Virginia.

Once these classes were defined, total areas were calculated for each class both within Virginia as a whole (including all protected lands, second and third column, Table 1) and within just the unprotected lands (third and fourth column, Table 1). Approximately 27% of the state ranked in the top three classes and is considered critical under this criterion.

When protected lands are removed from this figure, critical biodiversity lands comprise only 21% of currently unprotected lands. This reduction in percentage of critical biodiversity lands means that currently protected lands have already targeted these biodiversity resources to a certain degree. In other words, of the 12% of Virginia lands that are currently owned by federal, state, or local government or private conservation organizations, approximately half of those lands (27%-21% = 6% of the state) are ranked 8, 9, or 10 under the Biodiversity Criterion. Looked at in another way, the currently protected lands reduce the proportion of unprotected lands ranked 8, 9, or 10, and this focus thereby increases the proportion of unprotected lands ranked 1 through 7. Whether currently protected lands were selected specifically for their high biodiversity or not, they have effectively targeted these resources.

Table 1. Ranking system for predicted overall diversity values. Diversity values represent the total number of mammal, bird, reptile, and amphibian species predicted to occur at a given point in Virginia (range 34-328).

Diversity Value (species)	Area of Virginia (km ²)	Percent of Virginia	Area of Unprotected Lands (km ²)*	Percent of Unprotected Lands*	Rank
224-328	9,045	8.6%	5,693	6.2%	10
216-223	9,240	8.8%	6,109	6.6%	9
209-215	9,862	9.4%	7,395	8.0%	8
197-208	10,187	9.7%	9,427	10.3%	7
190-196	11,814	11.3%	11,362	12.4%	6
183-189	10,043	9.6%	9,527	10.4%	5
174-182	10,132	9.7%	9,584	10.4%	4
167-173	10,300	9.8%	9,996	10.9%	3
151-166	12,794	12.2%	12,159	13.2%	2
34-150	11,350	10.8%	10,692	11.6%	1
Sum	104,767	99.9%	91,944	100%	-

* *Unprotected Land figures are based on the state of Virginia minus lands owned by federal, state, or local government or private conservation organizations, which constitutes (12,823 km², or approximately 3.2 million acres).*

Another way to look at the effectiveness of currently protected lands is to directly view the distribution of critical biodiversity lands. Figure 2 is a map of Virginia, with biodiversity resources ranked 8, 9, or 10 highlighted. Clearly, the majority of critical biodiversity features occur in the mountain habitats of western Virginia and in the coastal habitats of eastern Virginia. Comparing this map to the one shown in Figure 1, it becomes clear that the majority of currently protected lands do indeed occur in these two regions.

Despite the well placed protected lands in relation to critical biodiversity features, 78% of the critical biodiversity lands in Virginia (21% of the state overall) remain unprotected and potentially at risk. Again, these areas are located primarily in the mountains and along the coasts. Appendix A lists the proportion of each county in Virginia classified into each of the 10 ranks as well as the total proportion of each county considered to be critical biodiversity lands (those ranked 8, 9, or 10).

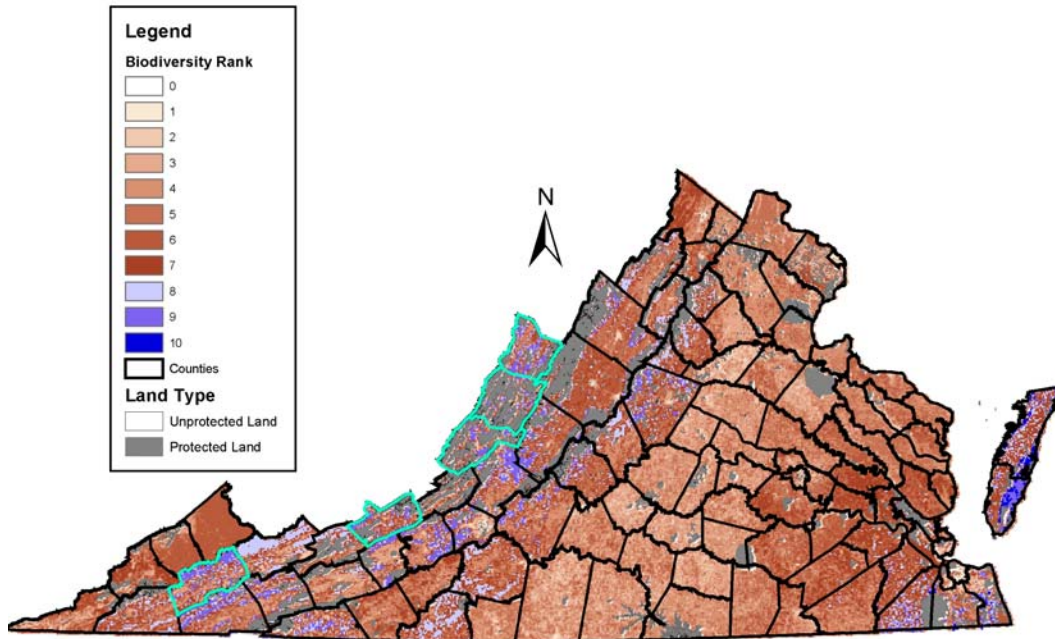


Figure 2. Critical biodiversity features (blue) in Virginia. Currently protected lands are in gray. Highlighted counties are those with the greatest proportion of critical biodiversity lands in Virginia.

Our primary research question was to examine those unprotected lands and determined how well privately owned conservation easements have targeted these remaining critical biodiversity features. Table 2 lists the percentages of conservation easement lands in each region of Virginia (regions defined by the Virginia Outdoors Foundation, Figure 3) falling into each of the 10 diversity ranks and summarizes those considered high priority (ranked 8, 9, or 10).

Table 2. Percent of biodiversity rank by VOF Region currently protected under conservation easement.

VOF Region	Diversity Rank (% of easement land in each class)										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
<i>Western</i> (~5% of easements)	3.9	4.7	9.1	6.4	0.0	0.0	2.9	2.4	46.1	24.6	73.1%
<i>Central</i> (~32% of easements)	9.6	25.0	3.5	7.8	0.0	25.1	0.1	7.4	21.3	0.1	28.8%
<i>Valley</i> (~18% of easements)	8.6	4.4	6.9	30.7	0.0	11.1	10.3	6.4	17.5	4.3	28.2%
<i>Eastern</i> (~12% of easements)	4.3	6.9	15.4	11.5	0.0	28.5	8.4	4.9	0.1	19.9	24.9%
<i>Northern</i> (~33% of easements)	4.5	16.8	8.4	43.6	0.0	12.3	5.4	9.0	0.1	<0.1	9.1%
Statewide	6.8	15.4	7.5	23.9	0.0	17.6	4.8	7.2	12.3	4.5	24.0%

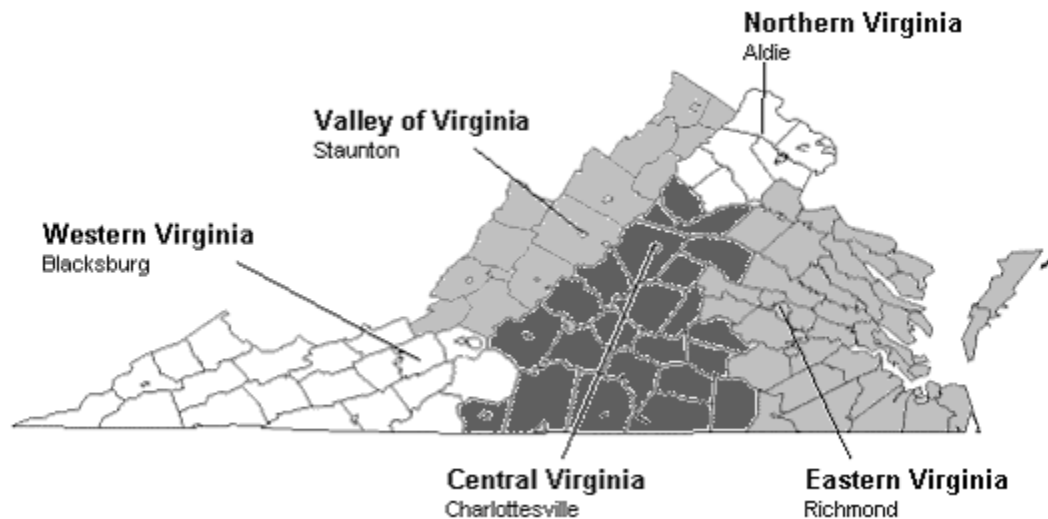


Figure 3. Virginia Outdoor Foundation regions used to evaluate the ecological value of privately owned conservation easements. Labeled cities represent locations for regional VOF offices. This map was adapted from VOF's website (<http://www.virginiaoutdoorsfoundation.org>)

Easement lands in western Virginia (where a large concentration of high biodiversity lands occur) appear to have targeted critical diversity features very well, with over 73% of easement lands in that region considered to be high priority (mostly ranked 9 and 10). Nearly 30% of easement lands in central Virginia and the Shenandoah Valley are high priority, and most likely these lands are concentrated in parts of those regions that overlap the mountain and/or coastal regions. In the coastal region, approximately 25% of easement lands protect critical biodiversity features, and 20% of easement lands protect lands ranked 10. Overall, 24% of easement lands statewide protect critical biodiversity features.

In summary, biodiversity in Virginia is distributed in an aggregated fashion that closely resembles the distribution of protected lands. In addition, conservation easements, where they occur in regions with high biodiversity, also protect valuable biodiversity resources. Although high priority biodiversity resources protected by conservation easements represent less than 1% of the state (or about 1.2% of unprotected critical biodiversity lands), they can provide valuable buffers or corridors to an already well-established conservation network. Further, targeted outreach efforts by local land trust and other easement supporting organizations have just been getting underway, particularly in the mountains. There is a good chance that the amount of high priority biodiversity lands protected by conservation easements could increase dramatically over the next 10 years.

Critical Land Cover Criterion

The second criterion we examined to identify high priority conservation sites was the Critical Land Cover Criterion. This criterion operates under the assumption that a major goal of land conservation is to have each land cover type sufficiently represented in the protected lands network in order to ensure habitat for all wildlife, fish, and plant species. We started out with the premise of a conservation objective to conserve each

undeveloped land cover type in the proportion in which it occurs statewide (i.e., if 10% of the state is wetlands, then 10% of the protected lands should be wetlands). Table 3 lists the classification system that we defined for placing Virginia lands into a ranking system (10 = most under-represented cover type, 1 = most over-represented cover type). We used the top 3 ranks (8, 9, and 10) to represent the critical land cover resources in Virginia.

Given the distribution of protected lands in Virginia, one can probably guess that the most over-represented cover types include mountain forests and coastal wetlands. Indeed, these cover types appear at the bottom of Table 3, with ranks of 1-6. The most under-represented cover types (the critical cover types) include open habitats (fields and other herbaceous cover types) and non-montane forests (including forests types that occur in both central and eastern Virginia).

Table 3. Virginia land cover classes ranked by protection status. Critical status was determined based on the assumption that each land cover type should be represented in the protected lands network to the same degree that it is represented on the landscape (i.e., if 20% of Virginia is a wetland, then at least 20% of protected lands should be wetlands). Critical land cover types (those that are the most under-represented on current protected lands) received higher ranks. Ranks 8, 9, and 10 are shaded in gray here to highlight the most critical land cover types for future conservation.

