



FARMS FOR THE FUTURE:

A Strategic Approach
to Saving Maryland's
Farmland and
Rural Resources



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This report is a product of the Chesapeake Farms for the Future Board, one of four boards created as part of the Future Harvest Project. The CFFB was created in July 1995 to carry out the project described in this document.

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Executive Summary

More farmland is permanently protected in Maryland than in any other state in the nation. Despite this success, the state is losing farmland faster than it is saving it. The diminishing farmland base is weakening the state's ability to produce food, protect the environment and the Chesapeake Bay, strengthen the economy and provide a quality of life that has defined regions of the state for centuries.

EXECUTIVE SUMMARY

The dramatic loss of farmland in Maryland is due in part to the lack of a plan that identifies the highest priority farmland and what mix of farmland protection techniques are needed to more effectively protect that land. Such plans are rare throughout the country because many citizens lack a good understanding of land resources in their communities. The lack of citizen support often results in limited funding, political will and planning resources for farmland protection.

Through a consensus-building process, the Chesapeake Farms for the Future Board developed the essential tools for creating an effective farmland protection plan for Maryland. Created in 1995 as part of the Future Harvest Project, the CFFB is a diverse group of farmers and non-farmers who are committed to strengthening the state's agricultural industry and protecting the environment. The tools are a series of maps, a model farmland protection program and a cooperative assessment.

Maps: A series of computer-generated maps identify the most important assets of Maryland's farmland. Assets include:

- Prime and productive soils;
- Environmental, cultural and historic features (e.g., wildlife habitat, archaeological sites and historic buildings);
- High market value for the agricultural products that are grown or raised on the farm; and
- A projected moderate to high increase in residential development.

Farmland with one or more of these assets is "strategic" and, therefore, should receive the highest priority when determining what farmland to protect. Because the maps create visual images, they also are helpful in portraying the various assets of farmland. This can lead to broader community support for farmland protection programs in the state and in its counties.

The mapping project reveals that approximately 63 percent of the 3.2 million acres in the state that is zoned for agricultural conservation has prime and other productive soils, 32 percent has important environmental, cultural and/or historic features and 23 percent has a projected moderate to high increase in development. Approximately 25 percent of the land zoned for agricultural conservation has two of these assets and 4 percent has all three of these assets. (Farmland with a high market value for the agricultural products that are grown or raised on the farm is not included in these statistics because the available data for this category was inconsistent with the other data; the data for market values is available at the county level, while all other data is available at the sub-county level.)

Model Farmland Protection Program: The model farmland protection program provides benchmarks to strive for when developing a strategy. The model program uses a mix of incentive-based and regulatory techniques to protect strategic farmland. Techniques include purchase of development rights, transfer of development rights, donations of development rights, agricultural conservation zoning, cluster zoning, right-to-farm protection, property tax credits, agricultural economic development programs, targeting public services to existing developed areas, cost-share programs and comprehensive planning. Simply having these techniques is not enough. The techniques must help communities protect their most strategic farmland while allowing growth to occur on farmland less important to agriculture and the environment. The description of the model program included in this report provides details on how to make the techniques most effective.

Cooperative Assessment: The CFFB used the maps and model farmland protection program to assess the current state of farmland protection in Maryland. Called the “Cooperative Assessment,” this phase of the project provides stakeholders with an objective assessment of how well existing farmland protection programs are protecting the strategic farmland identified in the maps. Not only do stakeholders learn about the pluses and minuses of their programs, they also learn what their neighbors are—or are not—doing to save farmland.

The assessment reveals that farmland protection programs are making progress in protecting strategic farmland. For example, of the 286,284 acres of agricultural land statewide that are protected by easements held by public and private entities, approximately 60 percent have prime and other productive soils, 23 percent have important environmental, cultural and/or historic features and 22 percent have a projected moderate to high increase in development. But despite this progress, the state has a long way to go in protecting its strategic farmland. Approximately 6.5 percent of the state’s agricultural land that has prime and other productive soils is protected by agricultural conservation easements, 5 percent of the state’s agricultural land with important environmental, cultural and/or historic features is protected by easements and 6.4 percent of the agricultural land with a projected moderate to high increase in development is protected by easements.

The degree of effectiveness of the farmland protection programs varies throughout the state, and none of the farmland protection programs include all of the elements of the model program. Common weaknesses are:

- No goal for the quantity and quality of land to protect.
- A “low” or “moderate” level of protection in the agricultural conservation zone (i.e., lot size is less than 20 acres). Approximately 75 percent of the state’s agricultural land falls into this category.
- Clustering of dwellings in agricultural conservation zones is voluntary and restrictions on non-farm development in clustered subdivisions are weak.
- Appropriate receiving areas are not delineated when TDR programs are created and the base density in the receiving areas is not low enough to create a demand for TDRs.

-
- The incentives for enrolling land in agricultural district programs are weak.
 - Farmland protection programs do not include an agricultural economic development component.
 - County comprehensive plans include goals and objectives for protecting farmland but actual programs capable of achieving them are not created.

Recommendations: This assessment is meant to motivate communities, not to discourage them. Specific recommendations on how to expand or enhance farmland protection programs include, but are not limited to:

- Establishing a matching grant program, administered at the state level, that provides counties with funding to enhance their farmland protection programs.
- Establishing a statewide "Critical Farms Program" to provide interim financing for the acquisition of agricultural conservation easements on critical farms (i.e., farms with strategic characteristics) when funding through the state PDR program is limited.
- Creating a program to provide participants in the state's agricultural districts program and/or state's easement program with funding to develop an agricultural economic development plan for their farming operations.
- Establishing a study committee to evaluate inter-jurisdictional tax revenue-sharing programs.
- Continuing to provide matching state and federal funding for federal conservation programs.
- Supporting the current level or a higher level of funding for the state PDR program and Program Open Space and researching alternative methods for funding the programs (e.g., installment purchase agreements).
- Targeting private land trust public education and outreach efforts to landowners who own farmland with strategic characteristics.



Agriculture helps protect the health of the nation's largest estuary: the Chesapeake Bay.
Photo: David Harp

Introduction

Does it matter that Maryland is losing approximately 30,000 acres of farmland per year?¹

The answer is “yes,” according to the Chesapeake Farms for the Future Board. With agricultural conservation easements on approximately 286,000 acres of farmland, more farmland is protected in Maryland than in any other state in the nation. Despite this success, the state is losing farmland faster than it is saving it. The loss of farmland is weakening the state’s ability to produce food, protect the environment and the Chesapeake Bay, strengthen the economy and provide a quality of life that has defined regions of the state for centuries.

A series of computer-generated maps produced by the CFFB, a diverse group of farmers and non-farmers, illustrates the importance of protecting the state’s remaining farmland. While some farmland identified on the maps is important because it has productive soils, other farmland is important because there is an historic building or wildlife habitat on the land. Still other farmland is worth protecting because, even though the soils are not highly productive, the value of livestock raised on the land is high, making the farm an important part of the economy. And some farmland should be protected so it is not developed; runoff and pollution from sprawling development adversely affects the health of the Chesapeake Bay.

Although often unnoticed, these environmental, economic, cultural, historic and agricultural assets are what define farmland as “strategic,” or worthy of protection, according to the CFFB. The maps created by the CFFB are designed to help communities understand the benefits of local farmland and, therefore, the variety of reasons for saving it. Communities can then identify the land that should be protected and land that could be developed.

But identifying strategic farmland is not enough. Developing a plan for how to protect strategic farmland also is necessary. To this end, the CFFB developed a model farmland protection program that provides benchmarks to strive for when developing a farmland protection plan. The model program uses a mix of incentive-based and regulatory techniques, such as purchase of development rights and agricultural zoning, to protect strategic farmland. Finally, the CFFB used the maps and models to assess how well Maryland is doing in protecting its strategic farmland and to develop recommendations on how the state’s farmland protection programs and policies can be enhanced or expanded to protect strategic farmland.

Working with a diverse group of people was critical to this project. Each CFFB member brought a unique perspective. This diversity was helpful in developing each piece of the project and in evaluating each piece’s accuracy. The CFFB’s farmland owners, for instance, were able to pinpoint errors in data or methodology when the maps were being created because they could see certain familiar properties being misportrayed. When developing the model farmland protection program, land use planners were able to explain the pros and cons of various farmland protection techniques by drawing on their first-hand experiences.

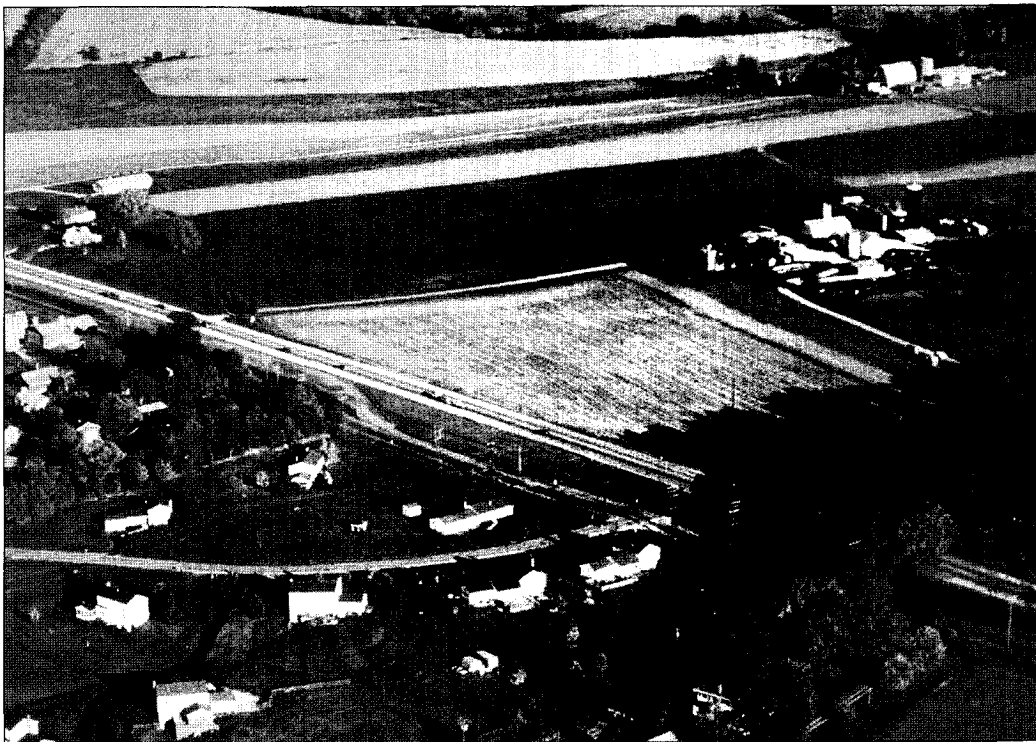
The strength of this project lies not just in the tools that were developed by the CFFB. It also gained from the consensus-building process that was used to develop those tools. The 20-member CFFB was able to address the farmland protection-related concerns and interests of the various groups represented on the CFFB—including state agencies, environmental organizations, developers, farmers and land use planners—and other stakeholders who attended the

INTRODUCTION

The loss of farmland is weakening the state’s ability to produce food, protect the environment and the Chesapeake Bay, strengthen the economy and provide a quality of life that has defined regions of the state for centuries.

board's public meetings. By bridging the gaps, the CFFB has helped Maryland broaden its farmland protection constituency. As a result, more public officials have a greater understanding of their important role in protecting farmland—such as supporting agricultural conservation zoning ordinances or funding PDR. Also, more people in the private sector—especially farmland owners—have a better understanding of the importance of their role in being good stewards of the land and saving farmland for future generations. The consensus reached, therefore, is just as much a product of this project as are the maps and model farmland protection program.

The success of the consensus-building process is most apparent when looking at the atmosphere at the onset of this project. When created in 1995, the CFFB was met with some resistance by people in Maryland who felt that county and state agencies were already working effectively at protecting farmland. Maryland is home to the nation's best statewide PDR program and county-level transfer of development rights program, as well as some of the best county-level PDR programs in the country². The ranking of PDR and TDR programs is based on the number of acres protected by the programs. Approximately 140,000 acres of farmland are protected through Maryland's statewide PDR program, almost 40,000 acres are protected through just one TDR program and approximately 40,000 acres are protected by 11 county-level PDR programs. The state with the next highest acreage is Pennsylvania, where approximately 100,000 acres of farmland are permanently protected. Maryland also is home to some of the best agricultural zoning in the mid-Atlantic region. The average permitted density in the primary agricultural zone is one dwelling unit per 50 acres in Baltimore County, one dwelling unit per 25 acres in Montgomery County and one dwelling unit per 20 acres in Worcester County. In total, approximately 810,000 acres are protected by what is categorized by the CFFB as highly effective agricultural zoning.



Agriculture and development compete for land.

Photo: David Harp

Even with this amount of land protected, the state is losing approximately three acres of farmland for every one acre it permanently protects with an easement. Even with traditional farmland protection programs in place, the state is struggling to address the new challenges placed on the agricultural industry, including suburban sprawl, uncertainty in commodity markets and a change in national farm policies that shift market risk back to producers. Original critics of the project came to accept that the CFFB recognizes the success of the work done in Maryland to date, but that new tools (i.e., maps and a model farmland protection program) are necessary to address such challenges. The tools are designed to enhance and expand what already is in place in Maryland.

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While many of the nation's agricultural states are facing similar challenges, the loss of farmland in Maryland is particularly significant because it is happening at a rapid rate. The loss of farmland in Maryland was put into perspective on a national scale when American Farmland Trust produced a report entitled *Farming on the Edge* in 1997. The report identified most of northern and central Maryland as being in the nation's second most threatened agricultural area and much of the Eastern Shore of Maryland as being in the nation's ninth most threatened agricultural area. The ranking is based on the vulnerability of the areas' top quality, highly productive farmland to intense urban development pressure³.

As is the case throughout the country, the dramatic loss of farmland is not necessarily due to an increase in the number of houses being built. Rather, it is due to an increase in the amount of land being used to build each house. In Maryland, for instance, houses built on large lots (lots larger than one acre but smaller than 20 acres) accounted for 64.6 percent of all the land consumed for residential development in 1993⁴. This type of development is the most damaging form of development for the Chesapeake Bay. It requires approximately 2.5 times the amount of surface area in roads, driveways and rooftops as more compact development. These impervious surfaces shed rainwater, increasing volumes of runoff and the levels of pollutants carried with it.

Confronting this trend can be a challenge. To save farmland and encourage compact or "smart" growth requires three critical factors: funding, political will and knowledge of successful farmland protection and growth management techniques. The CFFB's assessment of county, state and federal farmland protection initiatives in Maryland revealed that these resources are abundant in some communities but limited in most, particularly the state's rural communities. For instance, most of the PDR programs are not well-funded. Some TDR programs are not effective because the base density in the receiving areas is not low enough to create a demand for TDRs. Most clustering ordinances are not effective at protecting farmland because the restrictions on non-farm development are weak. Most county farmland protection programs do not include an agriculture economic development component. And some programs and policies exist only in comprehensive plans; they have not actually been created or implemented.

One outcome of these weaknesses is that some farmland protection programs do not meet the objectives of the state's Economic Growth, Resource Protection, and Planning Act of 1992 and the Smart Growth and Neighborhood Conservation Initiative. The goals of the act and the initiative are similar: save natural resources and revitalize existing developed areas. Through the act, this is to be accomplished by requiring counties to incorporate seven key elements into their comprehensive plans, including protecting sensitive areas and directing growth in rural areas to existing population centers.