Map Code	Cover Type	Area of Virginia (km ²)	% of Virginia	Area Protected* (km ²)	% of Protected Lands*	% VA - % Protected	Rank
36	Field	10,758	10.4%	236.9	1.9%	8.5	10
100-106	Piedmont/Coastal Plain Forest Complex	8,450	8.2%	431.9	3.4%	4.8	9
30	Mixed Herbaceous	5,803	5.6%	180.2	1.4%	4.2	9
4	Submontane Yellow Pine	6,792	6.6%	320.7	2.5%	4.1	9
31	Sparse Herbaceous/Row Crop	5,123	5.0%	122.5	1.0%	4.0	8
210-220, 231	Virginia Deciduous Forest Complex	10,524	10.2%	863.6	6.8%	3.4	8
38	Pasture	4,110	4.0%	209.9	1.6%	2.4	7
2	Montane Xeric Conifer	5,333	5.2%	404.4	3.2%	2.0	7
5	Submontane Oak Dominated	1,194	1.2%	39.8	0.3%	0.9	6
50	Non-Vegetated	1,126	1.1%	67.1	0.5%	0.6	6
52	Low Intensity Disturbed/Residential	760.3	0.7%	33.1	0.3%	0.4	6
56	Recent Clearcut	695.2	0.7%	25.4	0.2%	0.5	6
64	Forested Wetland	2,685	2.6%	288.4	2.3%	0.3	6
60	Wetland	323.5	0.3%	36.5	0.3%	0.0**	6
11	Riparian Forest	13.8	.01%	.8	0.01%	0.0**	6
3	Red Spruce/Fraser Fir	3.4	0.0%	3.4	0.0%	0.0**	5
18	Red Cedar Woodlands	42.9	0.0%	10.0	0.1%	-0.1	5
1	Montane Mesic Conifer	443.4	0.4%	66.0	0.5%	-0.1	5
63	Coastal Shrub	98.9	0.1%	25.3	0.2%	-0.1	5
61, 62	Herbaceous Wetland	1,302	1.3%	267.9	2.1%	-0.8	5
40	Open Water	1,485	1.4%	315.7	2.5%	-1.1	4
13	Tupelo/Red Maple Wet	813.2	0.8%	290.5	2.3%	-1.5	4

Forests

Table 3 continued

Map Code	Cover Type	Area of Virginia (km2)	% of Virginia	Area Protected* (km2)	% of Protected Lands*	% VA - % Protected	Rank
9	Mixed Central Hardwoods	1,212	1.2%	426.7	3.3%	-2.1	3
8	Dry Oak Dominated	658.8	0.6%	368.4	2.9%	-2.3	3
112	Montane Mesic Deciduous Forest Complex	6,697	6.47%	1,682	13.2%	-6.7	2
7	Montane Oak Dominated	6,514	6.29%	2,258.8	17.7%	-11.39	1
111, 113	Montane Dry Deciduous Forest Complex	11,941	11.5%	3,459	27.1%	-15.4	1
Totals		94,902.4	91.87%***	12,434.9	97.61%***	-	-

* Protected land figures are based on lands owned by federal, state, or local government or private conservation organizations, which constitutes (12,823 km², or approximately 3.2 million acres)..

** These cover types are protected in perfect proportion to their occurrence. Cover types listed above this point are under-represented in the protected lands network, and cover types listed below this point are over-represented in the protected lands network.

*** Certain cover types, including urban and unknown classifications were disregarded in this analysis, resulting in totals less than 100%

Critical cover types vary by region due to the distribution of protected lands and the cover types targeted by those protected lands. For instance, in the mountains of western Virginia (Figure 4), critical cover types include riparian areas, grasslands, and other non-forested cover types. Nearly all of the currently protected lands in this part of the state are under ownership by the U.S. Forest Service, and forested mountain habitats makes up most of the protected lands. Most of the riparian areas between mountains and the non-forested lands surrounding the mountains remain in private ownership, potentially at risk. Animal species that depend on these critical cover types include the common raven

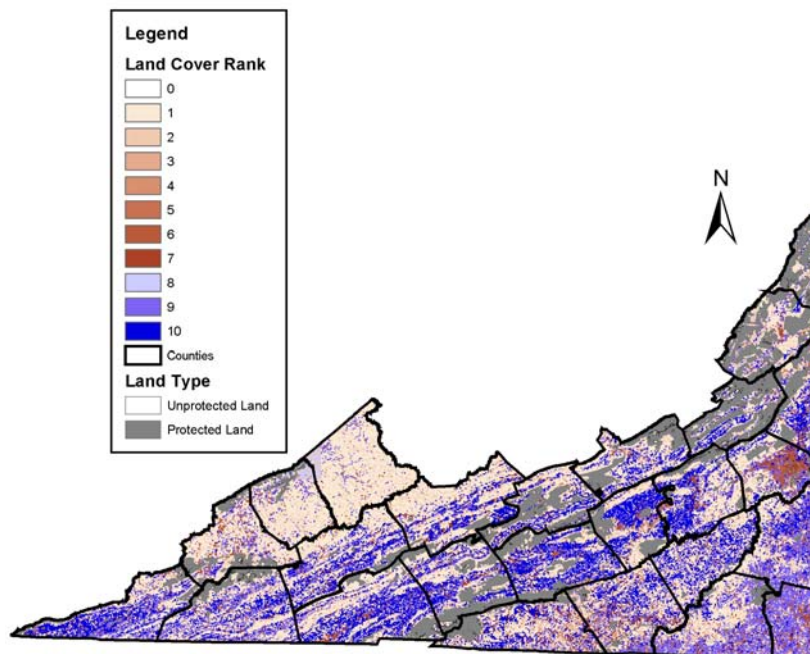


Figure 4. Critical land cover types (blue) in the mountains of western Virginia. Protected lands are shown in gray.

(*Corvus corax*), willow flycatcher (*Empidonax traillii*), river otter (*Lontra canadensis*, state special concern), and eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*, federal species of concern, state special concern).

In the Piedmont Plateau of central Virginia (Figure 5), critical cover types include nearly all undeveloped categories, reflecting the marked near absence of protected lands in this portion of the state (see Figure 1). Thus, critical cover types in the Piedmont include both open habitats (grasslands, etc.) and forested habitats (e.g., Piedmont/Coastal Plain Forest Complex, Submontane Yellow Pine, Virginia Deciduous Forest Complex). Any newly protected lands in this region, whether through outright ownership by a governmental or private conservation organization or through privately owned conservation easements, would be a valuable addition to the conservation network. Animal species that depend on these critical cover types in the Piedmont include the Bachman’s sparrow (*Aimophila aestivalis*, federal species of concern, state threatened), Common yellowthroat (*Geothlypis trichas*), Eastern river cooter (*Pseudemys concinna concinna*), Pine grosbeak (*Pinicola enucleator*), and the Rough-legged hawk (*Buteo lagopus johannis*).

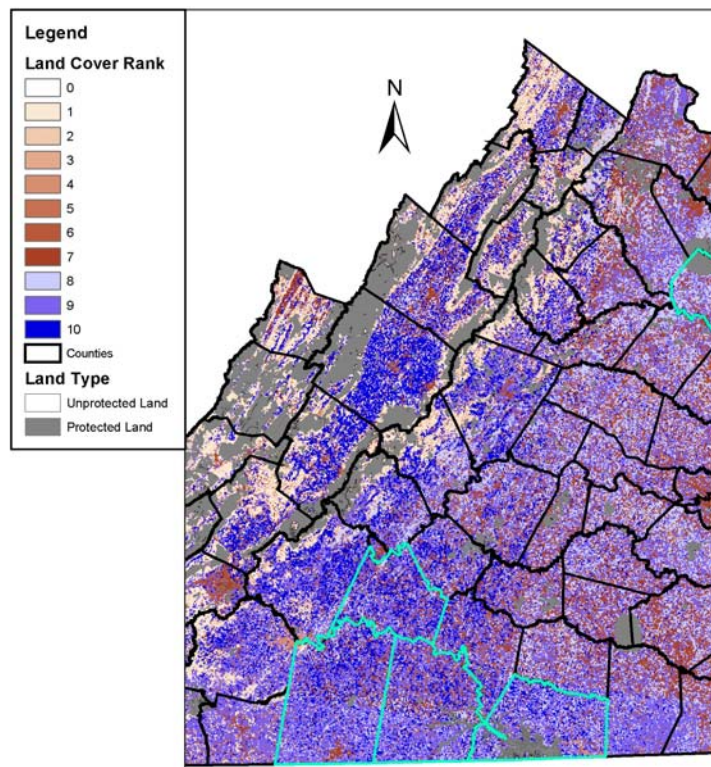


Figure 5. Critical land cover types (blue) in the piedmont region of central Virginia. Protected lands are shown in gray. Highlighted counties are those with the greatest proportion of critical land cover lands in Virginia.

Finally, in the coastal region of Virginia (Figure 6), critical cover types include nearly all upland categories. The majority of currently protected lands along the coast target wetland ecosystems (e.g., the Great Dismal Swamp). Thus, critical cover types along the coast include both upland habitats (grasslands, etc.) and upland forested habitats (e.g.,

Piedmont/Coastal Plain Forest Complex, Submontane Yellow Pine, Virginia Deciduous Forest Complex), similar to the critical cover types in the Piedmont. Animal species that depend on these critical cover types along the coast include the Delmarva fox squirrel (*Sciurus niger cinereus*, federal endangered, state endangered), the Southern short-tailed shrew (*Blarina carolinensis carolinensis*), and the Southeastern crown snake (*Tantilla coronata*).

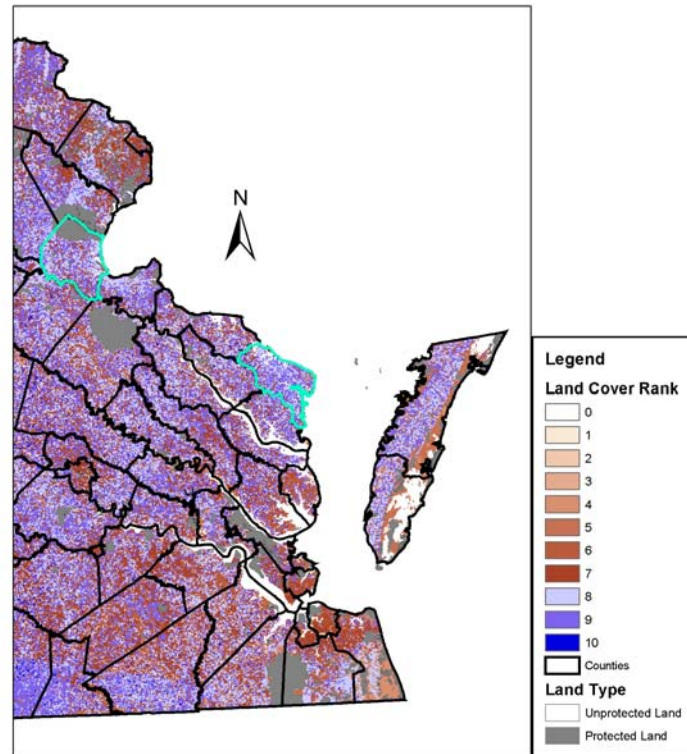


Figure 6. Critical land cover types (blue) in the coastal region of eastern Virginia. Protected lands are shown in gray. Highlighted counties are those with the greatest proportion of critical land cover lands in Virginia.

Once we had critical cover types identified for Virginia, we shifted our focus to the privately owned conservation easements to determine how well they target these high priority lands. Table 4 lists the percentages of conservation easement lands in each region of Virginia (regions defined by the Virginia Outdoors Foundation, see Figure 3) falling into each of the 10 land cover ranks and summarizes those considered high priority (ranked 8, 9, or 10). Overall, 52% of easement lands protect critical land cover resources, more than twice the proportion of easement lands that protected critical biodiversity resources.

Easement lands in central and eastern Virginia and the Shenandoah Valley have targeted critical diversity features very well, with over 50% of easement lands in each region considered to be high priority land cover types. Northern Virginia easements have a similar pattern with just under 50% protected high priority land cover types. In fact, the region with the lowest percentage of high priority land cover types on easement lands, western Virginia with only 22% protecting critical land cover types, was the most

important region for protecting biodiversity (73% of easement lands protect high priority biodiversity features).

Table 4. Percent of each land cover rank by VOF Region currently protected under conservation easement.