The initiative, which was spearheaded by Gov. Parris N. Glendening and approved by the Maryland General Assembly in 1997, includes five programs for reaching this goal: Smart Growth Areas, Rural Legacy Program, Brownfields Cleanup and Redevelopment Program, Job Creation Tax Credit and Live Near Your Work Program. The public and private sectors, both at the county and state levels, play a role in implementing and using these programs. A keystone of the initiative, Smart Growth Areas, is a program that targets state funding for infrastructure to regions called "Priority Funding Area"—municipalities; areas inside the Washington and Baltimore beltways; and areas already designated as enterprise zones, neighborhood revitalization areas, heritage areas and existing industrial land. Local governments also can use the criteria in the Smart Growth initiative to designate priority funding areas. A second keystone is the Rural Legacy Program, which provides funding to permanently protect areas rich in agricultural, natural and cultural resources. The Rural Legacy funding is targeted to "strategic" areas identified by local communities. In 1998, the first year of the program, nearly \$24 million is expected to be allocated to local communities for the acquisition of easements and land.

The CFFB hopes this report will help community leaders, elected officials, state agency representatives and others develop comprehensive farmland protection programs to support agriculture as an economically, environmentally and socially sustainable industry in Maryland. Fostering the widespread adoption of sustainable agriculture in the Maryland and Delaware portions of the Chesapeake Bay watershed (which includes approximately 95 percent of Maryland and 30 percent of Delaware) is the goal of the Future Harvest Project. A four-year project funded primarily by the W.K. Kellogg Foundation, Future Harvest operates using four boards, including the CFFB. The other boards are using on-farm demonstrations of innovative production, marketing, wildlife habitat and stewardship strategies to examine the best ways to promote the adoption of sustainable agriculture practices. As they relate to the health of the Chesapeake Bay, sustainable agriculture practices are important because they maintain the soil's permeability while protecting water quality and wildlife habitat through such conservation practices as riparian buffers, nutrient management and grassed waterways.

The tools developed by the CFFB are meant to be updated as new information becomes available. They are designed to be used by a diverse group of stakeholders, including local and state governments, community activists and agriculture organizations. Particularly in places where financial and political support for farmland protection is weak, the tools will help communities strategically use their limited resources for saving their best farmland.

The report focuses on Maryland, but other counties and states can use a similar process to develop maps and assess the farmland protection programs in their region. The CFFB's process can serve as a model for defining strategic farmland, determining what databases to use during the mapping, choosing how to use those databases and selecting criteria for evaluating farmland protection programs. The key is for all communities to develop farmland protection programs to help agriculture compete successfully with other land uses and set the framework for an improved quality of life and the environment in America.

Maps

Maryland's agricultural land is rich in wildlife habitat, productive soils and archaeological sites, and it produces high-value livestock and crops. This is news for the many people who live and work in the state's metropolitan areas. Their lifestyle often does not afford them the time to explore their environs. It is even news for some people who work the land on a daily basis who may not always consider the multiple assets of their land. Likewise, people who are making critical decisions about how the state's public and private land should be used don't always understand those assets.

A series of maps developed by the CFFB through a consensus-building process paint a picture of the state's agricultural industry. (See maps inserted in the back cover of the report.) The maps identify the location of farmland that is of high value from an environmental, economic, cultural, historic and food production standpoint, as well as farmland where a high amount of residential development is projected. The purpose of identifying this "strategic farmland" is to broaden the understanding of the multiple assets of farmland and to market those assets. Doing so, ultimately, will broaden the support for creating new farmland protection programs and improving existing programs. To illustrate how well the state is doing in protecting its strategic farmland, the CFFB created a map that identifies all of the protected land in the state. This includes land that is protected with a conservation easement, enrolled in an agricultural district or zoned for agricultural conservation.

The maps were developed by the CFFB through a four-stage consensus building process:

1. Identify Map Criteria: The first stage of the mapping project, identifying map criteria, was an opportunity to brainstorm about the multiple assets of agricultural land. During three public meetings, the CFFB identified more than 20 assets of agricultural land, all of which relate to the region's environment, economy, culture or food production capabilities. The make-up of the CFFB was invaluable during this stage. Each interest group represented on the board brought to the table slightly different viewpoints on why farmland is worth protecting. For instance, some CFFB members emphasized the importance of farmland in protecting water quality in the Chesapeake Bay watershed, especially when farmers use such conservation practices as riparian buffer strips, cover crops and grassed waterways. Others stressed the importance of farmland in producing grain for the state's poultry industry and fruits and vegetables that are eaten throughout the state.

2. Hire GIS Consultants: The CFFB decided to use a geographic information system to create the maps. A GIS is a computer system capable of assembling, storing, manipulating and displaying land use data. It is quick, flexible and produces high-quality maps. Since this is state-of-the-art technology, the CFFB hired GIS consultants to do the mapping work. Earth Satellite Corp. of Rockville, Md., did the statewide maps and Land Stewardship Services of Fort Collins, Colo., did the county-level maps. In addition to their technical abilities, the consultants were chosen because they communicated well with the CFFB. Communication was critical because most of the CFFB members had a broad understanding of farmland protection yet relatively minimal understanding of GIS, while the GIS consultants had a relatively minimal understanding of farmland protection. Sharing information, therefore, was important to the success of the project. To help bridge this gap, the CFFB also created and worked with a technical advisory committee made up of GIS experts from throughout the state.

MAPS

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*The CFFB hopes that,
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this project becomes
available, it will be
incorporated into
the maps.*

3. Inventory Available Databases: Working with Earth Satellite Corp., the CFFB conducted an inventory of GIS databases, determined the suitability of the databases for this project and obtained permission to use the databases. This stage of the project provided a reality check for the brainstorming session mentioned above. Although many assets of farmland were identified in the brainstorming session, less than half of those assets could be mapped because data pertaining to the assets was not available. In some cases, databases were being created, but they were not going to be available for several years. In other cases, the databases could be created within a few months, but the cost to do so was beyond the budget for this project. For instance, information about on-farm investments and the location of agricultural support services—information that would illustrate some of the economic assets of farmland—was not available. Following the advice of other people who have done GIS mapping projects, the CFFB chose to use the databases that are currently available so as to stay within the time frame and budget for the project. The CFFB hopes that, as new data pertinent to this project becomes available, it will be incorporated into the maps.

In one case, the challenge was not finding a single database but choosing which database to use. Research on databases pertaining to soils unveiled two potential sources: the State Soil Geographic (STATSGO) database or Natural Soil Groups database. While both databases include information about soil capability, the CFFB chose the Natural Soils Group database because it provides more detailed information about soil productivity than does STATSGO⁵. Several CFFB members believed it was important to portray soil productivity as precisely as possible because, in some areas of the state (e.g., Carroll County), the soil is productive even though it does not receive the highest capability rating: Class 1 soil.

With one exception, the CFFB used existing databases. Most of the databases are from three state agencies in Maryland: the Department of Natural Resources, Maryland Office of Planning and Maryland Historic Trust. Also used were databases from the U.S. Bureau of the Census, U.S. Geological Survey, U.S. Department of Agriculture and the U.S. Environmental Protection Agency. The only digital information created specifically for this project were properties protected through county TDR programs and PDR programs. Earth Satellite Corp. prepared digital GIS files about these properties from paper copies of property maps.

4. Establish Mapping Methodology and Design: In the final phase, the CFFB worked with Earth Satellite Corp. to establish a methodology for mapping the information contained in the databases and designing the maps. The CFFB faced several challenges in completing this phase of the project:

Limitations in Data:

Although the amount of data (particularly digitized data, which is the type of data that is necessary for a GIS project) that is available in Maryland is relatively high compared to most states, it is still limited. For instance, the state does not have any sub-county level data on the market value of agricultural products sold. The only available data is at the county level and is obtained through the U.S. Bureau of the Census. Data for all other maps was available at the sub-county level. The CFFB had to repeatedly remind itself that it would not be able to develop a map for everything it wanted to depict.

Multiple Methodology Options:

Even with the appropriate databases, it is necessary to agree on the appropriate methodology. Each database possesses its own set of assumptions and limitations which the user must bear in mind when using and interpreting the data. For instance, in mapping development pressure, some CFFB members were uncomfortable, at first, with the final decision to use the data that is based on the projected increases in development. This data is largely a reflection of zoning. Counties that permit high density development will experience a greater increase in development than counties that permit low density development, even though the desire to live in one area is not necessarily greater than the other. Some CFFB members wanted to avoid this misperception by identifying all of the major roadways or employment centers in the state, then drawing a radius (e.g., two miles for roadways or 30 miles for employment centers) around each and identifying all of the land within the circle as being under development pressure. This methodology was not used because it was based on some assumptions that several CFFB members were not comfortable with, such as the assumption that most people live near their place of employment. In the end, the CFFB agreed to use the methodology that is more closely related to zoning, but to call the map “Projected Increase in Residential Development” instead of “Development Pressure.”

In addition to developing a methodology, it was necessary to determine if the methodology was accurate. This often is referred to as “ground truthing.” During this stage of the process, working with the CFFB, again, proved to be invaluable. Since most of the CFFB members work or live in Maryland, they were familiar with the lay of the land. With the unrolling of each map, therefore, they were able to point out flaws in their neighborhood. One farmer, for instance, brought to the consultants’ attention the fact that several pieces of property in his county (Cecil County) that were permanently protected were not identified on the “Protected Agricultural Land” map. This observation resulted in the discovery that the easements from The Natural Lands Trust had not been included in the database.

Multiple Design Options:

Another challenge was keeping the maps simple. The simpler the maps, the easier they are to read and, therefore, the more useful they are to the general public. Despite advice from several people who have done GIS projects, the first several sets of maps developed by the CFFB were cluttered with information. For instance, on the earlier versions of the map that identifies protected agricultural land, all land uses were shaded with the same intensity (e.g., deep blue, deep green and deep red). On the final map, deep colors are used to represent agricultural land zoned for agricultural conservation (which are the areas that are of most concern in this project) and lighter colors are used to identify all other land uses.

Design also is important because it can be a direct reflection of the CFFB’s objectives. The first several versions of the map called “Strategic Characteristics of Farmland” used one color—orange—to identify all farmland with strategic characteristics. A lighter orange represented farmland with one important asset while a darker orange represented farmland with several important assets. Using this design assumed that the CFFB placed more value on farmland with more than one asset than it did on farmland with one asset. As Maryland is a diverse state with a variety of priorities, the CFFB wants communities to make their own judgments about which farmland is important. The final version of this map uses seven different colors to represent the various assets of farmland. One color is not more important than another.

The statewide maps are inserted in the back pocket of the report. Information about the statewide maps is on pages 9-24. County-level maps for protected agricultural land, productive agricultural soils and significant environmental, cultural and historic features are available upon request from American Farmland Trust and the Chesapeake Bay Foundation. Also available separately from AFT and CBF is an appendix with complete information about how the maps were created and all of the data (in the form of tables and graphs) and metadata generated through this project.

Note: The maps only highlight features on land zoned for agricultural conservation. This is based on the presumption that the land that is most likely to remain in agriculture is zoned for agricultural conservation. For this project, all land in Garrett County that is categorized as agricultural land use/land cover and is not zoned is considered to be land zoned for agricultural conservation. This was done because Garrett County has subdivision regulations but no zoning in the rural areas. In Prince George's County, all land zoned residential-agriculture is considered to be land zoned for agricultural conservation. This was done because the county does not have an exclusive agriculture zone.



Farming has defined the landscape in Maryland since the 17th Century.

Photo: David Harp

Why Was the Map Created and What Information Does it Include?

For most farmland protection programs, soil type is a high priority in determining what farmland to protect. The type of soil generally helps determine what type of farming can be done on the land and it is one of the indicators of how productive the farming operation is likely to be. Soil type, therefore, usually plays an important role in determining the economic viability of the farm. Soil type also affects the environmental health of the farm, as some soils are better than others at absorbing nutrients that can be harmful to the environment and some soils are less susceptible to erosion.

The soils map is based on “Natural Soils Groups” created in Maryland by the Natural Resources Conservation Service. The soils groups are based on each soils’ ability to produce crops, susceptibility to erosion, permeability, depth to bedrock, depth to water table and stability. Soils with similar properties and features are assembled into one of 14 groups. For the purposes of this project, the 14 groups are then divided into one of three general groups: “prime,” “productive” or “other.”

Prime soils have the highest productivity. Prime soils are deep, drain well and may contain silt or loam. Productive soils are second in productivity. Productive soils have some limitations often due to poor or excessive drainage. Soils classified as “other” includes all “non-productive” soils, or soils that have severe limitations for agriculture, such as extreme wetness or being sandy or rocky.

How Do We Interpret the Map?

Statewide, prime, productive and other soils are divided into nearly equal amounts: 31.66 percent, 31.05 percent, and 35.23 percent, respectively. Wetlands account for the remaining balance of 2.06 percent. Easements protect approximately 6.5 percent of the land in the state that has prime or productive soils.

The greatest concentrations of prime or productive soils are on the Eastern Shore. Queen Anne’s and Caroline counties have the highest acreage of prime soils (105,745 acres and 105,251 acres, respectively). They exceed the acreage of the next highest county (Kent County) by approximately 20,000 acres. With 107,012 acres of productive soils, Wicomico County leads the state in acres of productive soils, exceeding the acreage in the second leading county (Frederick County) by approximately 30,000 acres.

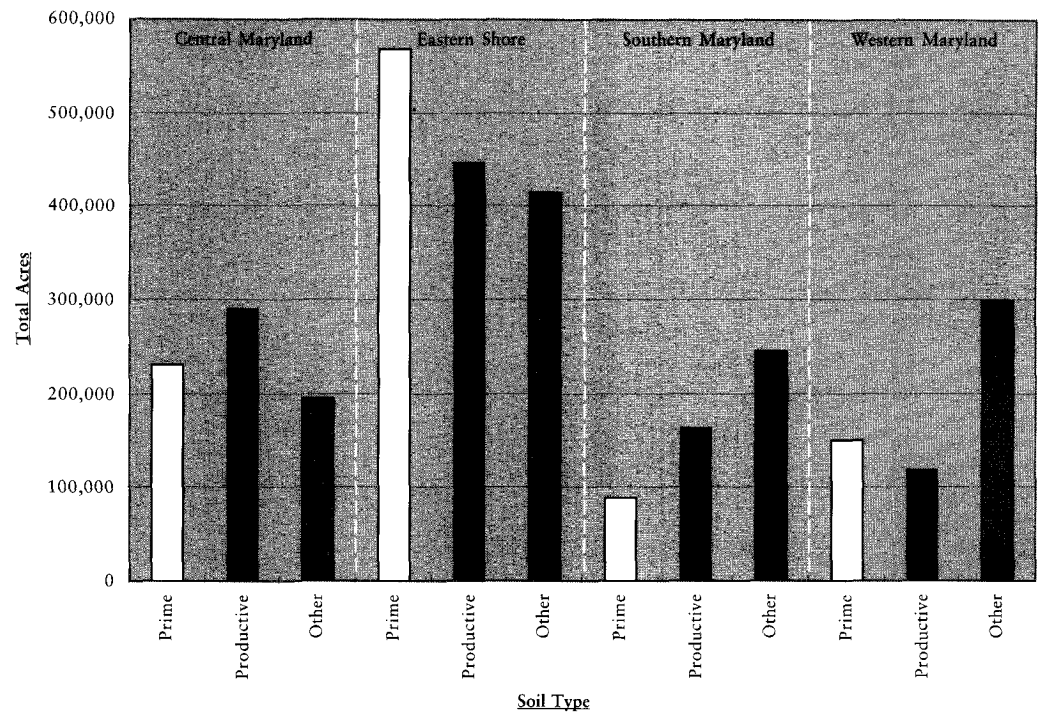
MAP ONE:

PRODUCTIVE

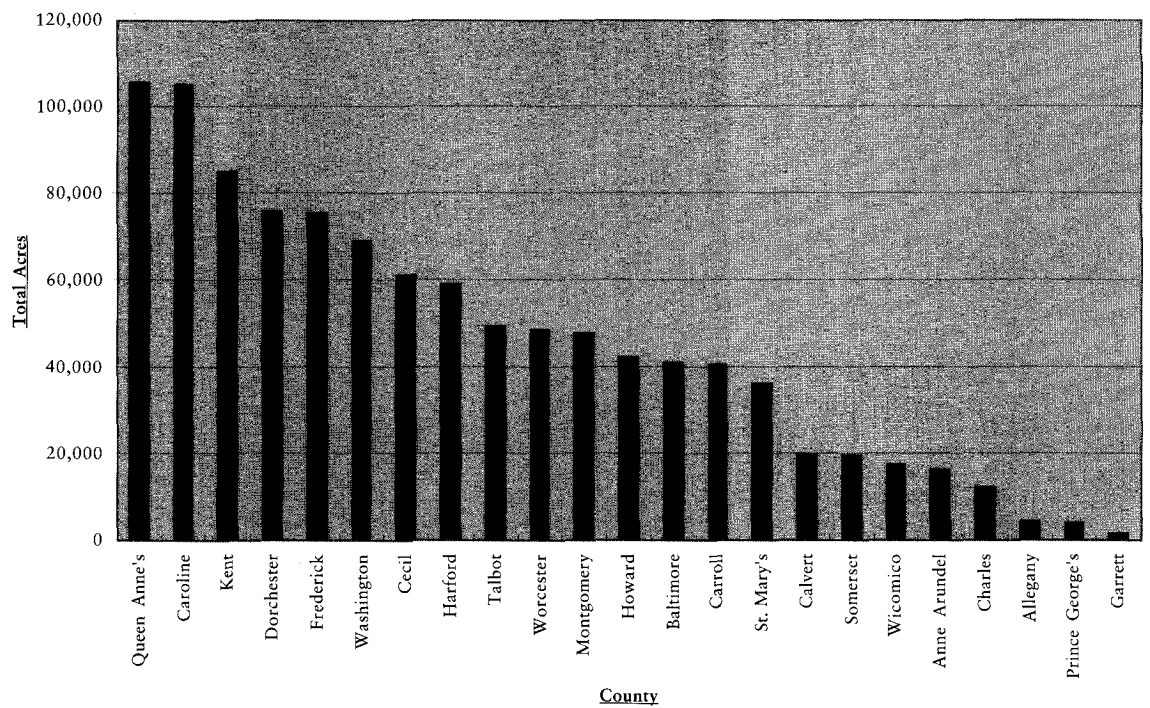
AGRICULTURAL SOILS

Map One is located in the back pocket of this report. Graphs related to Map One are on pages 10 and 11.