VOF Region	Land Cover Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
<i>Central</i> (~32% of easements)	12.2	5.9	2.9	1.7	0.9	8.2	9.4	15.2	22.7	21.0	58.8%
<i>Eastern</i> (~12% of easements)	<0.1	0.0	0.0	2.6	20.1	10.7	11.1	27.5	26.9	1.2	55.6%
<i>Valley</i> (~18% of easements)	22.1	11.2	2.4	2.9	0.8	1.0	8.5	5.1	17.1	29.0	51.2%
<i>Northern</i> (~33% of easements)	5.9	6.4	0.4	0.6	<0.1	1.0	37.3	22.4	18.2	7.9	48.4%
<i>Western</i> (~5% of easements)	61.1	11.8	1.5	0.8	0.2	0.9	2.1	0.2	9.2	12.3	21.7%
Statewide	12.9	6.6	1.6	1.6	2.9	4.5	18.2	16.5	20.0	15.3	51.8%

Clearly, one of the greatest ecological values of conservation easements is in their ability to target these critical land cover resources and round out the conservation network. Ecologically speaking the critical land cover types support a whole host of plant species not protected by other conservation lands (e.g., grasslands, upland non-montane forests) and, in turn, support many animal species that depend on those plant communities and would otherwise be unprotected. Further, it seems that the critical cover types identified in this study are particularly well suited to the type of arrangement that conservation easements offer – private ownership with an outside agreement and personal commitment for long-term conservation. Specifically, these cover types tend to 1) be those most suitable for private uses (e.g., forestry, agriculture), 2) require regular management and maintenance such as burning, mowing, or timbering (which landowners perform anyway as part of their livelihoods), and 3) be the most vulnerable to development and one-way conversion. Working with private landowners in this sense can be beneficial both to the resource and to the government agencies responsible for protecting natural resources because the burden of protection and management can be shared.

When combined with critical biodiversity lands, between 50% and 75% of conservation easements lands protect critical natural resources. Although the total volume of land protected under privately owned conservation easements (1% of the state) is small compared to the amount of land protected through ownership by governmental agencies or private conservation organizations (12% of the state), what they **do** protect is usually a valuable addition to the conservation network whether due to the biodiversity or land cover features that are present.

III. SOCIOECONOMIC FEASIBILITY

Literature Review

Tax Benefits of Easement Donations

Before discussing the various motivations behind conservation easement donations, a brief discussion is warranted regarding the financial incentives involved. Based on discussions with Virginia Outdoors Foundation personnel (the largest holder of conservation easement in Virginia), when a landowner donates a conservation easement, he/she is entering a legally binding agreement, usually “in perpetuity,” with a land trust organization. Under this agreement, certain activities (e.g., commercial/industrial development, residential development at a density of over 1-2 houses/100 acres, strip mining, etc.) can never take place on their land. The landowner retains legal ownership of the property, and may still continue current agricultural activities (including crop farming, livestock grazing, forestry, recreation, etc.), pass the land on to future generations, or sell the land to a new owner under the understanding that the easement restrictions still apply.

By giving up these rights under the conservation easement, the market value of the land decreases, usually by about 20-40%⁷. The difference in fair market value of the land before and after the easement donation is considered to be the value of the easement, and is the baseline for determining the tax benefits due to the landowner.

There are both federal and state tax benefits available to Virginia landowners placing their land under easement. Federal incentives include an income tax deduction (up to 30% of adjusted gross income) from tax code section 170(h), a reduction in the value of the land for estate tax purposes, and an additional estate tax exclusion from tax code section 2031(c)⁸. State conservation easement law varies significantly from state to state. In Virginia, a law passed in 2000 allows easement donors to earn a state income tax credit (credited to taxes due – NOT deducted from income) of up to 50 percent of the fair market value of the easement. In order to allow landowners to gain the most benefits possible from this legislation, the income tax credit can be spread over 6 years by the landowner or can be sold to other taxpayers⁹. Traditionally, these tax benefits have only been useful for people with large incomes and large tax income tax liabilities. However, Virginia’s new state legislation is one of the best state-level incentives for conservation easement donations in the nation, and the ability to spread benefits out over 6 years and/or sell unused tax credits to other taxpayers allows even low income landowners with very little state income tax liability can earn valuable benefits.

Finally, depending on the property tax laws of the county where the easement is located, donation of a conservation easement can also reduce the annual property tax due from the

⁷ Tamara Vance, VOF, personal communication

⁸ Small, J.S. 2000. An obscure tax code provision takes private land protection into the twenty-first century. In: J.A. Gustanski, R.H. Squires, eds. *Protection the Land: conservation Easements Past, Present, and Future*. Island Press, Washington D.C.: 55-68.

⁹ <http://www.newriverlandtrust.org>

landowner¹⁰. Specifically, in counties where property taxes are based on highest and best use principals, the property tax must be re-calculated to reflect the actual land use rather than the potential for development. In these cases, the landowner would see a significant decrease in his/her property taxes each year. However, in counties that assess a land use tax (which is already based on current land use rather than on potential use), there would be no difference in property taxes after donation of an easement.

Landowner Motivations

Several studies across the country have revealed unique demographics and landowner motivations regarding the participation in conservation easement programs. In all studies reviewed here, survey data was analyzed to gauge the type of landowner that most often takes part in these programs and the reasons behind their participation.

Across the country, it was found that the majority of landowners take part in easement programs in order to preserve the land rather than reap financial gains. In Vermont, 54% of landowners donating easements stated their primary reason for participation was to preserve the land, with the second most popular primary motives being to pay off debts or expand their operations (21% each)¹¹. Similarly, over half of respondents in a Pennsylvania survey reported agricultural preservation as their reason for participation, while over one quarter stated a combination of both open space preservation and financial motivations¹². Colorado ranchers stated several non-financial motivations including the desire to assure continued ranching on the land (44% of respondents), the desire to keep the ranch in the family (36%), the desire to benefit from estate planning programs (20%), and the desire to curb development pressure (20%). Only 11% of Colorado ranchers stated tax benefits as a significant motivational factor¹³. In a 1999 study, 89% of North Carolinian easement program participants stated that protecting land from development was an important motivation for them and 86% stated that the protection of green space was an important motivation. Wildlife habitat protection and recreational motivations were important for 77% and 63% of respondents respectively. Interestingly, income or estate tax advantages fell into fifth place with only 54% of respondents indicating financial concerns as an important motivational factor¹⁴.

Demographic analyses performed on these surveys yield an interesting perspective and invites speculation as to what really motivated landowners. In each study, easements program participants were generally older individuals with advanced degrees and higher incomes. For example, the North Carolina study mentioned above showed that 47% of respondents were 65 and over, 53% had completed some post-graduate work, and 58%

¹⁰ Sherry Buttrick, VOF, personal communication

¹¹ Market Street Research, Inc., 1999. The impact of Vermont's farmland conservation program on program participants, executive summary. Vermont Land Trust.

¹² Maynard, L.J., T.W. Kelsey, S.M. Lembeck, J.C. Becker, 1998. Early experience with Pennsylvania's agricultural conservation easement program. *Journal of Soil and Water Conservation*.

¹³ Pugliese, M, 2002. Colorado ranching management agreement: a proposal to promote biodiversity on private land. Masters project, Duke University.

¹⁴ Gaddis, D.A., 1999. An analysis of conservation easements on private nonindustrial forest lands in North Carolina. Doctoral project, North Carolina State University. URL <http://www.cals.ncsu.edu/wq/LandPreservationNotebook/PDFDocuments/quaddis.pdf>.

had a total household income of over \$100,000/year. It can be deduced from these findings that older individuals are more settled in their future estate planning than younger individuals and can utilize the benefits of estate tax exclusion and reduction in the value of their land more readily for these purposes. Older landowners may also recognize their mortality more readily and feel the need to preserve a place of special interest even after they are gone. Persons with higher incomes inevitably benefit more from income tax deductions and thus may be more likely to take part in easement programs for that reason. Finally, highly educated individuals may feel more comfortable with the easement process and having a greater understanding of the complex laws and tax codes involved.

It is important to point out here that concerns often arise in the discussion of survey data, particularly when asking about individuals about their personal motivations from a personal gain versus public good viewpoint, as each of these studies were required to do. There are concerns that individuals responding to the survey will choose the more altruistic answers for motivational questions, disregarding personal gain in their explanation as a means to feel less selfish and more beneficial to the society as a whole. Observed behavior is the least biased form of data collection but analyzing and categorizing such data can be a difficult and subjective process. Getting to the root of motivations in any method can be a daunting task that may take several analytical approaches. Our final step in this project, coordinating and conducting public meetings may be one way of approaching this problem from a non-survey perspective, but again, behavioral observation is difficult to interpret.

Results of Public Meetings

Two counties in Virginia were selected as the sites of public meetings (Figure 7). Giles County in the New River Valley of southwest Virginia was selected based on the Biodiversity Criterion, and Mecklenburg County in south-central Piedmont region of Virginia was selected based on the Critical Land Cover Criterion. Each county is described in more detail below along with a description of the co-sponsors and participants for each public meeting.

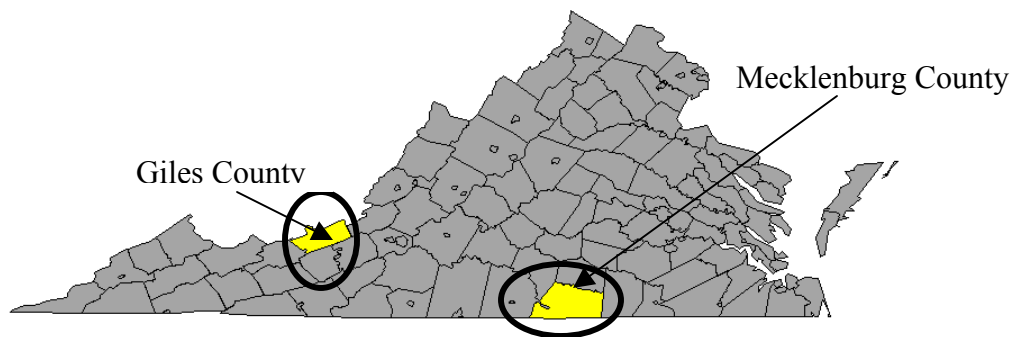


Figure 7. Location of Giles and Mecklenburg Counties, where public meetings were coordinated and conducted.

Giles County

Giles County, Virginia (Figure 8) is located along the Blue Ridge Mountains and within the New River watershed of southwest Virginia. The New River, a nationally designated Wild and Scenic River, runs north-south through the center of the county. Giles County land cover is made up of a mix of montane forests, riparian valleys, and small family farms. The average farm size in Giles County is roughly 70 acres¹⁵. The US Forest Service currently protects portions of Giles County as part of the Jefferson National Forest. As of September 2003, the Virginia Outdoors Foundation holds no easements within Giles County. Giles County, with a population of just over 16,000, is adjacent to Montgomery County (population of approximately 80,000), where Virginia Tech and the rapidly growing towns of Blacksburg and Christiansburg are located. Many landowners and governmental agencies in Giles County are apprehensive regarding the growing development pressure due to the neighboring communities and the growing population of commuters residing in Giles County.