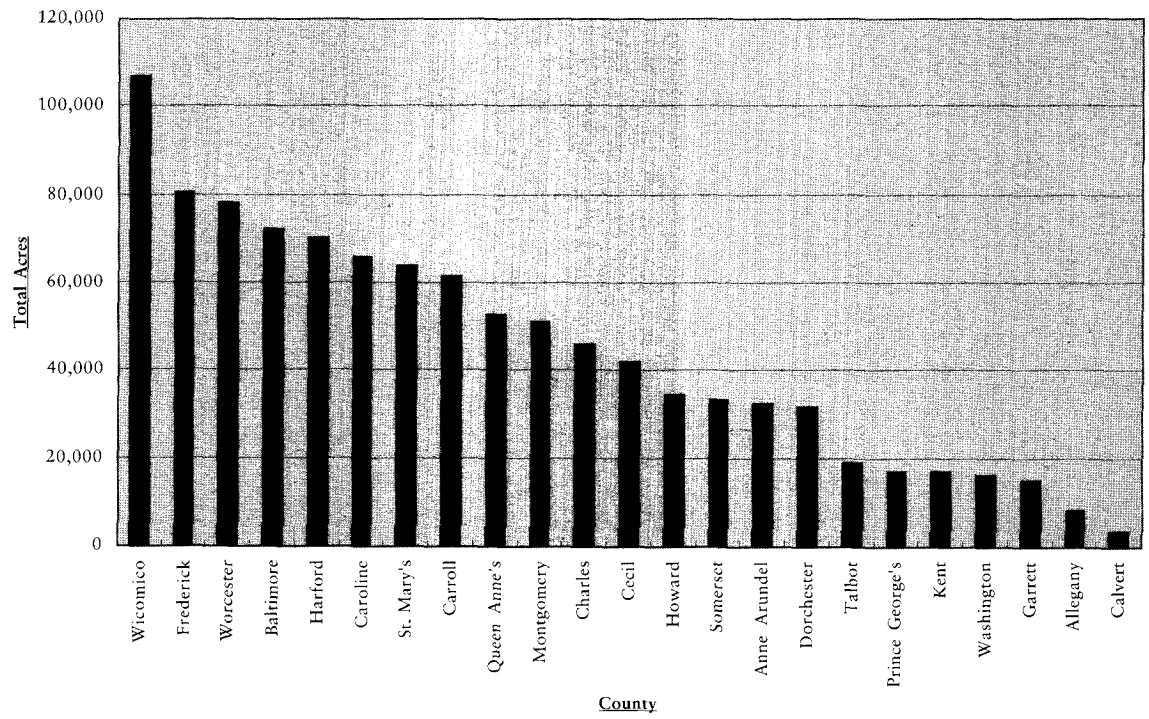
GRAPH 1: SOIL TYPES, BY REGION



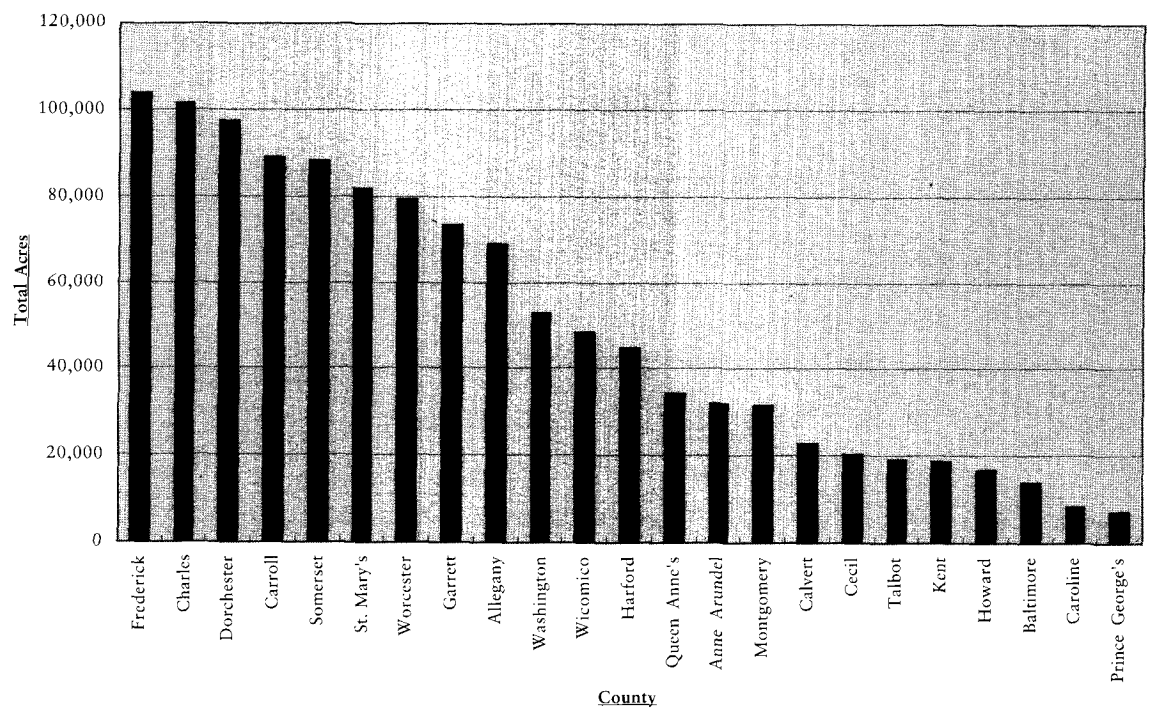
GRAPH 2: PRIME SOILS, BY COUNTY



GRAPH 3: PRODUCTIVE SOILS, BY COUNTY



GRAPH 4: OTHER SOILS, BY COUNTY



Why Was the Map Created and What Information Does it Include?

MAP TWO: MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD

*Map Two is located in
the back pocket of this
report. Graphs related
to Map Two are on
pages 13 and 14.*

The economic productivity of agricultural land is not based solely on soil productivity. Non-soil factors also can strongly influence agricultural productivity. Non-soil factors include capital investments in facilities for livestock and agronomic crops. These types of investments can yield high economic output independent of the quality of soils on a farm. Regional variations in topography and climate also affect agricultural productivity in terms of the types of crops that may be grown successfully and their yields. So does the distance to retail and wholesale markets. For example, vegetables may not be grown on soils suitable for vegetables if there is no local market for them. This map provides a picture of the geographic distribution of agricultural productivity, reflecting several soil and non-soil factors of economic productivity.

The data for this map pertains to the total market value of agricultural products sold in a county for a given year. In this case, the CFFB chose 1992 because it is the most current year for which data is available. The source of the data is the U.S. Census of Agriculture. Only data for an entire county is published, so it is not possible to map variations in market value of products at a finer level of detail than the counties. It is possible, however, to represent market sales per acre, rather than total sales for the entire county. Total sales for the entire county is, in part, a reflection of the total acreage of farmland in a county. Therefore, a county with a large amount of farmland could have greater total sales than another county merely by virtue of having more acres of farmland. Sales per acre, which is the product of dividing total county sales by total acres of county farmland, describes the productivity inherent in a county's farmland regardless of how much farm acreage exists in a county.

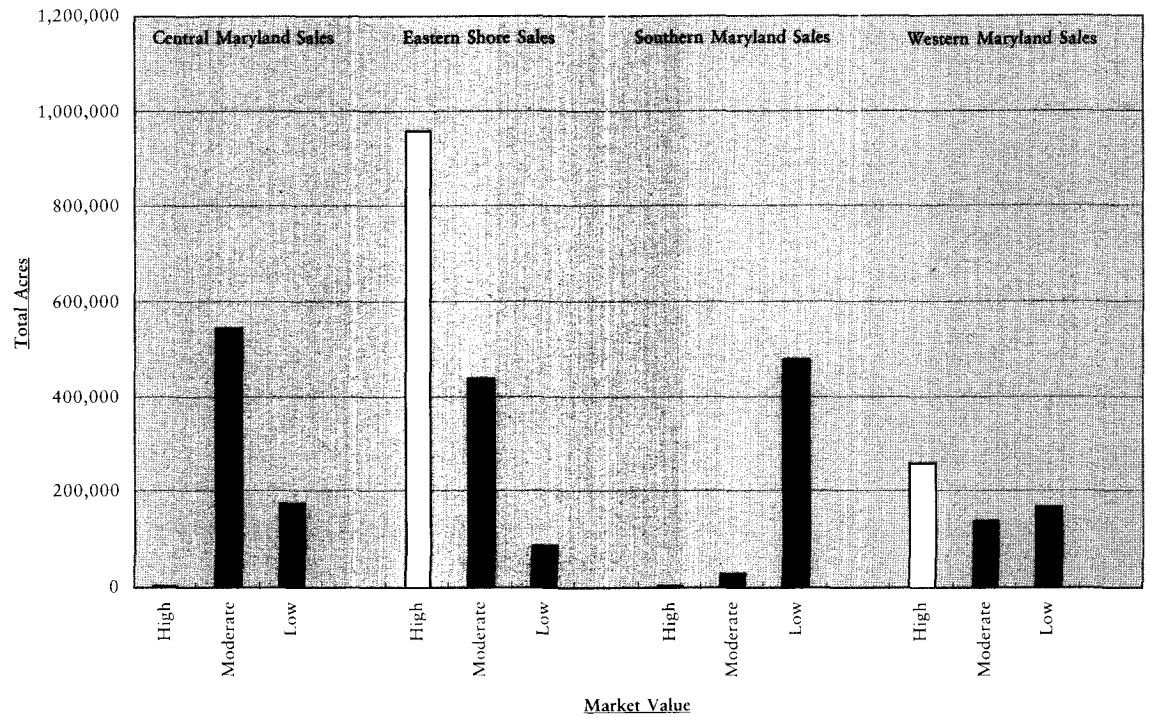
Three categories of market value are included in this map: high sales per acre, moderate sales per acre and low sales per acre. They are defined as follows: high sales per acre is \$487 to \$2,958, moderate sales per acre is \$325 to \$487 and low sales per acre is \$90 to \$325. The groupings are based on what are referred to as "natural breaks" in the data, or areas where there is a significant gap between dollar amounts.

How Do We Interpret the Map?

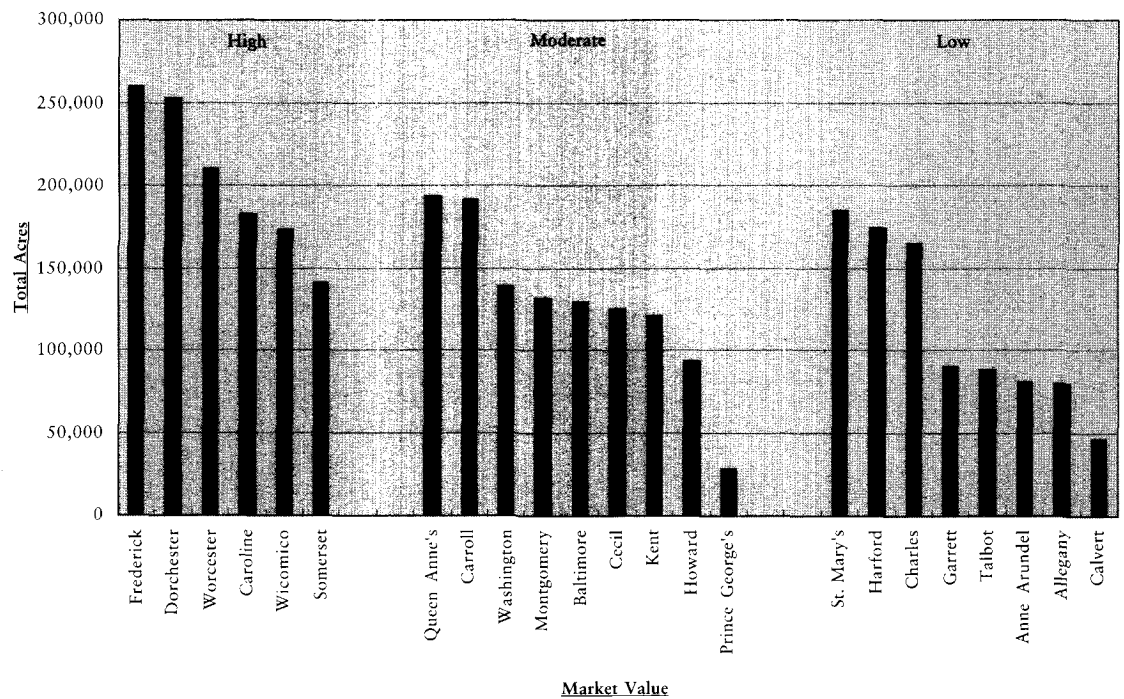
The counties that receive a "high" ranking are Caroline, Dorchester, Somerset, Wicomico and Worcester. Poultry farming is the primary type of farming in these counties. In 1992, the market value of agricultural products sold in these counties was approximately \$85 million, \$64 million, \$102 million, \$164 million and \$131 million, respectively. Frederick County, a dairy farming county, also receives a high ranking. The market value of agricultural products sold in Frederick County was approximately \$109 million in 1992⁶.

The sales distribution may reflect statewide variations in soil productivity since the southern and western regions of the state, which lack productive soils, also rank low on sales.

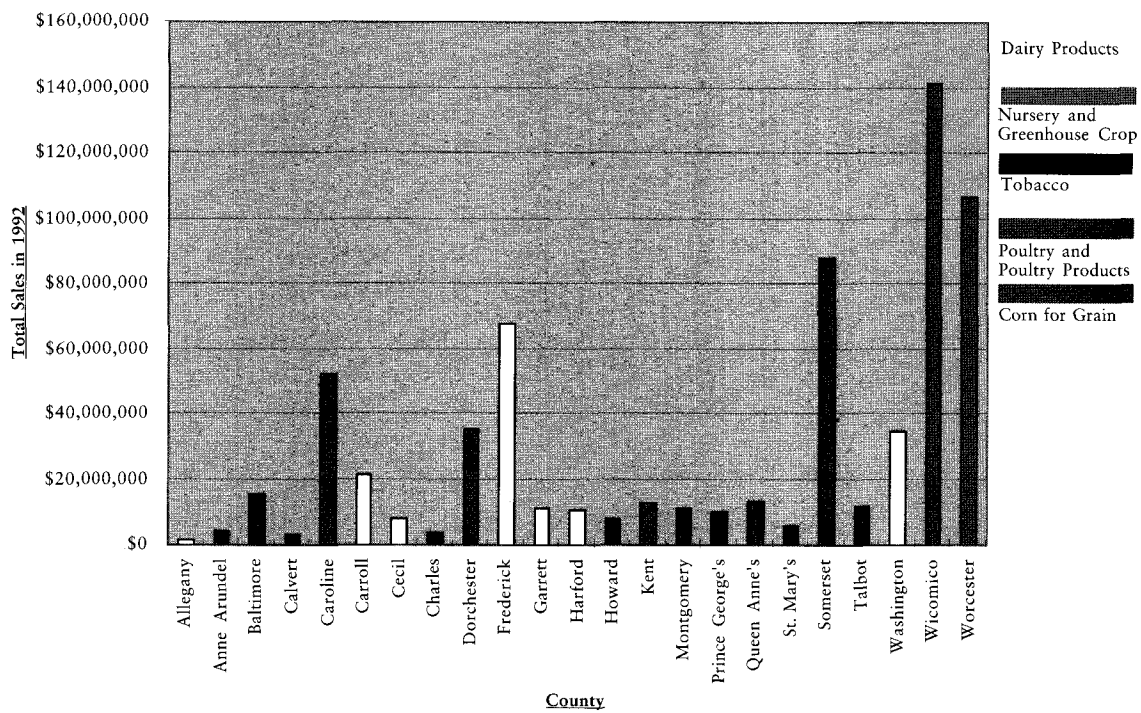
GRAPH 5: MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD PER ACRE, BY REGION



GRAPH 6: MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD PER ACRE, BY COUNTY

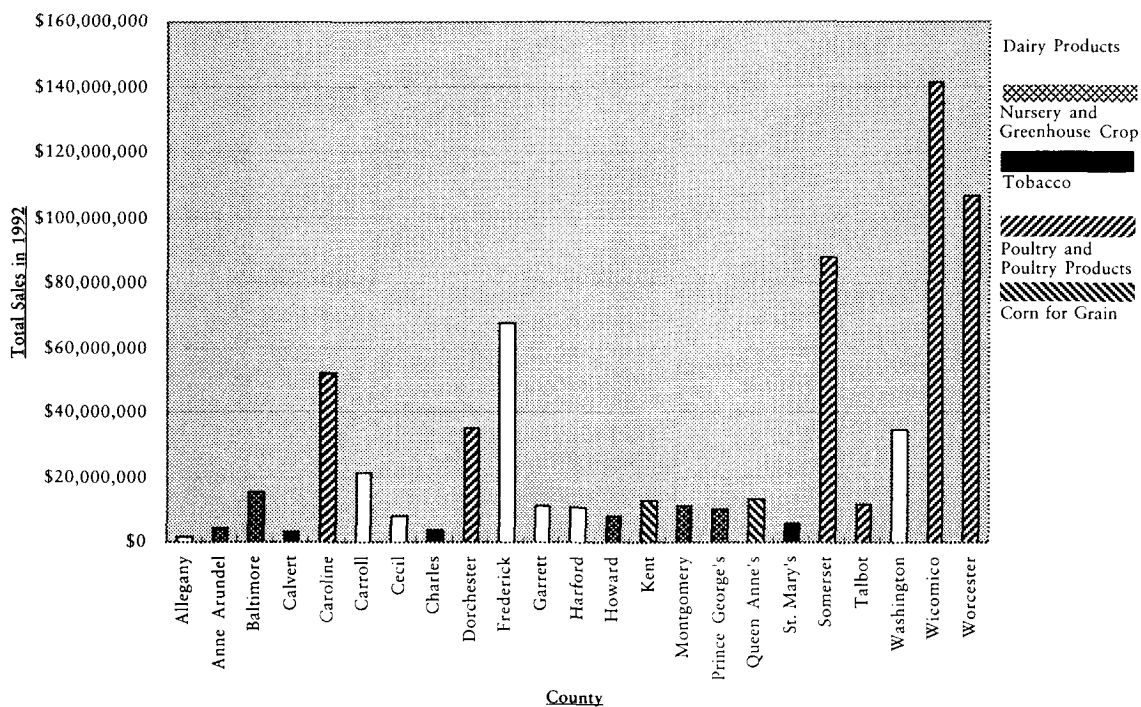


GRAPH 7: LEADING AGRICULTURAL PRODUCTS (ACCORDING TO SALES IN 1992)



Graph 7/Source: U.S. Census of Agriculture (1992)

GRAPH 7: LEADING AGRICULTURAL PRODUCTS (ACCORDING TO SALES IN 1992)



Graph 7/Source: U.S. Census of Agriculture (1992)

CORRECTION

The above graph is as it should appear on page 14 of the Farms for the Future Report.

In addition, the photographs on pages 35 and 63 are by Chesapeake Wildlife Heritage.

Why Was the Map Created and What Information Does it Include?

For many farmland protection programs in Maryland, one of the most important criteria in determining what farmland to protect is the amount of development pressure the farm faces. Farms with a high degree of development pressure generally receive high priority when ranking easement applications.

This map shows the distribution of the projected increase in development throughout the state. Specifically, it reveals the agricultural areas most at risk from residential development. There are five levels of projected increases in residential development: low, low-moderate, moderate, moderate-high and high. For each level, the projections are for increases between 1995 and 2020. Nondevelopable land (e.g., steep slopes and wetlands) was excluded before determining what land is likely to be developed.

It is important to note that zoning directly influences the projected increase in development. Zoning regulations establish limits on the potential for population growth by regulating development densities (i.e., the number of houses that may be built in an area). In other words, strong zoning dampens development pressure, whereas weak zoning increases it. The high projected increase in development per acre in Howard County is the clearest indication of this. Howard County has weak agricultural conservation zoning (i.e., the level of protection offered through zoning is categorized as “low”⁷) and is under intense growth pressure from the Baltimore and Washington metropolitan areas. In contrast to Howard County, areas of high projected increases in residential development are largely absent from the neighboring counties of Baltimore and Montgomery, despite those counties being subject to similar metropolitan growth pressures. Both counties possess strong agricultural zoning.

How Do We Interpret the Map?

Regionally, the projected increase in residential development is most acute in central and southern Maryland and shows an association with suburban sprawl expanding outward from the state’s urban centers. A ring of high household increases encircles the cities of Hagerstown, Bel Air, Westminster and Frederick.

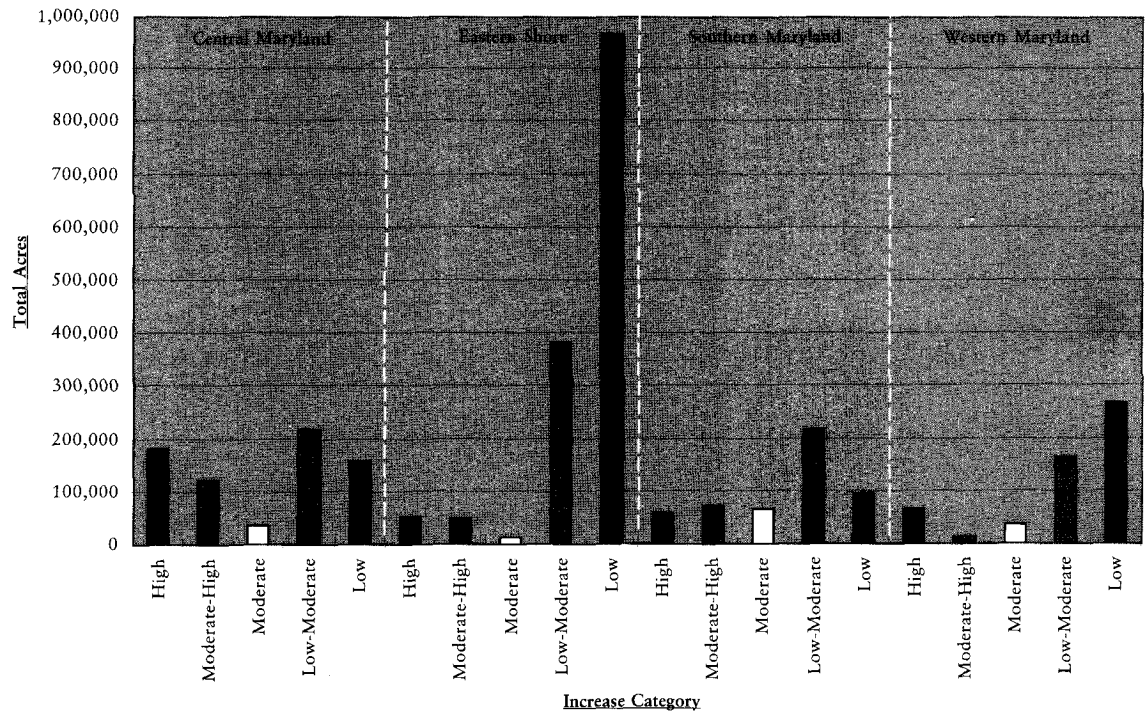
With a high increase in residential development projected on 93,606 acres of farmland, Howard County leads the state in terms of anticipated growth. Howard County is followed by Frederick County (41,282 acres) and Carroll County (39,367 acres). Statewide, only five counties have agricultural zoning that offers a high level of protection from development, and easements protect less than 7 percent of the land that is facing a moderate to high increase in development.

The interpretations from this map could be taken loosely in some areas of the state. Development pressure means different things to different people. Ten new homes in a rural area of the state, for instance, may be considered by rural residents to be threatening, while development in an urban or suburban area might not be considered to be threatening unless more than 100 homes are being built. In some Eastern Shore counties, therefore, where the projected increase in households is categorized as “low,” the development pressure may be considered by local residents to be high enough to warrant protecting the land.

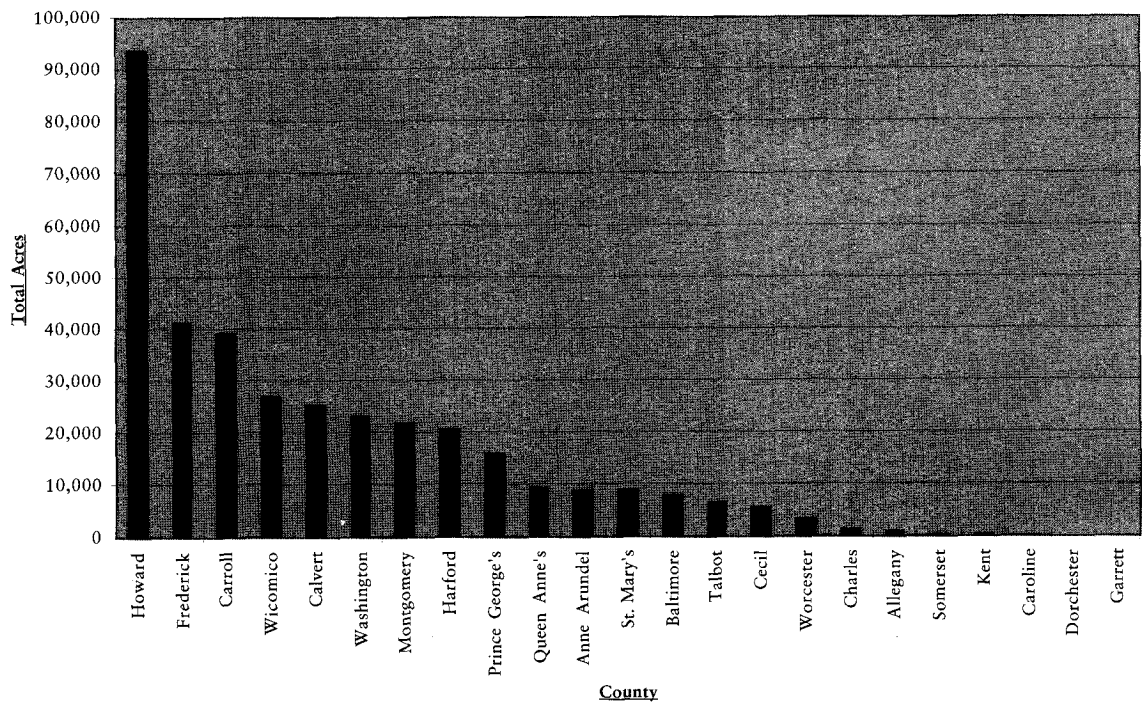
MAP THREE: PROJECTED INCREASE IN RESIDENTIAL DEVELOPMENT

Map Three is located in the back pocket of this report. Graphs related to Map Three are on pages 16 and 17.