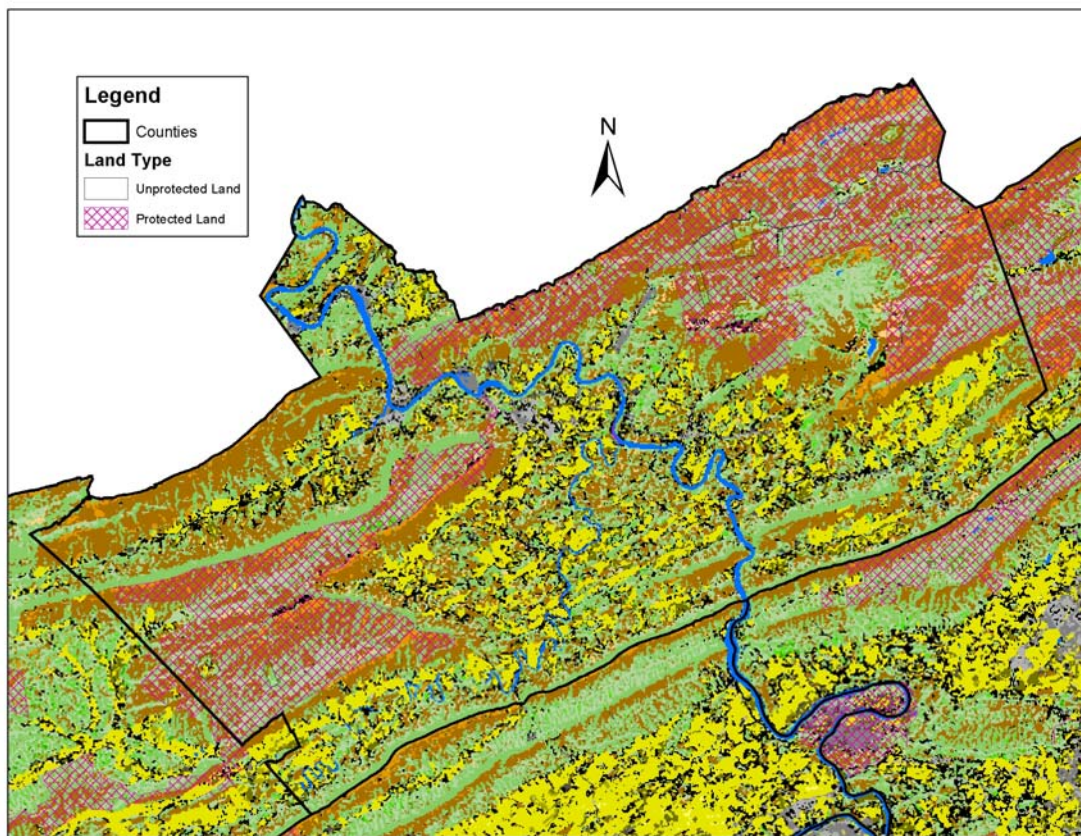


Figure 8. Giles County land cover map. Land cover types are a mix of deciduous (green, brown) forests interspersed heavily with agricultural lands (yellow). The New River, a nationally designated Wild and Scenic River, runs north-south through the center of the county. Protected lands (crosshatched) managed by the US Forest Service occur primarily along mountain ridges in the northeastern and west central portions of the county.

¹⁵ Chris Barbour, Skyline Soil and Water Conservation District, personal communication.

Based on our ecological evaluation in Chapter 2, 66% of the unprotected lands in Giles County are considered to be high priority biodiversity lands (ranked 8-10) and 30% are considered to be critical land cover types. In addition, a fairly new land trust organization, the New River Land Trust, has been working diligently in this region to talk to landowners and inform them about conservation easements.

Due to the small average farm size, we sent flyers (See Appendix C) about the public meeting to all landowners in the county who held parcels equal to or greater than 50 acres. Names and addresses were obtained from the county's online GIS system¹⁶ and a mailing list of 619 addresses was created. Flyers were mailed out 3 weeks before the scheduled meeting. In addition, a 2"x6" advertisement, similar in layout to the mailed flyer, was run in the local newspaper, the *Virginian Leader*, for 2 weeks prior to the meeting to ensure that all interested parties were invited to attend. The meeting took place October 23, 2003 from 6:30-8:30 pm.

Speakers included representatives from the Conservation Management Institute, the Virginia Outdoors Foundation, and the New River Land Trust. Other meeting co-sponsors were given the opportunity to introduce themselves during the meeting and tell participants about their programs. Co-sponsors included the Giles Rural Development Alliance, the Skyline Soil and Water Conservation District, and the Giles County Farm Bureau (see agenda in Appendix D).

Twenty-three individuals participated in the Giles County public meeting, representing at least 16 properties. Two additional Giles County landowners requested that information be mailed to them after the meeting because they were unable to attend.

Questions from participants during the meeting revolved primarily around requests to clarify the land use restrictions that go into place under conservation easements and what specific property rights are retained by the landowner (i.e., could the land still be subdivided for children?). Also, participants were concerned with the perpetuity of conservation easements and asked presenters to clarify the role of eminent domain when governmental activities encounter such easements. In short, participants wanted to be sure that if they placed land under easement, that it would prevent both private developers and governmental regulations from breaching the easement agreement in the future.

Eight exit surveys were returned as a result of the Giles County public meeting. Of these, 7 indicated that the respondents learned of the meeting via the flyer they received in the mail, with the one remaining respondent (owning less than 50 acres) learning of the meeting by word of mouth. Three of the respondents reported that they owned 200-500 acres in Giles County, 2 reported owning 50-100 acres, and 1 respondent each reported owning less than 50 acres, 100-200 acres, and more than 500 acres. When asked about their motivation for attending the public meeting, 71% indicated that they attended in order to learn how to conserve natural resources. Forty-three percent (43%) indicated

¹⁶ <http://arcims2.webgis.net/giles/>

they wanted to learn about the tax credits involved and/or about how to prevent future development. Finally, 28.6% of respondents attended in order to learn about estate planning options.

Respondents expressed an overwhelming sense of satisfaction with their experience at the meeting. Nearly all respondents (87.5%) were Very Satisfied with the amount of information provided to them, the quality of the presentations, the extent to which the meeting met their expectations, and the overall quality of the event. Seventy-five percent (75%) of respondents were Very Satisfied with the extent to which their questions were answered. When Very and Somewhat Satisfied responses were combined, each of these statistics jumps to 100% satisfied. Further, 87.5% of respondents reported that they would recommend a similar meeting to their friends.

At the end of the exit survey, respondents were asked to indicate how likely they were to pursue setting up an easement on their property. Two respondents indicated that they would be Very Likely to set up an easement in the near future, representing between 100-200 acres. An additional 4 respondents indicated that they would be Somewhat Likely to do so and that they would seek additional information before making a decision, representing 800-1250+ acres. One respondent indicated he would be Unlikely to pursue an easement and one responded “Don’t Know”.

Based on the overall tone of the meeting and the types of questions asked, participants seemed very interested in the concept of conservation easements. Question and answer periods were lively and informative. In fact, one landowner who left his name and number with the New River Land Trust representative expressed sincere interest in placing his 994-acre property under easement as soon as possible. At least one other landowner mentioned his intention to purchase conservation tax credits from another donor.

Mecklenburg County

Mecklenburg County, Virginia (Figure 9) is located in south-central Virginia in the Piedmont physiographic province. It is made up of a mix of deciduous and coniferous forests and relatively large family and corporate farms. The average farm size in Mecklenburg County is roughly 200 acres¹⁷. Portions of Mecklenburg County are currently protected by a combination of state and federal agencies, particularly along the shores of Buggs Island Lake (Kerr Reservoir) and the Roanoke River. As of September 2003, the Virginia Outdoors Foundation holds no easements within Mecklenburg County. Although the county is losing agricultural land at the rate of about 2-3% every 5 years¹⁸, development pressure is minimal and economic activity is slow. The county is primarily a slow-paced agricultural community, with a total population of just over 30,000. Surrounding counties also have small populations, ranging from 14,000-35,000 people.

Based on our ecological evaluation in Chapter 2, 88% of the unprotected lands in Mecklenburg County are considered to be critical land cover types (the highest of any

¹⁷Wesley Haskins, Lake Country Soil and Water Conservation District, personal communication.

¹⁸ U.S. Census Bureau data

county in the state), primarily because very little land in the Piedmont region is currently being protected.

Due to the relatively large (compared to Giles County) average farm size, we sent flyers (see Appendix C) about the public meeting to all landowners in the county who held parcels equal to or greater than 100 acres. Names and addresses were obtained from the Mecklenburg County Courthouse and a mailing list of 646 addresses was created. Flyers were mailed out 3 weeks before the scheduled meeting. In addition, a 2”x6” advertisement, similar in layout to the mailed flyer, was run in the local newspaper, the Mecklenburg Sun, for 2 weeks prior to the meeting to ensure that all interested parties were invited to attend. The meeting took place October 16, 2003 from 6:30-8:30 pm.

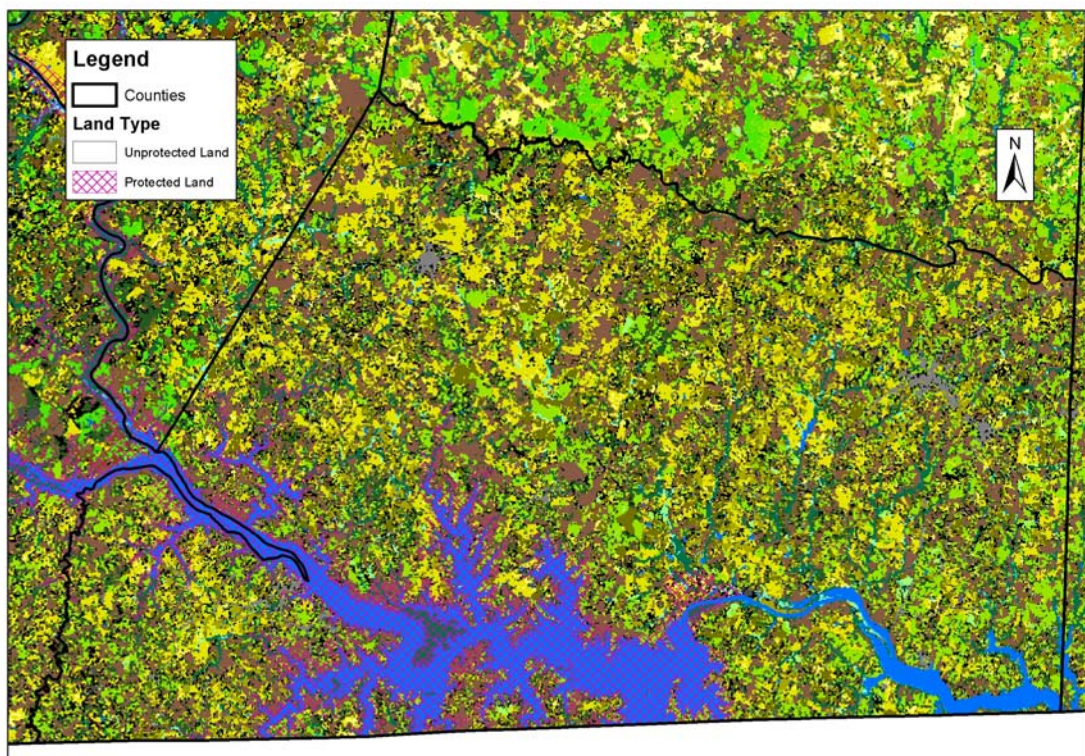


Figure 9. Mecklenburg County land cover map. Land cover types are a mix of coniferous (dark green) and deciduous (light green, brown) forests interspersed with agricultural lands (yellow). Southern Mecklenburg County consists of the Roanoke River flowing into Kerr Lake and then Gaston Lake. Protected lands (crosshatched) occur only along the shores of Kerr Lake and the Roanoke River.

Twenty-two individuals participated in the Mecklenburg County public meeting, representing as least 14 properties. Three additional Mecklenburg County landowners requested that information be mailed to them after the meeting because they were unable to attend (i.e., they owned land in Mecklenburg County, but lived elsewhere).

Mecklenburg County speakers included representatives from the Conservation Management Institute and the Virginia Outdoors Foundation. Other meeting co-sponsors

were given the opportunity to introduce themselves during the meeting and tell participants about their programs. Co-sponsors included the Lake County Soil and Water Conservation District, the Mecklenburg County Cooperative Extension Office, and the Mecklenburg County Farm Bureau (see agenda in Appendix D).

Questions from participants during this meeting reflected a deep concern among participants for being compensated for their property rights. Most questions were asked to clarify the tax benefits and how they work in realistic situations. Questions were also asked about will provisions (i.e., can I leave my land to VOF when I die?), and the possibility for outright purchase of development rights (PDR) rather than donations. Although a few participants were interested in the conservation aspect of conservation easements, most were focused on the potential financial benefits. This is likely a reflection of residents not perceiving a significant development pressure.