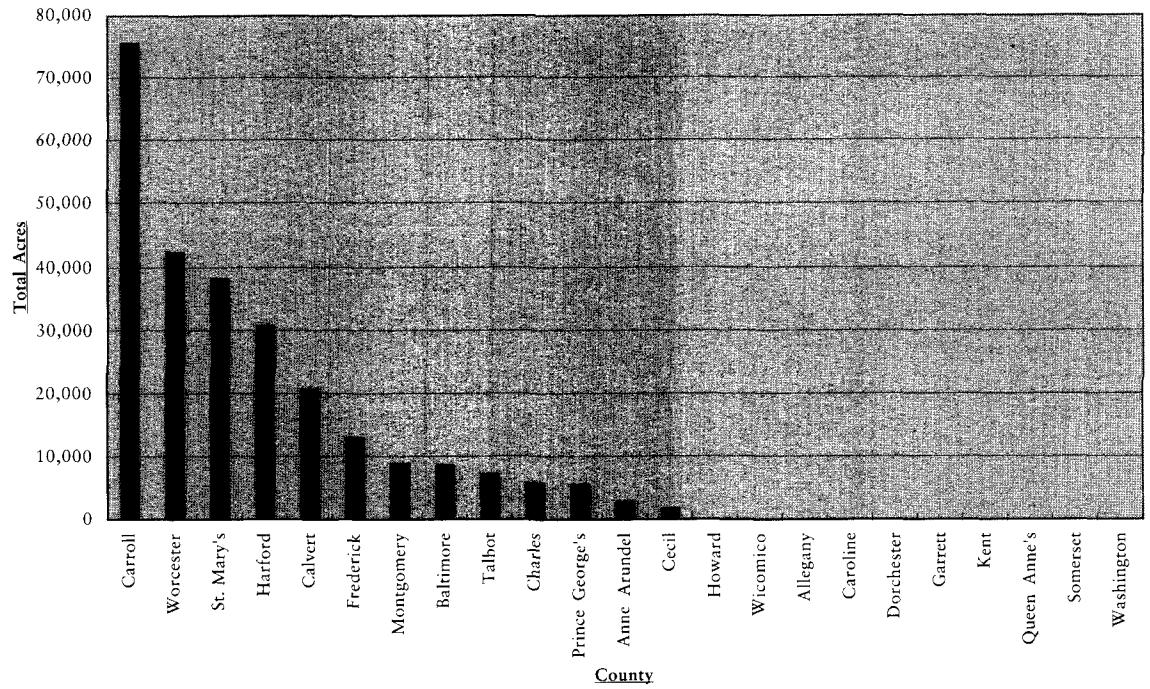
GRAPH 8: PROJECTED INCREASE IN RESIDENTIAL DEVELOPMENT, BY REGION



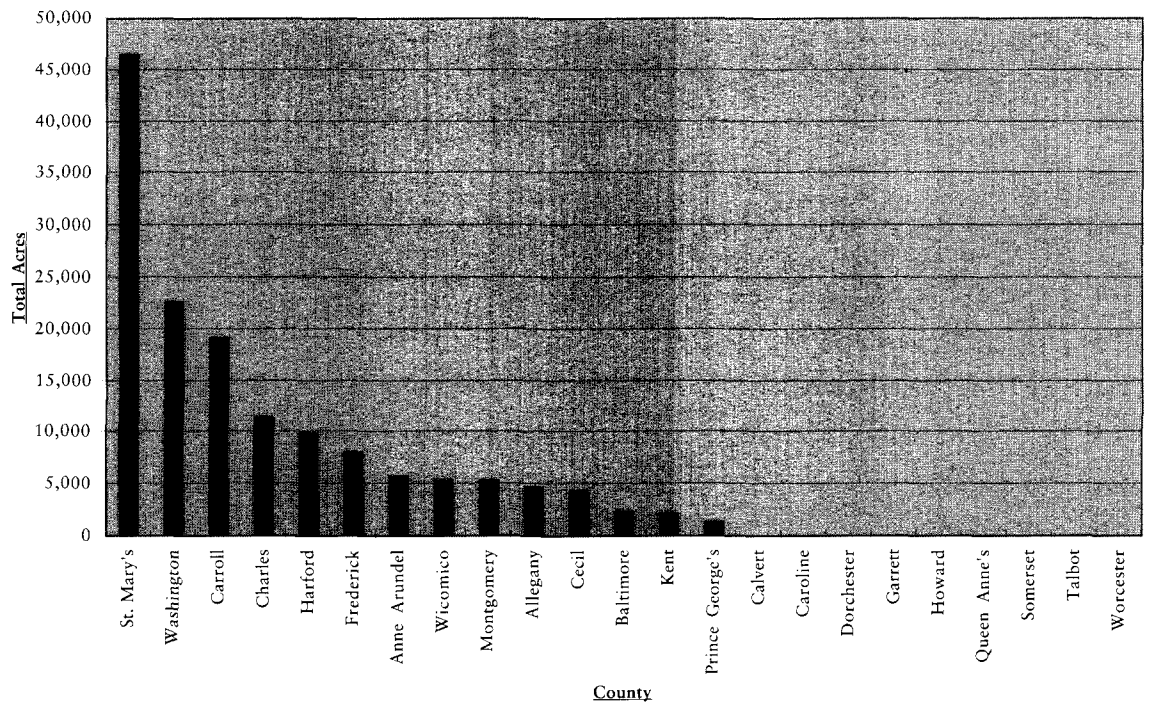
GRAPH 9: PROJECTED HIGH INCREASE IN RESIDENTIAL DEVELOPMENT, BY COUNTY



GRAPH 10: PROJECTED MODERATE-HIGH INCREASE IN RESIDENTIAL DEVELOPMENT, BY COUNTY



GRAPH 11: PROJECTED MODERATE INCREASE IN RESIDENTIAL DEVELOPMENT, BY COUNTY



Why Was the Map Created and What Information Does it Include?

MAP FOUR: SIGNIFICANT

ENVIRONMENTAL, CULTURAL AND HISTORIC FEATURES

*Map Four is located in
the back pocket of this
report. Graphs related
to Map Four are
on page 19.*

The purpose of this map is to show broad areas of farmland rich in particular environmental, cultural and historic resources. These resources are significant, yet often overlooked, attributes of farmland.

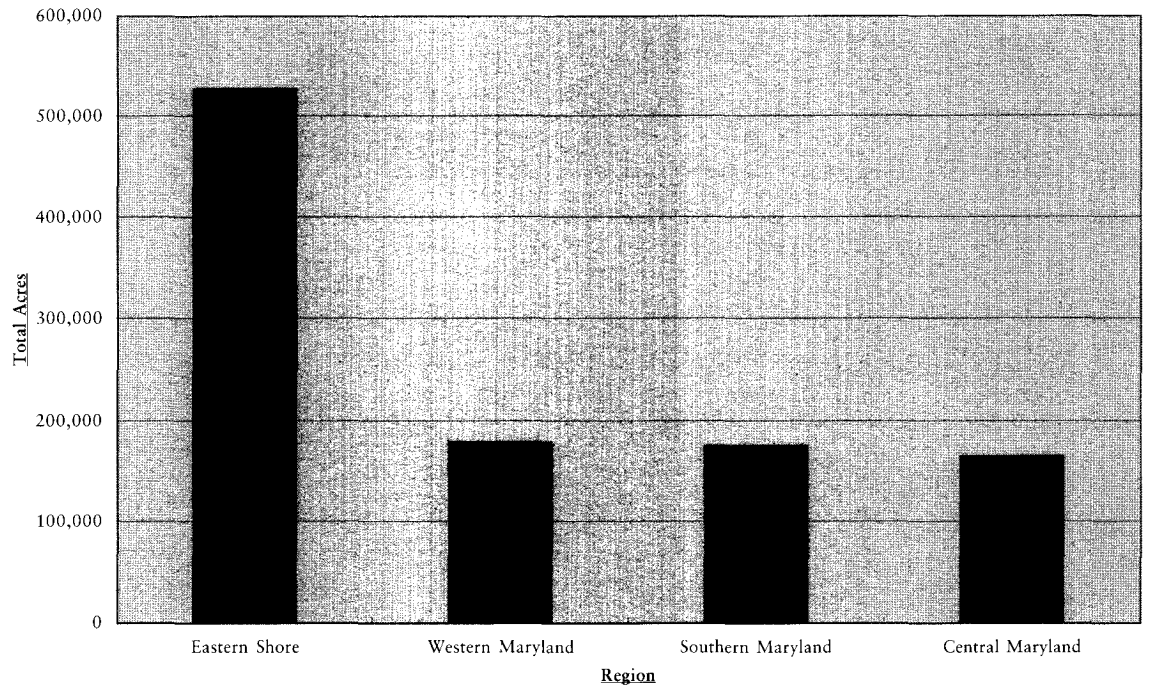
This map highlights wetlands, which provide a wide range of benefits, including wildlife and aquatic habitat and absorption of pollutants. It also identifies large contiguous blocks of forests, which are important because they are home to a variety of important species, including warblers and other forest interior-dwelling birds. Generalized areas within which rare, threatened and endangered species habitat exist are identified. Called Sensitive Species Project Review Areas, they are highly generalized in the state's database to prevent collectors or vandals from locating the specific habitat. Also highlighted are Chesapeake Bay Critical Areas (i.e., land along the shoreline), archaeological sites, and historic buildings and properties. To avoid cluttering the map, only areas with a concentration of cultural and historic features are shown.

This mapping is meant to be representative, rather than fully inclusive. Especially for environmental resources, it includes some but not all of the full range of such resources that may be present on farmland. Forested riparian buffers, for example, are not mapped. The availability of suitable statewide map data and the minimum mapping unit of 15.4 acres limits the map's inclusiveness at the state level. The content of the map can be expanded over time as more statewide map data for environmental resources becomes available. Also, resource inventories of farm properties can provide additional and more detailed information on the location and types of resources present on farmland.

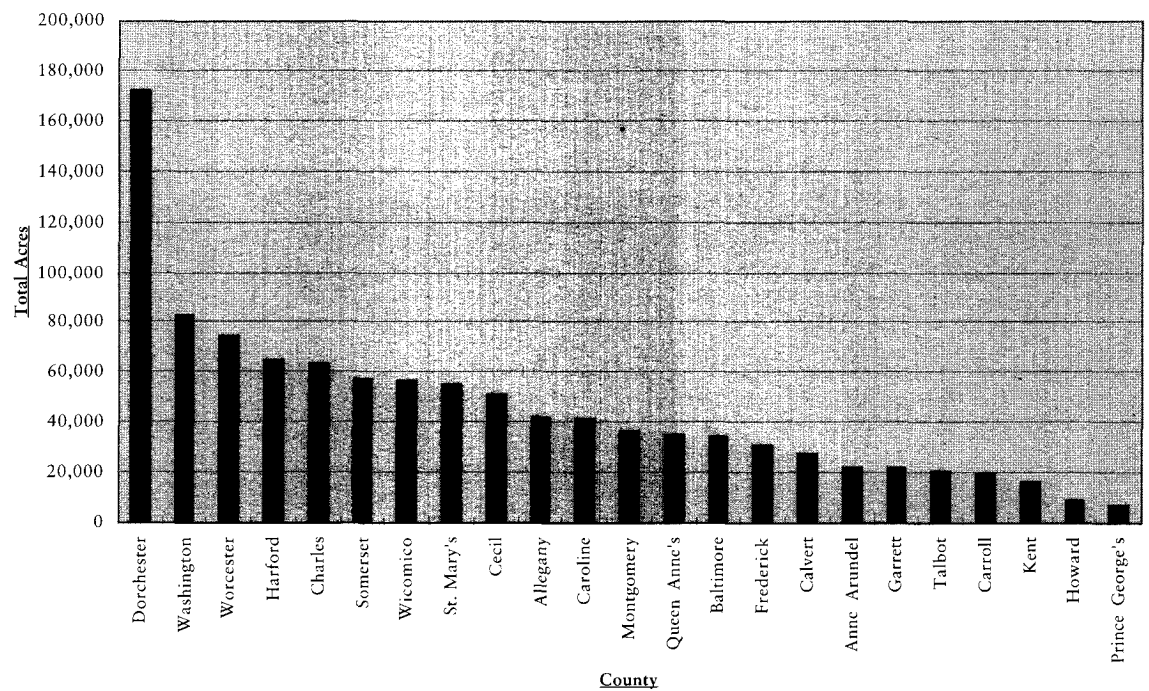
How Do We Interpret the Map?

Environmental, cultural and historic resources are widely scattered across the state. The greatest number of environmental, cultural and/or historic features on land zoned for agricultural conservation exists on the Eastern Shore. In terms of individual counties, Dorchester (172,494 acres), Washington (82,826 acres) and Worcester (74,981 acres) counties lead the state. Dorchester County ranks highest because of its large percentage of wetlands on farmland and large amount of Delmarva fox squirrel habitat.

GRAPH 12: SIGNIFICANT ENVIRONMENTAL, CULTURAL AND HISTORIC FEATURES,
BY REGION



GRAPH 13: SIGNIFICANT ENVIRONMENTAL, CULTURAL AND HISTORIC FEATURES,
BY COUNTY



Why Was the Map Created and What Information Does it Include?

MAP FIVE: STRATEGIC CHARACTERISTICS OF FARMLAND

This map combines information from the following maps: soils (prime and productive soils only), projected increase in residential development (high, high-moderate and moderate increases only), and significant environmental, cultural and historic features. This map, therefore, contains the most important features from the individual maps mentioned above. It shows the “best of the best.” The features are overlaid, so the map identifies farmland with one, two or up to three of these features. The map can serve as a guide for strategic planning for agricultural and rural preservation programs and as a tool for evaluating past program performance on protected land.

Map Five is located in the back pocket of this report. Graphs related to Map Five are on page 21.

This mapping is not intended to be all-inclusive. For example, adequate data was not available to map variations in the viability of farming as influenced by suburban development—an important strategic factor to consider. Nor is the map meant to define strategic value in an absolute sense. This map does not place value judgments on the worth of one characteristic or combinations of characteristics over another. Each state or local program will make its own judgments about strategic value in line with its goals.

The “strategic characteristics of farmland” map does not include information from the “protected lands” and “market value of products sold” maps. Protected lands information was excluded because this map identifies important features, not how the counties protected those features. The market value of products sold was not included because the coarse, county level of detail of that mapping limits its usefulness when combined with the more detailed mapping of the other information.

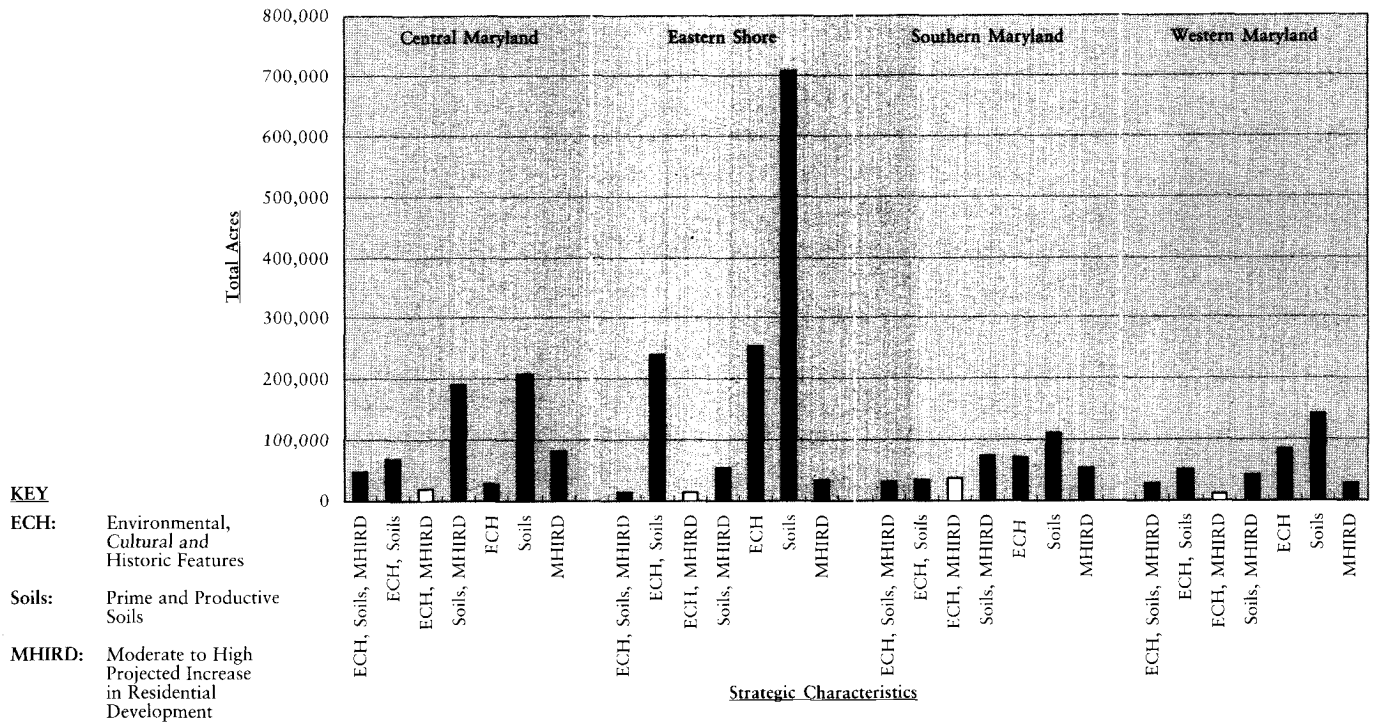
How Do We Interpret the Map?

While the specific definition of strategic farmland may vary from county to county, soil productivity, the threat of residential development and the presence of important environmental, cultural and historic features are undeniably three major values for consideration in defining the strategic importance of farmland. On that basis, the map suggests a hierarchy of strategic value in terms of the number of values occurring in a given location. Lands possessing all three characteristics receive the maximum benefit for preservation dollars, lands with two characteristics provide the next highest benefit, and so on, in descending order. It is important to keep in mind that the weaker the zoning, the weaker the benefit for preservation dollars.