Ten exit surveys were returned as a result of the Mecklenburg County public meeting. Of these, 9 indicated that the respondents learned of the meeting via the flyer they received in the mail, with the one remaining respondent (owning 100-200 acres) learning of the meeting by word of mouth. Seven of the respondents reported that they owned 200-500 acres in Mecklenburg County, 2 reported owning 100-200 acres, and 1 respondent reported owning more than 500 acres (this respondent specified owning approximately 1,600 acres). When asked about their motivation for attending the public meeting, 50% indicated that they attended in order to learn about the tax benefits associated with conservation easements and 50% attended to learn about how to conserve natural resources. Forty percent (40%) indicated they wanted to learn about the estate planning benefits involved. Finally, only 20% of respondents attended in order to learn about how to prevent future development.

Respondents expressed a high level of satisfaction with their experience at the meeting. Seventy percent (70%) were Very Satisfied with the amount of information provided to them (30% Somewhat Satisfied), 56% were Very Satisfied with the overall quality of the event (33% Somewhat Satisfied), 44% were Very Satisfied with the extent to which the meeting met their expectations and the extent to which their questions were answered (33% Somewhat Satisfied for each), and 40% were Very Satisfied with the quality of the presentations (30% Somewhat Satisfied). The least satisfying aspect of the meeting was apparently the quality of the presentations, with 30% of respondents being Somewhat Dissatisfied, which may be a reflection of the apparent confusion among participants about the tax benefits involved and the specific restrictions that apply under an easement agreement. However, 80% of respondents reported that they would recommend a similar meeting to their friends.

At the end of the exit survey, respondents were asked to indicate how likely they were to pursue setting up an easement on their property. One respondent indicated that he/she would be Very Likely to set up an easement in the near future, representing between 200-500 acres. An additional 3 respondents indicated that they would be Somewhat Likely to do so and that they would seek additional information before making a decision, representing 500-1200 acres. Four respondents indicated they would be Unlikely to

pursue an easement (representing 1100-3100 acres) and two responded “Don’t Know” (300-700 acres).

Based on the overall tone of the meeting and the types of questions asked, participants were clearly focused on trying to understand the tax benefits associated with conservation easements and appeared frustrated when they discovered that either they would not be paid outright for their development rights or that the tax benefits would not be as great as they’d hoped due either to low market value of developable land or low landowner income. Indeed, one participant wrote on the exit survey “You will have a hard time getting this project to go in Mecklenburg County.” However, conservation interests were expressed vocally primarily by 2 landowners. As of the writing of this report, one landowner has contacted the VOF to obtain more information about placing an easement on his property.

Conclusions

As a first contact with landowners and potential conservation easement donors, these meetings were a success. However, it became apparent that the economic atmosphere, level of development pressure, and overall lifestyle pace are critical factors to consider when presenting this material to landowners. Participants in Giles County were more receptive to the idea than Mecklenburg County participants. More specifically, Giles County participants had a greater focus on conservation needs and development prevention, with an associated interest in any financial benefits available to them. Conversely, Mecklenburg County participants appeared to be primarily focused on financial gains with a secondary focus on conservation. Either motivation can lead to the donation of conservation easements, but if landowners with financial concerns as a primary motivator do not perceive the financial gains as significant, then conservation easements will be dismissed as an option.

Development pressure is currently not a serious threat in Mecklenburg County, but unfortunately, many landowners are not likely to take conservation easements seriously (for the ecological *or* financial benefits) until it is. Currently, the ecological need is not perceived to be great, and the financial benefits are minimal due to low land values (and consequently low easement values) in this low-demand region. As development pressure rises and land values increase, both the ecological threats and the financial benefits will become better selling points for conservation easements. Giles County is just now reaching this turning point where landowners perceive a threat from development pressure and the financial benefits are substantial enough to warrant consideration.

IV. IMPLICATIONS

Conservation easements, as a substantial tool in natural resources conservation, is a relatively new idea among conservation professionals. There are many variables that go into establishing an easement program, including the geographic region targeted, the size of the properties being targeted, the specific restrictions and obligations that the easement agreement places on the landowner, and how easement properties are identified (e.g., landowner volunteers vs. a targeted outreach program based on some pre-defined criteria such as specific habitat types). The way that each of these variables is handled can have a significant impact on both the ecological value of the resulting easements and on the socioeconomic feasibility of the program's success.

In this study we looked at conservation easements across a range of geographic regions with varying landscape and socioeconomic characteristics and primarily in programs with no targeted outreach programs (i.e., most of Virginia's existing easements today are the result of landowner rather than land trust initiatives).

Ecologically, speaking, the conservation easements in Virginia do protect valuable resources – primarily because they are well suited to land cover types that are not well protected by other means, but also because they potentially add valuable corridors and allow other conservation efforts to extend out into areas that they otherwise would not be able to reach. Indeed, conservation easements are one of the few protective options available for lands in central Virginia, and easements in western Virginia are often located adjacent to National Forests lands, serving as a buffer and effectively extending the Forest Service's protection. So, the simple answer to our first question in this study, "Can/Do conservation easements protect ecologically valuable land," is "Yes."

The issue, however, becomes more complicated when the question of socioeconomic feasibility is raised. Most studies have reported that environmental conservation and preservation of open space are primary motivators for easement donors, but no study that we are aware of has looked at non-donors (i.e., potential donors) to see what is holding them back. In our study, we looked at two very different parts of Virginia: Mecklenburg County which has a low level of economic activity and little to no development pressure, and Giles County where the economic activity is increasing annually and development pressure is being felt keenly from neighboring communities. And the results of the meetings we held in each area reflected these differences and shed some light on what community characteristics are most likely to contribute to the success of local conservation easement programs.

Specifically, conservation easements in their current form are likely to be most feasible in areas that are already feeling significant development pressure, which unfortunately is what the concept of conservation easements is trying to prevent. First, these developing areas are most likely to have landowners interested in the conservation value of easements. Further, a foundation of conservation and community preservation values will already be in place among landowners and these landowners will sense that this foundation is being threatened. In Mecklenburg County, this development pressure is

simply not present, and environmental conservation arguments for establishing conservation easements just do not connect with the landowners because they see no threat from which they need protection. Giles County, however, is feeling this threat and the desire to preserve the rural atmosphere of the community is a strong force among landowners.

Second, these developing areas will also yield the greatest financial (tax) benefits for donors because the fair market value of developable land will be at a premium and the resulting easement value (difference between fair market value of land with and without development rights) will be maximized, therefore maximizing the potential tax benefits. In Mecklenburg County right now, the fair market value for land to be developed is not much different than the fair market value of agricultural land because there is no development pressure. On the other hand, in Giles County, development pressure is mounting, and the potential easement value is much greater than in Mecklenburg.

Financially speaking, the tax benefits, even with the new state tax credits, are simply not great enough for the majority of landowners to really benefit financially from the donation of a conservation easement and earn equitable compensation for the right they are giving up. If a conservation motive is already there, the tax benefit can be a nice added incentive, but it probably is rarely the sole motivator, even in areas where development rights are sold at a premium.

In areas such as Giles County, the combination of development pressure, community and environmental preservation values, and tax benefits are likely to sustain a substantial conservation easement program. However, in Mecklenburg County, with only the tax benefits piece of the puzzle present, it simply is not enough. If easement programs in these areas are deemed critical, more aggressive programs will likely be required, such as the development and financial support/funding of purchase-of-development-rights (PDR) programs. In these programs, money is available to directly purchase development rights to land, creating an easement agreement nearly identical to a traditional conservation easement agreement, but greater and more direct financial benefits to the landowner because the transaction is in immediate cash rather than tax deductions and credits over a period of years. Such programs are very expensive to run, and can be politically controversial if government operated. Virginia does have such a program, called the Preservation Trust Fund¹⁹ established by the General Assembly in 1997, but it is poorly funded, highly competitive, and generally only provides cost-reimbursement for the financial burdens (e.g., legal, appraisal) of donating an easement rather than market compensation for the easement's value.

In conclusion, conservation easements can be a very valuable addition to the conservation network from an ecological value point of view, but the feasibility of such a program depends highly on community values, status, and growth trends. Unfortunately, it appears that lands must already be significantly threatened in order to benefit considerably from conservation easement programs, but at least this program is available

¹⁹ Virginia Outdoors Foundation web site, 2003.
<http://www.virginiaoutdoorsfoundation.org/VOF/PTF.htm>.

to these communities at a time when other conservation options may have already been exhausted. Future expansion of easement programs, easement options, and financial benefits likely will allow this program to be applicable in a greater variety of communities, and we look forward to watching this transformation take place and perhaps being able to help shape the future of conservation easements with studies such as this.

APPENDIX A:

**SUMMARY TABLE: OCCURRENCE OF HIGH PRIORITY
BIODIVERSITY LANDS BY COUNTY**

Appendix A. Summary table listing the percentage of land area within each county classified into each of ten biodiversity ranks. A rank of 10 indicates that the land is predicted to have the highest number of total species present according to the range of possible values in Virginia. The last column summarizes these statistics by summing the percentage of each county representing the 3 highest biodiversity classes (those ranked 8, 9, or 10). *For the purposes of meeting location selection, we relied on ranks 8 and 9 only because many areas ranked 10 received that rank due to the predicted presence of many transient and incidental shorebird species; ranks 8 and 9 were more representative of resident and breeding species diversity.

County	Diversity Rank										High Priority (8-10)*
	1	2	3	4	5	6	7	8	9	10*	
ACCOMACK	7.16	0.00	0.00	0.00	0.00	25.25	0.00	24.72	10.05	32.82	67.59
ALBEMARLE	3.37	11.38	0.00	12.11	27.02	0.22	0.00	0.02	45.88	0.00	45.90
ALLEGHANY	13.62	4.16	8.68	0.00	0.00	0.00	0.89	0.00	72.65	0.00	72.65
AMELIA	3.89	49.81	0.00	0.02	0.01	45.81	0.02	0.00	0.43	0.01	0.44
AMHERST	13.73	1.37	17.83	1.70	20.70	0.00	0.00	0.02	44.66	0.00	44.68
APPOMATTOX	35.01	26.98	0.01	0.00	37.97	0.00	0.02	0.00	0.00	0.00	0.00
ARLINGTON	83.20	5.77	1.51	0.00	9.43	0.06	0.00	0.00	0.02	0.02	0.03
AUGUSTA	4.31	9.60	0.00	0.16	10.80	48.50	0.00	0.30	26.30	0.03	26.63
BATH	8.89	0.06	16.48	0.00	0.00	0.01	0.00	0.00	74.57	0.00	74.57
BEDFORD	20.76	1.09	8.29	29.99	0.00	0.00	0.27	0.00	39.60	0.00	39.60
BLAND	4.77	5.79	22.11	0.00	0.00	0.00	0.00	67.31	0.01	0.00	67.32
BOTETOURT	4.80	11.86	0.00	26.19	0.00	0.00	0.00	0.00	57.15	0.00	57.15
BRUNSWICK	6.92	20.11	21.41	0.00	0.01	51.33	0.00	0.00	0.21	0.00	0.21
BUCHANAN	6.72	0.00	0.00	0.00	0.00	93.23	0.00	0.01	0.04	0.00	0.05
BUCKINGHAM	11.53	27.44	16.57	0.00	44.45	0.00	0.00	0.00	0.00	0.00	0.00
CAMPBELL	21.39	16.54	30.91	0.02	0.00	0.00	31.11	0.00	0.02	0.00	0.02
CAROLINE	8.55	36.77	17.43	0.02	36.74	0.03	0.00	0.00	0.00	0.47	0.47
CARROLL	18.20	3.07	22.19	0.00	0.00	0.31	56.18	0.03	0.03	0.00	0.06
CHARLES CITY	1.86	0.06	12.39	17.12	19.94	0.08	46.55	0.00	0.00	2.01	2.01
CHARLOTTE	13.18	47.60	0.01	0.00	0.01	39.18	0.01	0.00	0.00	0.00	0.00
CHESAPEAKE	16.51	0.96	0.00	34.11	0.02	0.01	10.88	4.83	24.94	7.75	37.51
CHESTERFIELD	8.72	5.03	2.35	38.29	0.00	0.51	44.43	0.00	0.00	0.65	0.65
CLARKE	7.38	20.33	0.04	54.94	0.00	0.00	17.02	0.00	0.00	0.28	0.28
CRAIG	11.34	0.16	24.37	0.00	0.00	0.00	0.00	64.08	0.05	0.00	64.12
CULPEPER	8.60	18.26	44.56	0.05	0.01	28.41	0.02	0.06	0.03	0.00	0.09

Appendix A continued...

County	Diversity Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
CUMBERLAND	34.41	26.35	0.03	0.00	0.04	39.13	0.00	0.00	0.04	0.00	0.04
DICKENSON	13.02	2.58	0.00	0.00	0.00	79.08	5.31	0.00	0.01	0.00	0.01
DINWIDDIE	6.63	20.50	3.29	19.52	0.01	0.02	48.85	0.00	0.00	1.17	1.18
ESSEX	3.21	15.96	22.10	21.11	36.56	0.00	0.00	0.00	0.00	1.07	1.07
FAIRFAX	5.70	40.72	7.39	0.45	7.68	28.11	0.02	0.00	9.92	0.02	9.93
FAUQUIER	8.27	27.48	0.02	45.61	0.00	0.01	18.56	0.02	0.00	0.02	0.04
FLOYD	18.00	4.47	23.39	0.03	0.00	0.00	54.04	0.02	0.05	0.00	0.07
FLUVANNA	39.98	2.39	18.31	0.02	39.24	0.00	0.00	0.00	0.06	0.00	0.06
FRANKLIN	21.41	0.01	1.91	16.08	0.01	0.00	0.01	60.54	0.03	0.00	60.57
FREDERICK	9.17	0.66	20.85	15.85	0.00	0.18	53.00	0.03	0.26	0.00	0.29
GILES	13.82	0.06	20.22	0.00	0.00	0.00	0.00	0.02	65.87	0.00	65.90
GLOUCESTER	1.53	0.74	11.97	0.06	28.22	32.23	24.42	0.00	0.00	0.82	0.82
GOOCHLAND	6.00	53.26	0.01	0.02	0.02	40.60	0.00	0.00	0.08	0.00	0.08
GRAYSON	12.08	28.45	0.00	0.00	0.00	0.00	0.00	0.00	59.46	0.00	59.47
GREENE	3.64	0.07	0.00	32.88	0.00	0.00	0.00	63.37	0.00	0.04	63.41
GREENSVILLE	8.80	29.87	23.57	0.25	0.00	0.06	36.98	0.00	0.00	0.47	0.47
HALIFAX	15.09	46.12	0.00	0.00	0.00	38.78	0.00	0.00	0.00	0.00	0.00
HAMPTON	54.70	0.00	5.20	2.62	0.00	0.00	23.45	0.01	14.03	0.00	14.03
HANOVER	6.85	0.06	52.43	0.03	0.08	40.26	0.01	0.00	0.00	0.27	0.27
HENRICO	17.73	6.32	3.15	39.83	0.00	0.04	32.40	0.00	0.00	0.53	0.53
HENRY	23.12	7.14	0.01	0.00	69.66	0.00	0.00	0.07	0.00	0.00	0.07
HIGHLAND	5.18	0.05	4.67	28.39	0.00	0.00	0.00	0.00	61.71	0.00	61.71
ISLE OF WIGHT	1.74	0.81	0.01	32.63	0.02	15.05	24.12	21.49	0.00	4.14	25.63
JAMES CITY	2.77	1.68	0.12	11.87	23.36	0.08	58.69	0.01	0.01	1.40	1.42
KING AND QUEEN	1.53	23.90	0.02	23.30	51.10	0.02	0.01	0.00	0.00	0.11	0.11
KING GEORE	1.99	10.67	20.30	36.34	30.23	0.02	0.00	0.00	0.00	0.47	0.47
KING WILLIAM	2.60	5.30	23.52	0.05	30.45	37.48	0.00	0.00	0.00	0.61	0.61
LANCASTER	1.59	0.47	17.33	34.14	0.01	32.38	14.08	0.00	0.00	0.00	0.00
LEE	9.82	34.80	0.00	0.00	0.00	0.00	55.32	0.00	0.05	0.00	0.06
LOUDOUN	10.52	0.01	25.82	0.02	59.23	0.00	4.36	0.00	0.00	0.04	0.04

Appendix A continued...

County	Diversity Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
LOUISA	7.27	51.25	0.00	0.01	41.37	0.00	0.00	0.00	0.01	0.09	0.10
LUNENBURG	29.93	27.57	0.03	0.00	42.42	0.04	0.00	0.00	0.02	0.00	0.02
LYNCHBURG	67.24	3.29	12.77	0.01	0.00	0.00	16.62	0.00	0.08	0.00	0.08
MADISON	3.85	0.01	0.01	44.14	0.01	0.02	0.00	51.92	0.00	0.04	51.96
MATHEWS	1.54	0.35	8.79	38.34	0.08	18.05	32.79	0.00	0.00	0.05	0.05
MECKLENBURG	5.03	9.20	59.75	0.00	0.02	25.94	0.00	0.00	0.00	0.06	0.06
MIDDLESEX	1.81	0.46	18.47	34.43	32.59	11.75	0.02	0.00	0.00	0.47	0.47
MONTGOMERY	5.26	12.80	0.09	27.74	0.00	0.00	0.31	0.01	53.80	0.00	53.81
NELSON	10.56	18.11	0.01	18.36	0.01	0.00	0.00	52.89	0.06	0.00	52.95
NEW KENT	2.47	0.11	19.44	0.01	0.05	32.05	44.34	0.00	0.00	1.52	1.52
NEWPORT NEWS	21.81	0.00	0.68	5.90	0.07	0.08	54.03	12.63	4.07	0.72	17.42
NORFOLK	69.30	0.01	4.67	0.01	0.10	19.88	1.89	4.10	0.03	0.02	4.14
NORTHAMPTON	5.14	0.00	0.00	0.00	1.25	20.81	13.02	0.00	33.77	26.00	59.77
NORTHUMBERLAND	2.51	2.51	30.87	18.73	38.20	7.10	0.00	0.00	0.00	0.07	0.07
NOTTOWAY	28.72	3.40	27.10	0.00	40.56	0.01	0.00	0.00	0.20	0.00	0.20
ORANGE	31.11	36.57	0.02	0.02	32.16	0.02	0.00	0.03	0.06	0.00	0.09
PAGE	7.91	0.00	0.00	39.87	0.00	0.00	0.00	52.07	0.01	0.14	52.22
PATRICK	14.33	0.00	12.13	0.00	0.00	0.00	0.03	73.50	0.00	0.00	73.50
PETERSBURG	57.72	4.41	12.04	0.22	0.00	25.10	0.40	0.00	0.00	0.11	0.11
PITTSYLVANIA	33.90	26.66	0.00	0.00	0.28	39.15	0.00	0.01	0.00	0.00	0.01
POQUOSON	12.00	4.92	0.00	33.79	0.00	8.92	40.22	0.01	0.13	0.00	0.14
PORTSMOUTH	50.41	1.33	3.68	0.00	36.80	3.55	3.98	0.01	0.09	0.14	0.24
POWHATAN	4.92	58.04	0.00	0.00	0.00	36.96	0.00	0.00	0.07	0.00	0.07
PRINCE EDWARD	32.37	27.39	0.00	0.00	40.21	0.01	0.00	0.00	0.00	0.00	0.00
PRINCE GEORGE	6.12	8.08	4.02	17.30	13.74	47.18	0.03	0.00	0.00	3.53	3.53
PRINCE WILLIAM	17.58	6.55	0.06	58.92	0.08	0.21	16.50	0.00	0.01	0.08	0.09
PULASKI	7.57	9.96	37.63	0.00	0.00	0.00	0.01	0.01	44.82	0.00	44.83
RAPPAHANOCK	2.67	7.03	0.01	38.86	0.00	0.01	0.03	51.35	0.00	0.04	51.39
RICHMOND	1.97	17.80	22.12	21.26	0.04	36.61	0.01	0.00	0.00	0.18	0.18
RICHMOND CITY	49.15	4.81	19.60	0.12	0.00	0.00	26.32	0.00	0.00	0.00	0.00

Appendix A continued...

County	Diversity Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
ROANOKE	32.55	0.00	0.18	13.44	0.00	0.00	0.25	0.72	52.86	0.00	53.58
ROCKBRID	13.59	0.00	0.01	4.56	31.58	0.00	0.17	0.01	50.09	0.00	50.10
ROCKINGHAM	5.69	3.48	0.05	0.07	54.59	0.00	0.02	0.00	35.89	0.20	36.09
RUSSELL	6.32	13.07	20.42	0.00	0.00	0.08	0.02	0.01	60.09	0.00	60.10
SCOTT	9.88	0.01	26.29	0.00	0.00	0.00	0.05	63.77	0.00	0.00	63.77
SHENANDOAH	7.06	0.00	0.01	43.80	0.00	0.00	0.04	48.90	0.00	0.17	49.08
SMYTH	5.72	12.33	26.36	0.02	0.00	0.00	0.00	0.03	55.54	0.00	55.57
SOUTHAMPTON	3.68	9.06	27.76	23.20	0.00	0.16	32.29	0.02	0.00	3.81	3.84
SPOTSYLVANIA	11.69	5.97	44.86	0.17	0.02	37.02	0.00	0.00	0.00	0.28	0.28
STAFFORD	5.43	9.54	17.41	44.95	0.00	22.63	0.02	0.00	0.00	0.02	0.02
SUFFOLK	3.15	2.96	0.00	4.89	27.86	0.02	11.89	0.02	43.96	5.25	49.22
SURRY	3.38	0.02	0.01	22.47	11.30	0.03	57.41	0.01	0.00	5.36	5.37
SUSSEX	4.46	5.25	16.48	18.97	0.00	0.02	51.29	0.00	0.00	3.53	3.53
TAZEWELL	4.35	24.94	0.00	0.00	0.00	0.04	0.00	70.65	0.02	0.00	70.67
VA BEACH	15.39	8.82	0.01	0.02	0.00	22.07	20.72	0.00	10.46	22.51	32.97
WARREN	11.24	3.08	0.01	28.78	0.00	0.00	56.64	0.01	0.00	0.24	0.25
WASHINGTON	8.98	0.06	0.00	41.84	0.00	0.13	0.00	0.01	48.98	0.00	48.99
WESTMORELAND	3.86	13.23	29.95	0.04	19.53	32.70	0.00	0.00	0.00	0.69	0.69
WILLIAMS	25.60	0.00	11.20	8.20	0.04	14.21	36.56	0.06	0.53	3.60	4.19
WISE	7.43	14.01	0.00	0.00	0.00	1.42	77.12	0.01	0.01	0.00	0.02
WYTHE	12.45	0.01	49.84	0.00	0.00	0.00	0.00	37.69	0.01	0.00	37.70
YORK	7.21	0.01	0.98	9.40	0.09	0.01	36.17	24.29	19.55	2.28	46.12

**For the purpose of locating public meeting sites, we relied on ranks 8 and 9 only because many areas ranked 10 received that rank due to the predicted presence of many transient and incidental shorebird species; ranks 8 and 9 were more representative of resident and breeding species diversity.*

APPENDIX B:

**SUMMARY TABLE: OCCURRENCE OF HIGH PRIORITY
LAND COVER TYPES BY COUNTY**

Appendix A. Summary table listing the percentage of land area within each county classified into each of ten critical land cover ranks. A rank of 10 indicates that the land is classified as a critical land cover type (i.e., a land cover type that is currently underrepresented in Virginia’s protected lands network). The last column summarizes these statistics by summing the percentage of each county representing the 3 highest biodiversity classes (those ranked 8, 9, or 10). For the purposes of meeting location selection, we relied on this combined score to select an area with the most critical land cover.