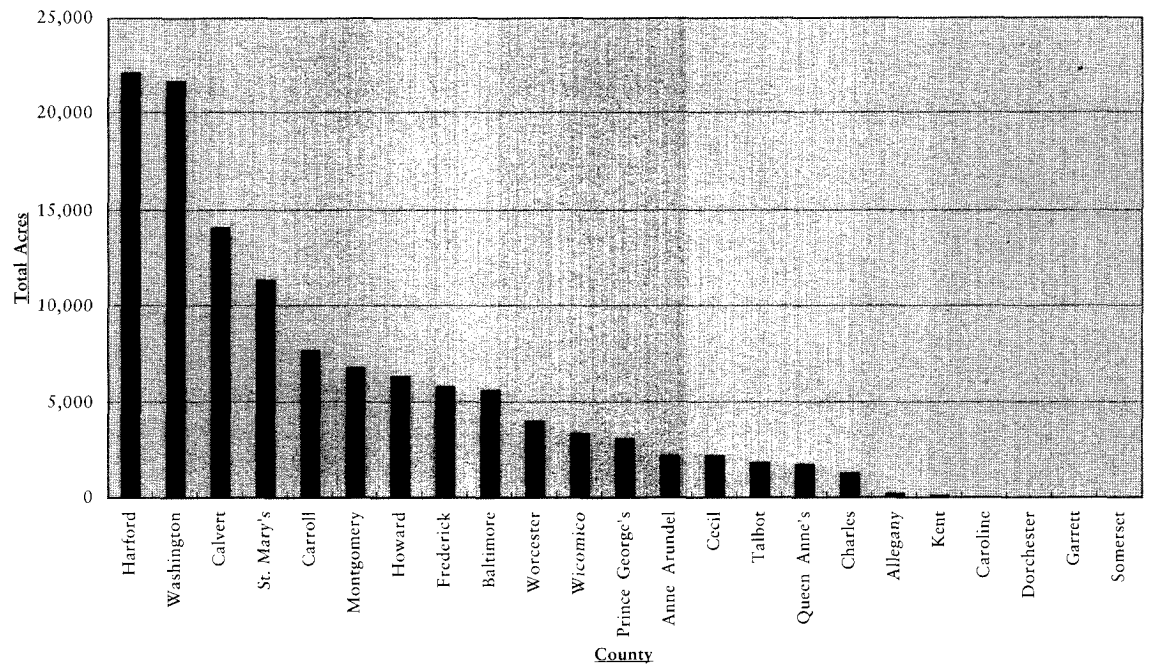
Less than 4 percent (121,236 acres) of the land in the state that is zoned for agricultural conservation has all three of these features. The leading counties are Harford (22,131 acres) and Washington (21,699 acres). One of the largest areas of such land exists in Washington County, southeast of Hagerstown. This is the area near Antietam Battlefield, the focal point of many local, state and federal preservation initiatives.

Approximately 25 percent (848,308 acres) of the land in the state that is zoned for agricultural conservation has two of these features and 55 percent (1.8 million acres) has one.

GRAPH 14: STRATEGIC CHARACTERISTICS, BY REGION



GRAPH 15: SIGNIFICANT ENVIRONMENTAL, CULTURAL AND HISTORIC FEATURES, PRIME OR PRODUCTIVE SOILS AND MODERATE TO HIGH PROJECTED INCREASE IN RESIDENTIAL DEVELOPMENT ALL PRESENT



Why Was the Map Created and What Information Does it Include?

MAP SIX: PROTECTED AGRICULTURAL LAND

Map Six is located in the back pocket of this report. Graphs related to Map Six are on pages 23 and 24.

This map illustrates the current state of farmland protection in Maryland. Therefore, it is one of the indicators of the effectiveness of farmland protection programs. The map identifies what farmland is protected and how it is protected. Specifically, the map highlights land protected with a perpetual conservation easement acquired through a PDR or TDR program or donated to a private land trust; land enrolled in a state agricultural district; and land protected by agricultural conservation zoning. Three colors are used to distinguish between the levels of protection (high, moderate or low) offered through zoning. The map further indicates whether farmland protection occurs in contiguous, clustered or dispersed patterns; where farmland protection is or is not targeted; the regional differences in farmland protection efforts; and whether state or county programs predominate in a county.

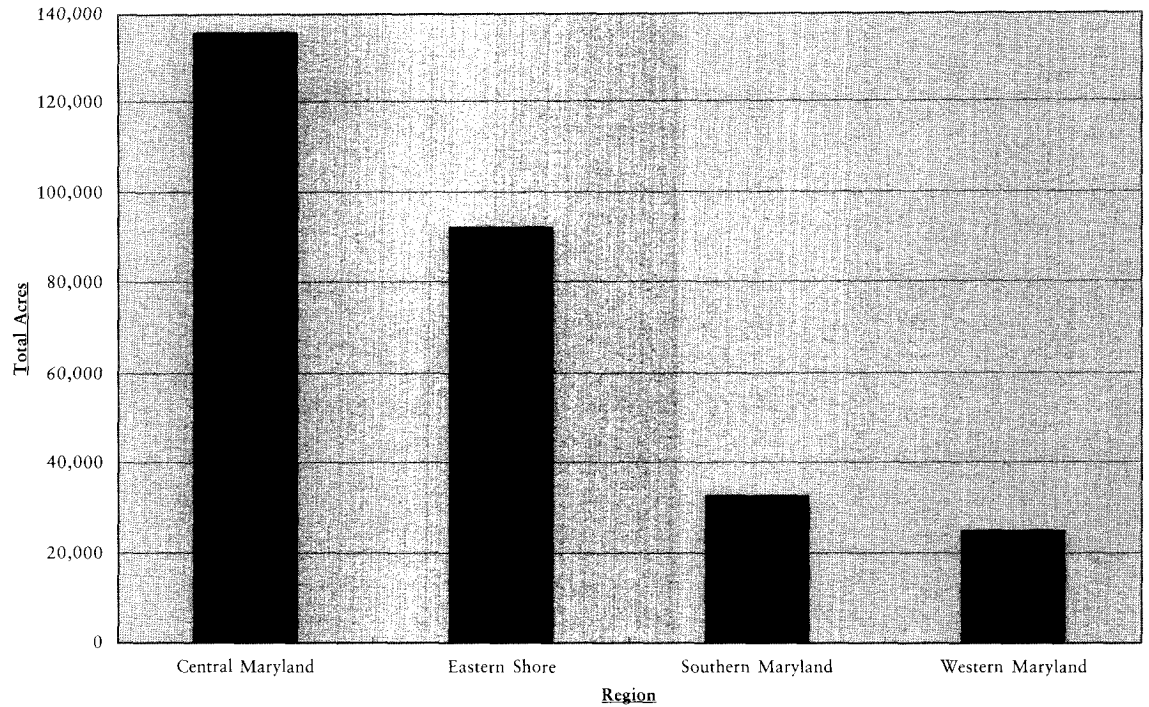
How Do We Interpret the Map?

Agricultural districts and easements held by the state are concentrated in the central and mid-Eastern Shore regions. For easements, Carroll County leads in the central region and Caroline County leads in the mid-Eastern Shore region. Easements protect approximately 20,000 acres of land in Carroll County and 27,000 acres in Caroline County. Most easements sold through county PDR and/or TDR programs are located in a handful of western shore counties, primarily counties in central Maryland. With a few exceptions, counties outside central Maryland do not make use of these farmland protection techniques. The largest concentration of easements held by private land trusts are in Baltimore, Kent and Talbot counties, where a total of more than 23,000 acres of farmland are protected with easements.

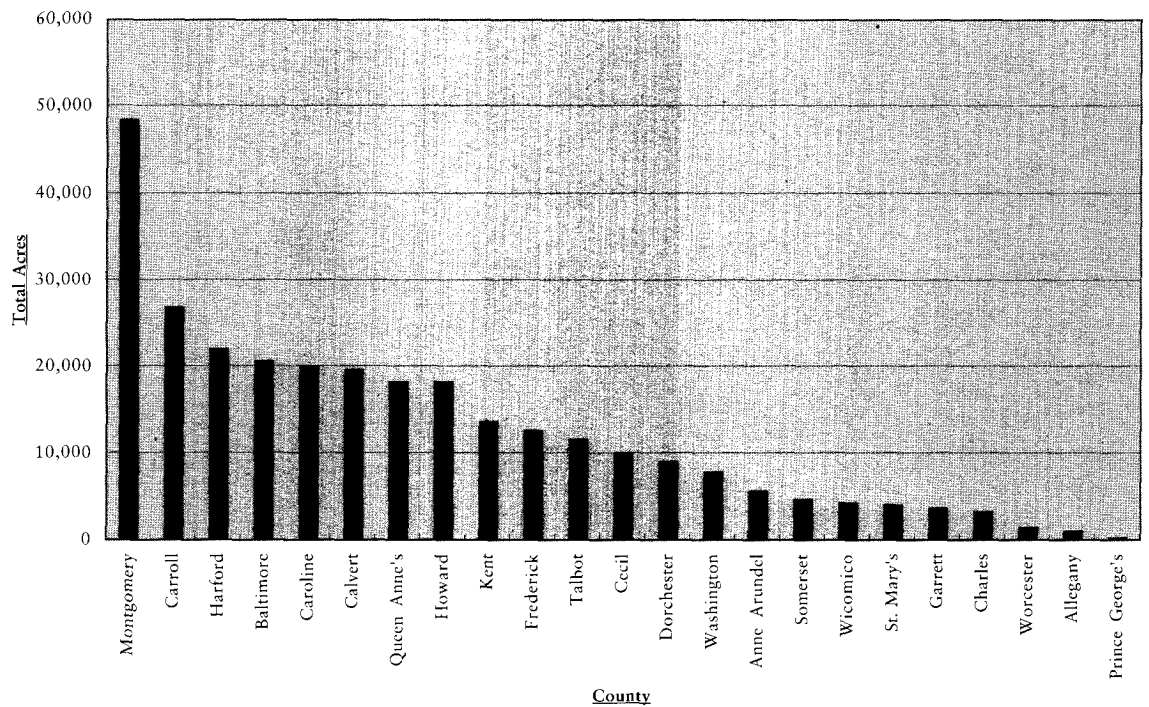
The most effective agricultural conservation zoning (i.e., zoning that offers a high level of protection) is in Allegany, Baltimore, Frederick, Montgomery and Worcester counties. Of these counties, Baltimore is home to the best zoning for agriculture. In Baltimore County, landowners in the primary agricultural conservation zone can subdivide one time on lots of record that are between 2 and 100 acres, then build 1 dwelling unit per 50 acres. As with the zoning category that offers a high level of protection, zoning districts that offer a moderate and low level of protection are scattered throughout the state rather than concentrated in a particular region. Moderate and low categories of zoning generally are not effective in protecting agricultural land because they allow houses to be built on large lots, which can drive up the fair market value of farmland and increase conflicts between farmers and their non-farming neighbors. Large lots also are damaging to the Chesapeake Bay. The sediment loads from low density sprawl, for instance, are approximately 14 times higher than for compact residential development⁸. In counties such as Washington and Charles, where the minimum lot size in the agricultural conservation zone is one acre and three acres, respectively, zoning does little to protect agricultural land.

Contiguous, clustered patterns of protected land are most evident in central Maryland and, to a lesser extent, in Cecil and Caroline counties. For the most part, however, protected land exists in thin, scattershot patterns throughout the state.

GRAPH 16: ALL EASEMENTS, BY REGION*

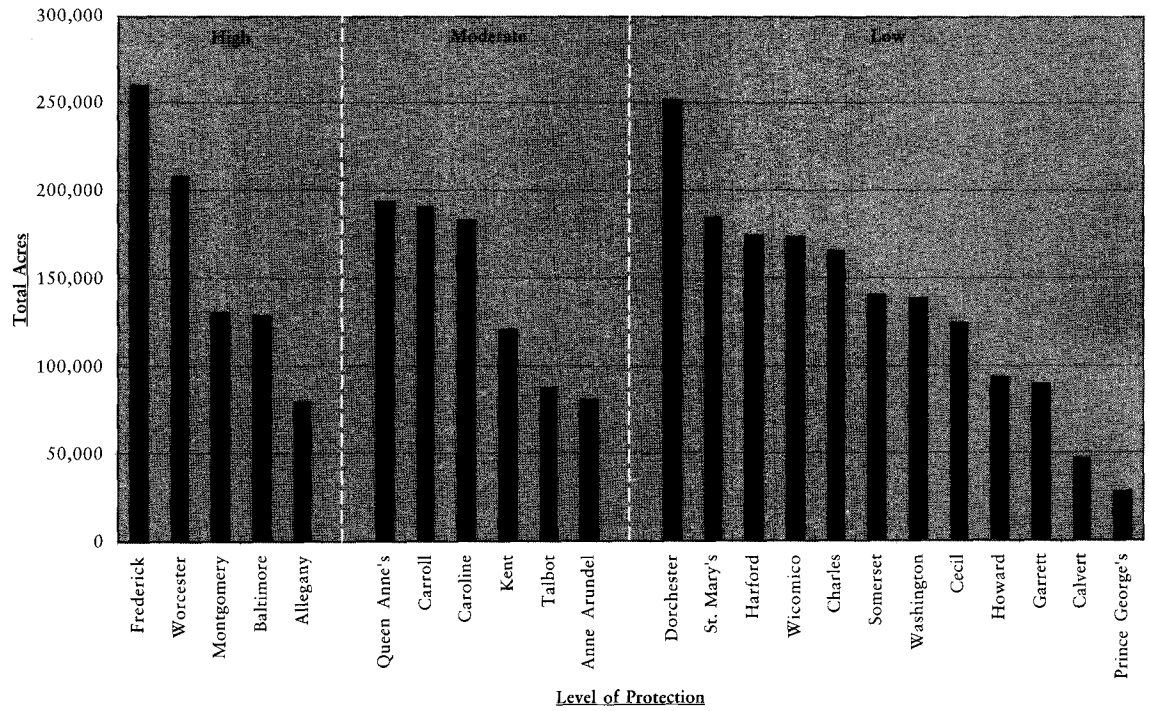


GRAPH 17: ALL EASEMENTS, BY COUNTY*



* Graph includes all easements acquired or donated through county and state PDR programs, TDR programs and private land trusts, as of December 1, 1997. On map, all state easements and districts are current through 1994 and most other easements and districts are current through 1996.

GRAPH 18: AGRICULTURAL CONSERVATION ZONING*



* For this project, all land in Garrett County that is categorized as agricultural land use/land cover and is not zoned is considered to be zoned for agricultural conservation. In Prince George's County, all land zoned as Residential-Agriculture is considered to be land zoned for agricultural conservation.

Graph 18/Source: Earth Satellite Corp. (1998)

The Model Farmland Protection Program

The CFFB developed the nation's first model farmland protection program. The model program is the ideal to which the CFFB recommends communities in Maryland should aspire if they want to protect strategic farmland. It provides a structure for developing new farmland protection techniques and a benchmark for evaluating techniques that already are being used. There are two key elements to the program:

Coverage: Protect the proper quality and quantity of farmland. This includes all farmland with one or more strategic assets, as identified on the CFFB's maps. Which assets are important may vary throughout the state because the reasons for saving farmland may vary.

Comprehensiveness: Use a mix of incentive-based and regulatory techniques. This includes PDR, TDR, donations of development rights, agricultural conservation zoning, cluster zoning, right-to-farm protection, property tax credits, agricultural economic development programs, targeting public infrastructure to existing developed areas, cost-share programs and comprehensive planning. The program includes techniques that are administered at the county, state and federal levels, both in the public and private sectors. Simply having a mix of techniques is not enough. The techniques are effective only if they offer strong protection over the long term. For example, an agricultural conservation zoning ordinance is not effective unless it limits high density development and is adhered to when rezoning requests are proposed.

On the following page is a description of the CFFB's model farmland protection program. Table 1 on pages 26-27 summarizes all of the characteristics of the model program. In developing the program, the CFFB drew from successful programs in Maryland and other regions of the country. Several members of the CFFB have firsthand experience in administering those programs, and others have participated in them (e.g., creating an easement through a PDR program).

Coverage

"Coverage" refers to the quantity and quality of land protected. The goal of the model program is to protect all of the strategic farmland identified through the CFFB's mapping project. As described earlier, strategic farmland has one or more of the following characteristics: prime or productive soils; significant environmental, cultural or historic features; and a projected moderate to high increase in residential development. Because the importance of each criteria may differ between regions, the CFFB did not specify which features are the most important. This is a decision that must be made locally because the needs of the community are best understood at the local level. Farmland with one, two or all three of these features may be the farmland that receives the highest priority for protection. The techniques included in the model program can help communities reach this goal. For instance, methods used in PDR programs to rank easement applications can give highest priority to strategic farmland; maps that delineate agricultural zoning districts can include all strategic farmland in the agricultural conservation zone; and TDR program sending areas can include strategic farmland.