County	Land Cover Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
ACCOMACK	0.00	0.00	0.00	3.53	30.47	8.45	0.42	30.19	26.92	0.00	57.12
ALBEMARLE	11.58	5.19	3.30	1.05	0.80	4.41	7.12	11.61	33.47	21.47	66.55
ALLEGHANY	45.65	22.71	2.09	2.46	0.51	2.08	3.87	4.01	10.51	6.13	20.64
AMELIA	1.47	0.00	0.00	0.93	0.79	3.87	22.61	27.18	38.08	5.07	70.33
AMHERST	9.73	2.80	2.84	1.24	0.61	6.28	4.93	17.31	34.42	19.84	71.57
APPOMATTOX	0.00	0.01	0.07	0.57	0.09	9.25	11.80	18.46	37.16	22.61	78.22
ARLINGTON	0.00	0.00	0.00	0.55	0.00	13.95	67.31	4.16	14.04	0.00	18.20
AUGUSTA	14.70	6.71	2.53	0.88	0.87	3.14	5.67	3.56	19.75	42.18	65.50
BATH	50.34	15.11	4.98	2.05	1.02	1.24	3.39	0.20	9.65	12.03	21.88
BEDFORD	10.46	5.93	2.36	2.72	0.62	4.17	4.34	8.05	34.92	26.42	69.39
BLAND	43.61	18.67	2.85	0.10	1.27	0.73	2.51	0.60	9.96	19.70	30.26
BOTETOURT	31.43	10.59	6.00	1.98	2.17	2.93	6.77	0.77	17.17	20.19	38.13
BRUNSWICK	0.16	0.00	0.00	0.93	0.31	7.15	13.49	20.54	51.90	5.52	77.96
BUCHANAN	74.23	13.15	1.42	0.23	0.10	1.41	0.27	2.91	5.52	0.75	9.19
BUCKINGHAM	0.24	0.02	0.07	0.91	0.10	11.60	14.29	25.02	36.01	11.73	72.76
CAMPBELL	0.08	0.01	0.18	0.67	0.18	7.41	9.61	15.62	41.39	24.84	81.85
CAROLINE	1.29	0.00	0.00	1.06	0.92	18.24	14.79	30.99	31.46	1.25	63.70
CARROLL	29.29	16.31	4.11	0.72	3.13	1.77	7.50	0.57	20.62	15.97	37.16
CHARLES CITY	0.00	0.00	0.00	2.78	4.47	6.61	24.10	27.24	34.26	0.54	62.04
CHARLOTTE	0.08	0.00	0.05	0.39	0.33	15.17	11.18	14.87	39.08	18.84	72.80
CHESAPEAKE	0.00	0.00	0.00	8.85	3.40	25.10	11.58	33.62	17.18	0.27	51.07
CHESTERFIELD	0.52	0.00	0.00	2.49	0.98	4.48	17.62	33.37	39.24	1.31	73.92
CLARKE	4.47	10.34	1.69	2.41	0.06	1.27	9.53	23.98	26.82	19.44	70.24
CRAIG	43.10	17.39	1.26	1.08	0.86	1.00	1.27	0.38	14.96	18.71	34.05
CULPEPER	2.94	7.26	0.12	1.01	0.23	1.60	24.05	21.27	35.35	6.17	62.78
CUMBERLAND	1.63	0.00	0.00	0.76	0.82	9.27	19.92	26.55	34.97	6.08	67.60

Appendix B continued...

County	Land Cover Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
DICKENSON	65.43	15.47	0.75	0.59	0.27	2.09	0.39	4.15	8.48	2.37	15.00
DINWIDDIE	0.04	0.00	0.00	1.98	0.52	6.64	29.47	28.74	30.07	2.55	61.36
ESSEX	0.25	0.00	0.00	2.00	2.59	10.96	14.57	35.52	33.12	1.00	69.63
FAIRFAX	0.02	0.00	0.00	0.70	0.05	15.11	36.97	25.37	21.77	0.00	47.14
FAUQUIER	2.52	5.24	0.52	0.44	0.02	1.46	25.54	30.75	28.96	4.56	64.27
FLOYD	34.62	15.67	0.59	0.41	1.52	1.14	1.66	0.08	21.23	23.08	44.39
FLUVANNA	0.93	0.00	0.10	1.38	0.33	7.21	13.27	29.36	36.90	10.52	76.79
FRANKLIN	21.92	7.31	0.90	3.61	1.63	2.87	3.35	0.43	43.07	14.92	58.42
FREDERICK	27.92	21.57	1.02	0.76	0.57	2.55	9.19	1.91	24.24	10.26	36.41
GILES	50.41	11.19	3.04	2.65	0.21	1.70	1.32	0.10	13.61	15.78	29.50
GLOUCESTR	0.01	0.00	0.00	2.04	4.65	18.81	22.95	19.79	30.96	0.79	51.54
GOOCHLAND	1.98	0.00	0.00	1.65	1.42	7.91	18.40	29.57	34.68	4.40	68.64
GRAYSON	32.88	16.94	5.69	1.47	3.37	0.78	7.21	0.58	13.48	17.61	31.67
GREENE	28.45	16.94	1.43	1.18	1.20	1.00	6.74	2.06	28.87	12.14	43.06
GREENSVILLE	0.01	0.00	0.00	1.14	1.62	17.90	10.52	25.10	41.17	2.54	68.82
HALIFAX	0.02	0.00	0.05	0.75	0.15	9.55	7.43	17.15	47.72	17.18	82.04
HAMPTON	0.00	0.00	0.00	2.55	6.28	36.16	37.96	3.27	13.79	0.00	17.06
HANOVER	2.95	0.00	0.00	0.78	1.07	11.67	18.39	27.89	34.62	2.64	65.14
HENRICO	0.55	0.00	0.00	1.61	1.88	11.01	23.28	26.98	32.90	1.79	61.68
HENRY	12.74	3.97	1.26	1.16	2.33	5.61	5.71	0.22	62.27	4.73	67.22
HIGHLAND	37.61	11.77	10.65	0.16	0.52	0.87	16.18	0.10	9.52	12.61	22.23
ISLE OF WIGHT	0.00	0.00	0.00	5.60	2.28	19.70	21.56	31.39	18.44	1.03	50.86
JAMES CITY	0.00	0.00	0.00	3.89	6.80	11.18	17.87	28.69	30.69	0.88	60.26
KING AND QUEEN	0.14	0.00	0.00	0.60	4.06	10.03	20.08	27.64	36.59	0.85	65.08
KING GEORGE	0.11	0.00	0.00	0.94	0.74	6.53	13.10	37.17	41.15	0.25	78.57
KING WILLIAM	0.40	0.00	0.00	1.27	3.92	13.10	14.59	35.16	30.47	1.09	66.72
LANCASTER	0.00	0.00	0.00	0.63	2.56	10.05	14.57	29.26	42.40	0.53	72.19
LEE	32.43	6.80	3.45	1.09	0.75	2.25	2.03	0.88	23.14	27.20	51.22
LOUDOUN	0.57	1.16	0.04	0.52	0.39	3.49	29.56	25.91	36.84	1.53	64.27
LOUISA	1.56	0.14	0.01	3.11	0.73	13.39	11.95	32.75	31.64	4.73	69.12

Appendix B continued...

County	Land Cover Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
LUNENBURG	0.91	0.00	0.00	0.14	0.33	7.69	18.37	27.67	38.68	6.22	72.56
LYNCHBURG	0.00	0.00	0.47	1.45	0.00	3.11	38.84	2.71	43.95	9.47	56.13
MADISON	21.04	16.89	2.31	0.93	0.85	1.08	10.70	4.78	23.22	18.20	46.20
MATHEWS	0.00	0.00	0.00	0.60	8.13	40.68	15.45	8.88	26.14	0.13	35.14
MECKLENBURG	0.01	0.00	0.00	1.94	0.58	5.34	3.90	25.66	45.86	16.71	88.23
MIDDLESEX	0.07	0.00	0.00	1.31	2.21	11.00	23.00	23.70	37.90	0.80	62.40
MONTGOMERY	39.29	11.24	1.37	0.79	0.45	3.51	3.09	0.40	18.50	21.36	40.26
NELSON	19.87	4.93	6.67	0.99	0.61	4.39	4.28	17.43	25.09	15.75	58.26
NEW KENT	0.01	0.00	0.00	2.79	5.83	8.46	18.65	29.48	34.10	0.68	64.26
NEWPORT NEWS	0.00	0.00	0.00	2.84	1.38	17.32	45.14	8.81	24.13	0.37	33.31
NORFOLK	0.00	0.00	0.00	3.15	2.89	35.97	51.67	0.84	5.47	0.01	6.32
NORTHAMPTON	0.00	0.00	0.00	2.27	33.34	9.13	0.36	35.71	19.18	0.00	54.90
NORTHUMBERLAND	0.02	0.00	0.00	2.85	0.75	4.17	8.10	36.33	47.52	0.25	84.10
NOTTOWAY	1.45	0.00	0.00	0.65	0.76	9.03	24.79	24.20	33.86	5.26	63.32
ORANGE	4.48	3.62	0.05	1.26	0.37	6.04	20.56	27.72	27.12	8.80	63.63
PAGE	26.63	19.59	2.48	2.52	0.84	2.65	9.27	3.71	15.64	16.67	36.03
PATRICK	30.31	12.46	3.41	0.20	2.33	3.43	3.48	1.15	36.28	6.94	44.38
PETERSBURG	0.00	0.00	0.00	1.63	0.19	23.54	45.89	3.81	24.61	0.33	28.75
PITTSYLVANIA	0.95	0.15	0.05	1.07	0.20	6.15	8.26	15.98	48.54	18.64	83.17
POQUOSON	0.00	0.00	0.00	0.86	42.69	21.20	10.86	2.10	22.28	0.00	24.38
PORTSMOUTH	0.00	0.00	0.00	2.12	2.75	24.13	55.54	2.53	12.74	0.19	15.47
POWHATAN	2.25	0.00	0.00	1.72	1.00	8.43	16.33	35.34	30.92	4.01	70.27
PRINCE EDWARD	1.29	0.00	0.03	0.42	0.41	13.02	15.16	20.33	36.24	13.10	69.67
PRINCE GEORGE	0.02	0.00	0.00	4.69	0.91	5.01	37.75	23.35	27.25	1.03	51.63
PRINCE WILLIAM	0.06	0.00	0.00	1.34	0.02	4.91	25.83	33.01	34.83	0.00	67.84
PULASKI	29.34	11.80	1.43	4.76	0.50	3.05	2.50	0.49	15.62	30.51	46.62
RAPPAHANOCK	25.02	22.19	1.81	0.60	0.38	0.49	11.01	7.82	14.34	16.35	38.51
RICHMOND	0.07	0.00	0.00	0.85	3.29	11.81	15.42	33.19	34.26	1.11	68.57
RICHMOND CITY	0.00	0.00	0.00	1.17	1.54	12.38	49.10	13.62	21.31	0.88	35.81
ROANOKE	34.43	9.37	1.57	0.83	1.39	11.69	10.54	0.17	20.19	9.83	30.19

Appendix B continued...

County	Land Cover Rank										High Priority (8-10)
	1	2	3	4	5	6	7	8	9	10	
ROCKBRIDGE	27.48	8.61	7.33	1.33	2.20	2.03	4.86	0.59	15.33	30.23	46.16
ROCKINGHAM	17.55	14.41	1.70	1.21	0.70	2.94	13.16	8.19	19.35	20.79	48.33
RUSSELL	46.28	11.83	0.48	0.79	0.33	1.78	2.86	0.22	17.80	17.62	35.64
SCOTT	38.39	9.74	2.79	1.41	0.51	1.64	1.91	0.49	25.31	17.81	43.61
SHENANDOAH	23.76	21.01	1.60	1.03	0.70	2.04	9.88	3.86	18.99	17.14	39.98
SMYTH	38.25	15.74	0.57	0.49	0.39	1.42	4.29	0.70	15.95	22.20	38.85
SOUTHAMPTON	0.00	0.00	0.00	4.42	1.39	16.73	15.90	31.51	27.88	2.15	61.55
SPOTSYLVANIA	0.98	0.00	0.00	3.20	0.43	6.60	19.31	32.55	34.94	1.97	69.46
STAFFORD	0.11	0.00	0.00	0.59	0.19	4.49	13.41	44.19	37.02	0.00	81.21
SUFFOLK	0.00	0.00	0.00	8.68	2.14	18.46	15.47	33.20	21.20	0.86	55.26
SURRY	0.00	0.00	0.00	6.39	1.44	16.37	28.18	28.57	18.32	0.73	47.63
SUSSEX	0.00	0.00	0.00	4.07	1.41	16.68	30.01	18.83	28.22	0.77	47.83
TAZEWELL	51.32	16.46	1.72	0.22	0.30	1.29	3.70	0.39	8.77	15.83	24.99
VA BEACH	0.00	0.00	0.00	33.49	6.83	14.51	16.11	21.42	7.52	0.12	29.06
WARREN	27.55	23.12	3.27	3.23	0.74	2.43	8.47	3.97	15.33	11.88	31.18
WASHINGTON	35.27	10.67	1.47	1.15	0.22	2.25	3.04	1.27	17.20	27.45	45.92
WESTMORELAND	0.06	0.00	0.00	1.93	0.85	12.53	17.76	32.77	33.20	0.90	66.87
WILLIAMS	0.00	0.00	0.00	3.83	1.94	9.58	40.51	11.06	32.67	0.39	44.13
WISE	56.39	16.34	0.50	0.56	0.33	6.49	2.23	0.45	12.83	3.88	17.16
WYTHE	23.34	11.16	1.18	0.76	0.71	2.61	4.08	1.39	19.54	35.25	56.17
YORK	0.00	0.00	0.00	4.69	4.45	17.91	26.66	16.80	29.02	0.47	46.29

APPENDIX C

FLYERS ANNOUNCING THE PUBLIC MEETINGS

Landowner Options for Conservation

Conservation Easements, Costs, & Benefits
for Mecklenburg County Landowners



How can I gain important tax benefits from my property while still retaining ownership?

Do you have questions about your options as a landowner?

How can I ensure that my property remains undeveloped, even after I am gone?

Come to an informational public meeting!

Mecklenburg County Circuit Court, Boydton VA
October 16, 2003
6:30-8:30 PM

Get your questions answered!

- Are there valuable natural resources found in Mecklenburg County? (yes, farmland, timberland, fields, forests, and other open areas all count!)
 - What is a conservation easement?
- What types of easements are available to Mecklenburg County landowners?
 - How do I go about creating an easement on my property?
 - How much money can I save in taxes?

Can I earn valuable tax benefits, prevent future development, and conserve natural resources while continuing my current activities?

How can I preserve the resources on my property without giving up all my development rights?

For more information, contact:

Julie McClafferty
Conservation Management Institute, VA Tech
540-231-7348
jmcclaff@vt.edu

Program Sponsored By:

Virginia Tech
Conservation Management Institute
USGS Gap Analysis Program

Virginia Outdoors Foundation
Mecklenburg County Farm Bureau

Landowner Options for Conservation

Conservation Easements, Costs, & Benefits
for Giles County Landowners



How can I gain important tax benefits from my property while still retaining ownership?

Do you have questions about your options as a landowner?

How can I ensure that my property remains undeveloped, even after I am gone?

Come to an informational public meeting!

Pearisburg Community Center
(Old Pearisburg High School & KJ Middle School)
1410 Wenona Avenue, Pearisburg VA
October 23, 2003
6:30-8:30 PM

Get your questions answered!

- Are there valuable natural resources found in Giles County?
(yes, farmland, timberland, fields, forests, and other open areas all count!)
 - What is a conservation easement?
- What types of easements are available to Giles County landowners?
 - How do I go about creating an easement on my property?
 - How much money can I save in taxes?

Can I earn valuable tax benefits, prevent future development, and conserve natural resources while continuing my current activities??

How can I preserve the resources on my property without giving up all my development rights?

For more information, contact:

Julie McClafferty
Conservation Management Institute, VA Tech
540-231-8709
jmccclaff@vt.edu

Program Sponsored By:

Conservation Management Institute
Virginia Tech
National Gap Analysis Program

Virginia Outdoors Foundation
New River Land Trust
Soil & Water Conservation District
Giles County Farm Bureau

APPENDIX D

PUBLIC MEETING AGENDAS AND SPONSORS

**Landowner Options for Conservation
Mecklenburg County, Virginia**

AGENDA

October 16, 6:30-8:30pm
Mecklenburg County Circuit Court
Boydton, VA

Thank you for attending! We've organized this meeting in order to provide landowners like you with information about conservation easements and other valuable conservation options available to them. While we have several speakers scheduled, the agenda has been designed to allow for a flexible discussion schedule. There will be plenty of time for questions and discussions during or after each speaker and at the end of the meeting.

- 6:30** **Welcome. Mecklenburg County – A Unique Resource.** Presented by Julie McClafferty, Conservation Management Institute
- 6:50** **Introduction of Sponsors**
- 7:10** **Conservation Easements – What are they, how can I benefit, what do I do and what is the Virginia Outdoors Foundation?** Presented by Sherry Buttrick, Virginia Outdoors Foundation
- 7:45** **Open for questions and discussion**

****Also, be sure to check out the tables in the back of the room for valuable information about these and other programs available to you!*

CONTACT INFORMATION FOR SPONSORS

Conservation Management Institute

Julie McClafferty
1900 Kraft Drive, Suite 250
Blacksburg, VA 24061
540-231-8709
jmcclaff@vt.edu

Virginia Outdoors Foundation

Sherry Buttrick
1010 Harris Street, Suite 4
Charlottesville VA 22903
434-293-3423
sbuttrick@virginiaoutdoorsfoundation.org

Mecklenburg County Farm Bureau

Billy Park, President
434-738-6141
va58@vafb.com

**Lake Country Soil and Water
Conservation District**

Wesley Haskins, Conservation Specialist
434-738-0150
wesley_haskins@nacdnet.org

**Mecklenburg County Cooperative
Extension Service**

Taylor Clarke, Extension Agent
434-738-6191 extension 244
cclarke@vt.edu

**Landowner Options for Conservation
Giles County, Virginia**

AGENDA

October 23, 6:30-8:30pm
Pearisburg Community Center
Pearisburg, VA

Thank you for attending! We've organized this meeting in order to provide landowners like you with information about conservation easements and other valuable conservation options available to them. While we have several speakers scheduled, the agenda has been designed to allow for a flexible discussion schedule. There will be plenty of time for questions and discussions during or after each speaker and at the end of the meeting.

- 6:30** **Welcome. Giles County – A Unique Resource.** Presented by Julie McClafferty, Conservation Management Institute
- 6:45** **Introduction of Sponsors**
- 7:00** **Conservation Easements – What are they, and why are they important?**
Presented by Beth Obenshain, Executive Director, New River Land Trust
- 7:30** **Conservation Easements – How can I benefit, and what do I do?** Presented by Tamara Vance, Virginia Outdoors Foundation
- 8:00** **Open for questions and discussion**

******Also, be sure to check out the tables in the back of the room for valuable information about these and other programs available to you!***

CONTACT INFORMATION FOR SPONSORS

Conservation Management Institute

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New River Land Trust

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Virginia Outdoors Foundation

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Skyline Soil & Water Conservation Dist.

Chris Barbour, Conservation Specialist
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Giles Rural Development Alliance

Steve Craig
540-544-3033
<http://gilesrda.org>

Giles County Farm Bureau

Don Wilson, President
540-921-1777
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APPENDIX E

PUBLIC MEETING EVALUATION SURVEY INSTRUMENTS

Landowner Options for Conservation in Mecklenburg County, Virginia

Thank you for attending tonight's meeting! In order to ensure that we are meeting the needs of landowners in your area and to better tailor the agenda for participants in future meetings, **please complete the short evaluation survey below.** When you are finished, simply place it in the collection box as you leave the meeting, or mail it back to Julie McClafferty, Conservation Management Institute, 1900 Kraft Drive - Suite 250, Blacksburg VA 24061 within 2 weeks of this meeting (**by October 30, 2003**).

<p>1) How did you hear about this meeting?</p> <p><input type="checkbox"/> Flyer mailed to me</p> <p><input type="checkbox"/> Ad in newspaper</p> <p><input type="checkbox"/> Word of mouth (friend, neighbor)</p> <p><input type="checkbox"/> Other: _____</p>	<p>2) What was your primary motivation for attending tonight's meeting? (Check ONE)</p> <p><input type="checkbox"/> To learn about the tax credits</p> <p><input type="checkbox"/> To learn about how to conserve natural resources</p> <p><input type="checkbox"/> To learn about how to prevent future development</p> <p><input type="checkbox"/> To learn about estate planning options</p> <p><input type="checkbox"/> Other: _____</p>
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In reflecting on tonight's meeting, how satisfied were you with...

	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
3) the amount of information provided to you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) the quality of the presentations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) the extent to which your questions were answered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) the extent to which this meeting met your expectations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) the quality of the overall event?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8) After attending tonight's public meeting, how likely are you to pursue setting up a conservation easement for your land?

- Very likely - I am very interested in setting up a conservation easement on my property.
- Somewhat likely - I will seek out additional information before making a decision.
- Not very likely - I don't think that conservation easements are right for me.
- I don't know

9) If we were to organize a similar meeting, either in Mecklenburg County or elsewhere in Virginia, would you recommend it to your friends?

- Yes
- No
- Not Sure

10) Please indicate how much property you own in Mecklenburg County?

- Less than 50 acres
- 50-100 acres
- 100-200 acres
- 200-500 acres
- More than 500 acres

11) If you have any comments about tonight's meeting or suggestions for improvements in future meetings, please write them in below. And once again, **Thank You for your feedback!**

Landowner Options for Conservation in Giles County, Virginia

Thank you for attending tonight's meeting! In order to ensure that we are meeting the needs of landowners in your area and to better tailor the agenda for participants in future meetings, **please complete the short evaluation survey below.** When you are finished, simply place it in the collection box as you leave the meeting, or mail it back to Julie McClafferty, Conservation Management Institute, 1900 Kraft Drive - Suite 250, Blacksburg VA 24061 within 2 weeks of this meeting (**by November 4, 2003**).

1) How did you hear about this meeting?

- Flyer mailed to me
- Ad in newspaper
- Word of mouth (friend, neighbor)
- Other: _____

2) What was your primary motivation for attending tonight's meeting? (Check ONE)

- To learn about the tax credits
- To learn about how to conserve natural resources
- To learn about how to prevent future development
- To learn about estate planning options
- Other: _____

In reflecting on tonight's meeting, how satisfied were you with...

	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
3) the amount of information provided to you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) the quality of the presentations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) the extent to which your questions were answered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) the extent to which this meeting met your expectations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) the quality of the overall event?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8) After attending tonight's public meeting, how likely are you to pursue setting up a conservation easement for your land?

- Very likely - I am very interested in setting up a conservation easement on my property.
- Somewhat likely - I will seek out additional information before making a decision.
- Not very likely - I don't think that conservation easements are right for me.
- I don't know

9) If we were to organize a similar meeting, either in Giles County or elsewhere in Virginia, would you recommend it to your friends?

- Yes
- No
- Not Sure

10) Please indicate how much property you own in Giles County?

- Less than 50 acres
- 50-100 acres
- 100-200 acres
- 200-500 acres
- More than 500 acres

11) If you have any comments about tonight's meeting or suggestions for improvements in future meetings, please write them in below. And once again, **Thank You for your feedback!**