THE MODEL FARMLAND PROTECTION PROGRAM

COVERAGE

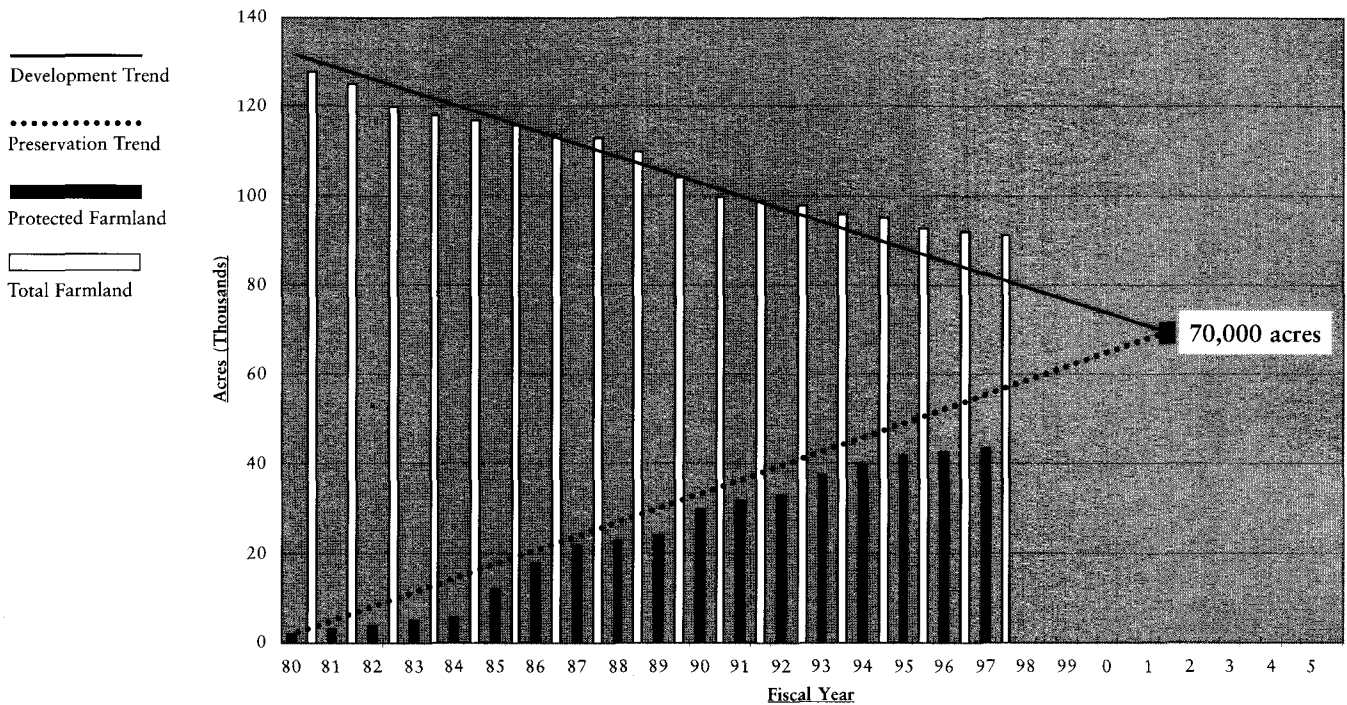
TABLE ONE: MODEL FARMLAND PROTECTION PROGRAM

Successful farmland protection programs are built on a mix of techniques. County, state and federal programs and policies, both in the public and private sectors, each play a different role in protecting farmland. Following is a description of the "model" farmland protection program for Maryland. The program is comprehensive and protects strategic farmland. Each technique listed is available in each county of the state. It is funded, administered or enforced by the federal, state and/or county government, or a private entity. The codes in the first column refer to who administers, funds or enforces the technique. C = county, S = state, F = federal, Pu = public entity and Pr = private entity.

C, S, F Pu, Pr	Quantity of Land Protected	<ul style="list-style-type: none"> Using a mix of incentive-based and regulatory techniques, protect all strategic farmland (see definition for "strategic" in Quality of Land Protected category below).
C, S, F Pu, Pr	Quality of Land Protected	<ul style="list-style-type: none"> Using a mix of incentive-based and regulatory techniques, protect strategic farmland. Strategic farmland has prime or productive soils, a projected moderate to high increase in residential development and/or significant environmental, cultural or historic features.
C Pu	Agricultural Zoning	<ul style="list-style-type: none"> Level of protection offered through zoning is "high" (i.e., average lot size is 20 acres or larger). Maximum lot size permitted is less than or equal to two acres. Zoning ordinance is at least 10 years old. Proposals to rezone strategic farmland located outside of designated growth areas are denied. As a result, the size of the zoning district has remained the same, or increased, since zoning ordinance was adopted.
C Pu	Cluster Zoning	<ul style="list-style-type: none"> Cluster zoning is mandatory. Non-farm development is restricted to no more than 20 percent of the parcel. Undevelopable land is deducted before determining how much land must remain as farmland. Portion of the parcel that is not developed is protected by a permanent easement that states agriculture is the primary use of the land. Clustered development is restricted to transition areas (areas between rural and urban communities); it is prohibited adjacent to strategic farmland.
C, S Pu	Right-to-Farm Provisions	<ul style="list-style-type: none"> Right-to-farm provisions are included in a right-to-farm law or zoning or subdivision ordinance and protects farmers and farm operations in public and private nuisance lawsuits. The provisions include a mechanism for dispute resolution; encourage and, if possible, require the inclusion of agricultural disclosure notices as part of purchase and sale agreements; and require the placing of agricultural disclosure notices on subdivision plats and tax maps.
C Pu	Transfer of Development Rights Program	<ul style="list-style-type: none"> An average of at least 1,000 acres of farmland are protected annually as a result of the TDR program. Program is mandatory (i.e., agricultural conservation zoning is used to reduce the amount of development that can occur in the sending area). Receiving area(s) is delineated when TDR program is established. This area is designated as a growth area in the comprehensive plan and has the physical capacity, infrastructure and design standards to absorb additional development. Also, the base density in the receiving area is low enough to create a demand for TDRs. Sending area(s) is delineated when TDR program is established. This area is designated as a non-growth area in the comprehensive plan and has as an infrastructure that supports commercial agriculture. Supply of development rights is equal to the demand to purchase development rights.
C, S, F Pu, Pr	Purchase of Development Rights Program	<ul style="list-style-type: none"> An average of at least 1,000 acres of farmland are protected annually as a result of the PDR program. Revenue from the agricultural transfer tax is not the only source of funding for the program. Federal, state and/or county funds are dedicated to the program for a minimum of five years, especially if interest in the program is high and easement values are high. County and state programs use an easement ranking system that gives highest priority to protecting strategic farmland. State program provides counties with the option of requesting the state to use the county OR the state system when ranking easements. Easements are permanent and monitored at least once every two years. A soil and water conservation plan that includes best management practices is required for all easement properties. Government agencies work cooperatively with nonprofit organizations (e.g., private land trusts) to protect contiguous blocks of strategic farmland. 100 percent of the easement offers made are accepted. Land being considered for easement acquisition must be enrolled in an agricultural district for a minimum of five years. Benefits to enrolling in an agricultural district include eligibility for the easement program, additional right-to-farm protection, eligibility for differential assessment, eligibility for tax credits offered by the jurisdiction where the land is located and limitations on the use of eminent domain.

C, S, F Pu, Pr	Donation of Development Rights or Land	<ul style="list-style-type: none"> • Government and nonprofit agencies encourage owners of strategic farmland to donate their land or the development rights so the land is protected in perpetuity. • Programs to educate landowners about their options for donating land or development rights are targeted to landowners with strategic farmland. • Nonprofit organizations (e.g., private land trusts) work cooperatively with government agencies to protect contiguous blocks of strategic farmland.
C Pu	Property Tax Credit Program	<ul style="list-style-type: none"> • County tax credit is offered for property protected by an easement and/or enrolled in an agricultural district.
C, S Pu	Agricultural Economic Development Program	<ul style="list-style-type: none"> • Program includes activities (e.g., farmers' markets, local labeling, farm tours, agricultural marketing, technical assistance) that help make local agriculture economically viable. • State and county programs are each staffed by at least one full-time employee, or the equivalent, who works cooperatively with the farmland program administrator and economic development office. Staffing for the county program is provided by the county or state economic development office. • Budget is large enough to sustain the primary activities of the program.
C, S, F Pu	Targeting Public Services to Existing Developed Areas	<ul style="list-style-type: none"> • The expansion of infrastructure (e.g., schools, sewer and water services, road) into areas designated for agricultural preservation is prohibited.
C Pu	Staffing	<ul style="list-style-type: none"> • County farmland protection program is staffed by a minimum of one full-time employee.
C, S, F Pu, Pr	Cost-Share Programs	<ul style="list-style-type: none"> • State and federal agencies provide matching funding for the Conservation Reserve Program, Wetlands Reserve Program, Conservation Reserve Enhancement Program, Forest Legacy program, Environmental Quality Incentives Program, Wildlife Habitat Incentives Program and Farmland Protection Program. • Government agencies and nonprofit organizations encourage landowners to participate in the programs listed above.
C, S Pu	Comprehensive Plans	<ul style="list-style-type: none"> • County comprehensive plan includes goals and objectives for protecting farmland with strategic characteristics. The goals and objectives are considered when voting on requests to rezone farmland with strategic characteristics. • Land use element of county comprehensive plan is consistent with the goals and objectives for protecting farmland.

GRAPH 19: PROTECTED FARMLAND ACRES AND TOTAL FARMLAND ACRES
IN MONTGOMERY COUNTY



*The program should
work fast enough
to protect strategic
farmland while allowing
growth to occur on
farmland less important
to agriculture and the
environment.*

In addition to establishing a goal for the quantity and quality of land to protect, the model farmland protection program projects how long it will take to reach this goal. The projection is based on the rate of development within the program's region. As illustrated in Graph 19, Montgomery County projects that it will reach its goal of protecting 70,000 acres by 2005 if it is able to spend approximately \$1.2 million per year on PDR and the current level of agricultural zoning remains inviolate.

The program should work fast enough to protect strategic farmland while allowing growth to occur on farmland less important to agriculture and the environment. This should create a critical mass of farmland. A critical mass is enough farmland to support the retention of an agricultural infrastructure that includes equipment dealers and repair facilities, feed mills, fertilizer and pesticide suppliers and veterinarians, all of which need their farm customers to stay in business.

Note: In assessing the amount of strategic farmland protected through Maryland's programs, the amount of land categorized as agricultural land use/land cover that is zoned for agricultural conservation is a criteria to consider. Agricultural land use/land cover is defined as cultivated fields, pastures, orchards and land with farm buildings. In Maryland's model program, at least 80 percent of the land categorized as agricultural land use/land cover is zoned for agricultural conservation. This evaluation criteria exists in Maryland because the mapping project only identifies strategic farmland that is zoned for agricultural conservation. This is based on the presumption that the land that is most likely to remain in agriculture is land zoned for agricultural conservation. The CFFB decided that it is important for the majority of the land categorized as agricultural land use/land cover to be zoned for agricultural conservation.

Graph 19/Source: Montgomery County Department of Economic Development (1996)

Comprehensiveness

No state legislature or county commission alone can solve the problems facing agriculture. Nor can a private entity, such as a land trust. Each plays a different role in setting the parameters within which farmland can and should be protected because no one technique can address all the challenges of farming in and around developing communities. The reason for this is twofold. First, most techniques have drawbacks and benefits. While a particular technique might make sense for one landowner, it might not be useful to another. Likewise, while one technique might be easy to administer in one place, it might fail elsewhere because it may not be politically or financially feasible. Second, a mix of techniques allows the cost of protecting land to be distributed between landowners and the broader public. For example, the general public usually pays for PDR programs, often through taxes levied on their property. People who own land that is zoned for agricultural use “pay” for zoning if they lose equity in their land. Sharing the cost recognizes that farmland is a multi-purpose resource that benefits the environment, economy and society’s social fabric.

COMPREHENSIVENESS

Following is a description of the most important characteristics for each farmland protection technique that is included in the CFFB’s model program. General information about each technique is described below and a more detailed, generic description of each technique is included in the glossary.

1) Agricultural Conservation Zoning: Agricultural conservation zoning is a form of local land use regulation. Agricultural conservation zoning ordinances protect the agricultural land base by limiting non-farm uses, prohibiting high-density development, requiring houses to be built on small lots and restricting subdivision of land into parcels that are too small to farm. Agricultural conservation zoning helps reduce conflicts between farmers and their nonfarming neighbors, helps achieve critical mass and limits land speculation, which drives up the fair market value of farmland.

In the model program, agricultural conservation zoning offers a “high level of protection.” The CFFB defined this as zoning that limits development to lots that are 20 acres or larger. The density for all levels of protection pertains to the average yield when building rights associated with clustering, remainders (other available building lots), etc. are considered. For instance, in Carroll County, the permitted density in the agricultural conservation zone is one dwelling unit per 20 acres, but the average density is one dwelling unit per 15 acres when the number of remainders permitted is considered.

A “high level of protection” helps prevent low density sprawl. The greatest threat to farmland protection and the Chesapeake Bay, from a land use standpoint, is low density sprawl. It is one of the most effective methods for consuming the rural landscape and producing large quantities of polluted runoff. Counties with agricultural conservation zoning that offers a “low level of protection” (i.e., zoning that limits development to lots that are less than 10 acres) are not being truthful about the true purpose of the zoning. Agricultural conservation zoning ordinances which permit residential development on small lots do not conserve agricultural or rural land, as stated in the ordinance. The effect of the ordinances, in reality, is the opposite of what the counties purport it to be.

The greatest threat to farmland protection and the Chesapeake Bay, from a land use standpoint, is low density sprawl.

In addition to the development density, the size of building lots also is important. Ideally, lots in the agricultural area are not larger than two acres. Establishing this maximum helps separate farming and nonfarming uses. This may be difficult to achieve because health departments require a certain amount of land per dwelling unit to ensure the adequate disposal of sewage. Depending on how well the soil drains, the required lot may be as large as two to five acres.

Agricultural conservation zoning also is effective if it has been in place for at least 10 years. A long-standing ordinance for zoning that offers a high level of protection demonstrates to farmers that the county views agriculture as a long-term, economically and environmentally viable activity, instead of an interim land use that will disappear when the land is ripe for development or a potential victim of shifting politics.

A final measure of success for agricultural conservation zoning is a county's willingness to deny requests to rezone parcels of farmland that are located outside of designated growth areas. Likewise, the zoning is effective and respected if landowners do not submit such requests. Routine denial of rezoning requests in non-growth areas shows respect for the comprehensive plan. Further discussion on this issue is included in the "Comprehensive Plan" section on page 35.

2) Cluster Zoning: Cluster zoning is a form of zoning that allows or requires houses to be grouped close together in areas where large minimum lot sizes generally are required. By grouping houses on small sections of a large parcel, cluster zoning can be used to protect open space.

In the model program, cluster zoning is effective if it is mandatory and helps ensure that agriculture can be economically viable on the portion of the parcel that is not developed. Nonfarm development is restricted to no more than 20 percent of the parcel and the remaining land is protected by an agricultural conservation easement that is held in perpetuity by a government agency, nonprofit entity, developer or homeowners' association. The easement is monitored at least once every two years to ensure that its conditions are enforced. Also, undevelopable land (e.g., steep slopes and wetlands) is not included when determining the amount of land that must remain as farmland, and clustering is mandatory instead of voluntary. Finally, clustered development is not permitted adjacent to strategic farmland. It is restricted to areas between rural and urban communities. Doing so reduces conflicts between farmers and their nonfarming neighbors and limits land speculation, which drives up the fair market value of farmland.

3) Right-to-Farm: In the model program, right-to-farm provisions are included in a state or county right-to-farm law or a county subdivision or zoning ordinance. Right-to-farm provisions are effective if they strengthen the legal position of farmers when neighbors sue them for private nuisance, and they protect farmers from anti-nuisance ordinances and unreasonable controls on farming operations. Right-to-farm provisions also are effective if they include a mechanism for resolving disputes between landowners; encourage and, if possible, require the inclusion of agricultural disclosure notices as part of purchase and sale agreements; and require the placing of agricultural disclosure notices on subdivision plats and tax maps.

4) TDR Program: TDR programs allow landowners to transfer the right to develop one parcel of land to a different parcel of land where development should be encouraged (e.g., areas

adjacent to existing developments). When the development rights are transferred, the land is restricted with a permanent agricultural conservation easement. TDR programs establish “sending areas” where land is to be protected by agricultural conservation easements and “receiving areas” where land may be developed at a higher density than would otherwise be allowed by local zoning. Transactions generally occur through the private market.

The model TDR program is mandatory. Throughout the country, there are a variety of definitions for mandatory. For the purposes of this assessment, a mandatory program is one that uses agricultural conservation zoning to reduce the amount of development that can occur in the sending area. If landowners in the sending area want to realize their full equity under the old zoning, they must sell their development rights. If not, they do not have to sell their development rights. In Montgomery County, for example, the development density in the sending areas was changed from one dwelling unit per five acres to one dwelling unit per 25 acres when the county created a TDR program. Therefore, a landowner with a 25-acre parcel could have built five homes before the program was created but can now build one home and has the option of selling four development rights to somebody who wants to build in the receiving area.

An effective TDR program provides landowners with a timely and financially feasible alternative to development, and builders with a timely and financially feasible opportunity to increase the allowable density on the parcel they want to develop. This is most likely to occur if the supply of development rights is equal to the demand to acquire development rights. If the supply is too low, the price of the development rights is likely to be too high for the developer and the developer may have to wait too long to acquire the additional development rights, which could discourage the developer from seeking additional density. If the supply is too high, the prices offered to landowners in the sending area are likely to be low and offers are likely to be infrequent. As in the above scenario, this could discourage farmland owners from participating in the TDR program. There is, however, one important note to this measure of effectiveness. A low supply of development rights might not be an indicator of a low interest in selling development rights. Rather, it may indicate that the interest in selling development rights is not immediate. Landowners who might want to sell their development rights might be willing to wait to do so until the demand to acquire development rights is higher. When the demand is higher, the sale price is likely to be higher.

One way to ensure that the demand and supply of development rights is equal is to designate a receiving area that has the physical capacity, infrastructure and design standards to adequately absorb additional development. Furthermore, the base density in the receiving area should be low enough to create a demand to acquire development rights so that the allowable density can be increased. Also, the model TDR program designates a sending area that has an infrastructure that supports commercial agriculture. With the infrastructure in place, farmers are likely to have a greater incentive to support the TDR program. The sending and receiving areas should be delineated as non-growth and growth areas, respectively, in the county’s comprehensive plan.

If all of the elements mentioned above are in place, the amount of acreage protected through the TDR program will be high. “High,” as defined by the CFFB, is an average of at least 1,000 acres per year.

5) PDR Program: PDR programs pay farmers to keep their land available for agriculture. Landowners sell an agricultural conservation easement to a qualified government agency or private conservation organization. Landowners retain full ownership of their land for agricultural purposes. PDR programs do not give government agencies the right to develop land. Development rights are extinguished in exchange for compensation.

The model PDR program also is timely. The timeliness of the program is directly related to how long landowners have to wait to receive a financially feasible offer for their easement.

In Maryland, a PDR program is effective if it is financially competitive, timely, adequately funded, offers proper protection, requires enrollment in an agricultural district, uses a ranking system and protects at least 1,000 acres of land per year.

- **Financially Competitive:** Like a TDR program, a PDR program is effective if, among other things, it offers landowners a financially feasible alternative to development. What is meant by “financially feasible?” The answer to this varies because the money landowners are willing to accept for their easements varies, depending on their financial situations and reasons for selling their easement. A PDR program is effective if all the landowners who are made easement offers accept them. Their acceptance is an indication that they consider the offer to be financially feasible.
- **Timely:** The model PDR program also is timely. The timeliness of the program is directly related to how long landowners have to wait to receive a financially feasible offer for their easement. One indicator of the waiting period is the ratio of the number of applications submitted to the PDR program to the number of easement offers made each year. The smaller the ratio, the more effective the program. One limitation to this indicator, however, is that the number of applications submitted does not include applications from landowners who did not apply to sell their easements, perhaps because they do not know about the program or they think the PDR program is not effective. Another limitation with this indicator is that it does not account for landowners who are willing and able to wait for a higher easement offer than the one made by the PDR program. Due to the difficulty in quantifying information related to the timeliness of PDR programs, this factor was not included in the model program.
- **Adequately Funded:** To provide landowners with timely and financially competitive easement offers, the community must be willing to make a financial commitment to the PDR program. This is particularly true in communities where the interest in PDR is high and/or the value of easements is high. In Maryland, effective PDR programs are supported with agriculture transfer tax revenue and/or at least one other source of funding, such as real estate transfer tax revenue, general funds or federal funds from the Farmland Protection Program. The state and counties are encouraged not to rely entirely on one source of funding, particularly the agricultural transfer tax, which fluctuates depending on the real estate market and—in 1990—was diverted from the state PDR program when the state was facing a budget shortfall. Furthermore, counties with farmland protection programs that are not certified by the state are encouraged to find other funding sources because these counties retain 33 percent of the agriculture transfer tax revenue generated in their county, compared to 75 percent in certified counties. Finally, in the model program, funds are dedicated to the PDR program for a minimum of five years to increase the likelihood of being able to make timely easement offers to landowners.

- **Proper Protection:** A PDR program also is effective if easements acquired through the program are permanent. Also, a requirement for all easements is that the protected land is farmed in a manner that is not detrimental to the environment. The easement, therefore, includes a requirement for a soil and water conservation plan, whole-farm plan or similar plan that calls for the use of best management practices on the land. To ensure that the plan, as well as other conditions of the easement, is being followed, the property should be monitored at least once every two years by the entity that purchased the easement.
- **Enrollment in Agricultural District:** To be eligible to sell an agricultural conservation easement, the model farmland protection program requires landowners to enroll their land in an agricultural district. The district serves as a “temporary” easement because enrollment requires landowners to restrict the use of the land to agriculture for a minimum of five years. The agricultural districts program also provides an opportunity for the administrators of the PDR program to evaluate whether the parcel of farmland is worth protecting with an easement. This occurs because the attributes of the farmland are weighed when considering whether to enroll the land in an agricultural district. In addition to eligibility for the easement program, benefits to enrolling in an agricultural district include additional right-to-farm protection, eligibility for differential assessment, eligibility for tax credits offered by the jurisdiction where the land is located and limitations on the use of eminent domain.
- **Ranking System:** To ensure that protecting farmland with strategic characteristics is the highest priority of the PDR program, the program uses an easement ranking system that gives the highest ranking to farmland with strategic characteristics. Also, government agencies that administer PDR programs work cooperatively with non-profit organizations, such as land trusts, to protect contiguous blocks of farmland with strategic characteristics.
- **At Least 1,000 Acres Protected:** If all of the elements mentioned above are in place, the amount of acreage protected through the PDR program will be high. “High,” as defined by the CFFB, is an average of at least 1,000 acres per year.

6) Donations of Development Rights or Land: In addition to creating a conservation easement by selling their development rights through a TDR or PDR program, the model program provides landowners with the option of protecting their land by donating their development rights or their land to a qualified government agency or nonprofit organization, usually a land trust. This is a particularly attractive option in areas with no PDR program or a PDR program that is not well-funded. In these areas, protection of land can happen more rapidly through a donation than acquisition. For a donation program to be effective, the government agency and/or nonprofit organization must educate landowners about the methods for and benefits of making a donation. The education campaign is targeted to the owners of land with strategic characteristics. This method of protecting land also is effective if it is coordinated with programs that acquire development rights. In doing so, larger blocks of contiguous land are likely to be protected.

7) Property Tax Credit Program: To provide an incentive to create a conservation easement and/or enroll land in an agricultural district, the model farmland protection program includes a property tax credit program that offers a credit on local property tax bills for land protected by an easement and/or enrolled in an agricultural district. Such programs help farmers stay in business by lowering their expenses. The tax credit is in addition to the credit authorized under the state's differential assessment law. The law allows eligible farmland to be assessed at its value for agriculture rather than its fair market value, which reflects "highest and best" use. Property tax credit programs are effective if they result in farmland owners' taxes being equivalent to the cost of services (e.g., schools, roads, police protection, water) that the landowner requires. This is because it costs local government much less to serve families living on farms than it does to provide services to families living on lots in large subdivisions. More than 40 cost of community services studies have shown that farmland owners pay more in taxes than local governments pay to provide them with services. For instance, a COCS study in Frederick County, Md., showed that, for every dollar in taxes paid by a residential landowner, the county spent \$1.14 providing services to that landowner in 1995. The same year, for every dollar in taxes paid by a farmland owner, the county spent 53 cents providing services to the landowner⁹.

8) Agricultural Economic Development Program: The tools and techniques described above are designed, in part, to make land more affordable and, therefore, farming more profitable. To further ensure that farming is profitable, the model farmland protection program includes an agricultural economic development program that is designed to help farmers choose the best products to market, then help farmers market those products. Activities of the program may include sponsoring farmer's markets, creating a food cooperative or local food processing facility, developing a regional label for local produce, promoting educational and recreational services provided by farmers, and/or providing technical assistance in product research and development. A good county agricultural economic development program is one that is staffed by at least one full-time employee. Staff for state programs varies, depending on the size of the state. At both levels, enough funding to fully carry out the priorities of the program is available.

9) Targeting Public Services to Existing Developed Areas: To further protect strategic farmland, the state and counties restrict the expansion of public services (i.e., water and sewer lines, schools, roads) into areas that include strategic farmland. This can be done by adopting and enforcing an adequate public facilities ordinance that prohibits development in areas without adequate services. It also can be done with an urban growth boundary, which is the line beyond which expanded infrastructure is prohibited because the area beyond the line is not designated for growth. One of the goals of the state's Smart Growth and Neighborhood Conservation Initiative is to target funding for public services to areas designated for growth.

10) Staffing: Developing, carrying out and promoting an effective county-level farmland protection program is made easier if the program is staffed by at least one full-time person who dedicates 100 percent of his or her work hours to the program.

11) Cost-Share Programs: State and federal agencies administer programs that provide matching funding to protect farmland, promote best management practices and/or improve or protect the environmental features of farmland (e.g., wildlife habitat). Programs include the Conservation Reserve Program, Wetlands Reserve Program, Wildlife Habitat Incentives Program, Environmental Quality Incentives Program, Conservation Reserve Enhancement Program, Forest Legacy Program, Farmland Protection Program and Maryland Agriculture Cost Share Program. In addition to administering some or all of these programs, state and federal agencies provide funding for the programs. Federal, state and county agencies and non-profit organizations work together to fund and promote the programs and encourage landowners to participate in them.

12) Comprehensive Plans: The protection of farmland is an important element of each county's "blueprint" for growth, usually referred to as the master plan or comprehensive plan. The plan includes goals and objectives for protecting farmland with strategic characteristics and developing growth areas. It also includes a map that delineates growth and non-growth areas. This is generally found in the land use element of the plan. The plan is effective if its goals and objectives are carried out (i.e., programs and policies that are recommended are created). Also, the goals and objectives are adhered to when the county is considering requests to rezone farmland in areas that are not designated for growth.



Farmland provides habitat for wildlife on Maryland's Eastern Shore.

Photo: David Harp

Cooperative Assessment

COOPERATIVE ASSESSMENT

The CFFB used the maps and model program to assess the effectiveness of all of Maryland's farmland protection programs. Specifically, the CFFB assessed how well programs have protected land identified as strategic farmland through the mapping project. The assessment includes all current programs but not programs that only have been proposed. Since the mid-1990s, a variety of innovative and ambitious programs have been proposed and are currently undergoing local review. In most cases, these are the result of a state mandate to update county comprehensive plans by July 1997 and greater public support for farmland protection. However, this assessment is limited to existing programs because it is impossible to evaluate the success of programs that have not been implemented.

COVERAGE

Coverage: Coverage refers to the quantity and quality of land protected. The goal of the model program is to protect all of the strategic farmland identified through the CFFB's mapping project.

Quantity: Throughout most of Maryland, not enough strategic farmland is being protected. (See Table 2 on page 46.) None of the counties are close to reaching the CFFB's goal of protecting 100 percent of their strategic farmland, even though they are using a variety of county and state programs to achieve this result¹⁰. Approximately 6.5 percent of the state's agricultural land that has prime or productive soils is protected by agricultural conservation easements. Montgomery County (26 percent) ranks highest in this category. Approximately 5 percent of the state's agricultural land with important environmental, cultural or historic features is protected by easements. Calvert County (29.5 percent) is doing the best job. Statewide, 6.4 percent of the agricultural land with a moderate to high increase in households projected is protected by easements. In this category, Calvert County (29.6 percent) is at the top of the list. In each of the three categories, the percentages for strategic land enrolled in agricultural districts are slightly lower.

Zoning also plays a small role in protecting farmland. The level of protection is defined as high—the average lot size is 20 acres or larger—on less than 25 percent (810,996 acres) of the state's agricultural land.

Quality: The farmland protection programs are making progress in protecting strategic farmland. Of the 286,000 acres of agricultural land statewide protected by conservation easements held by public and private entities, approximately 60 percent have prime or productive soils. Caroline County (89 percent) is at the top of the list. Approximately 23 percent of the state's easement land has important environmental, cultural and/or historic features. In this category, Dorchester County (57.8 percent) ranks first. And statewide, 22 percent of the easement land has a moderate to high increase in households projected. Here, Howard County (98.6 percent) receives the highest ranking. The percentages for land enrolled in agricultural districts are similar.

Ten of the state's 23 counties have established goals for how much land to protect. None of the goals, however, are based exclusively on the criteria or numbers established through the CFFB's mapping project. Also, most of the farmland program administrators who work in a county that has a goal said that the acreage goal was chosen more randomly than scientifically. Finally, only two of the counties (Montgomery and Carroll) have projected how long it will take to

reach their goals. Approximately three-quarters (76.6 percent) of the land categorized as agricultural land use/land cover is zoned for agricultural conservation.

Comprehensiveness

Only three counties (Harford, Howard and Montgomery) have farmland protection programs that include all of the techniques in the model program. In none of these counties, however, do the techniques meet all the conditions listed in the model program. Most Maryland counties do not have comprehensive farmland protection programs and/or the techniques they are using are weak because they are not being applied effectively. (See Table 3 on page 48.) The most commonly used techniques are PDR and zoning.

COMPREHENSIVENESS

Following is a summary of the effectiveness of each technique. Tables 3 to 8 apply a scoring system to rank their effectiveness. In most cases, the categories of effectiveness are low, moderate, high or high*, with high* being the best possible ranking.

1) Agricultural Conservation Zoning: With a few exceptions, agricultural conservation zoning is not an effective farmland protection technique in Maryland. (See Table 4 on page 50.) This generally reflects the level of protection offered by the agricultural conservation zoning ordinance. The levels of protection, as defined by the CFFB, are:

- Low: average lot size is less than 10 acres.
- Moderate: average lot size is 10 acres up to 20 acres.
- High: average lot size is 20 acres or larger.

Most Maryland counties do not have comprehensive farmland protection programs and/or the techniques they are using are weak because they are not being applied effectively.

In 12 of the state's 23 counties, a low level of protection is offered through zoning¹¹. In six counties, the level of protection is moderate. Approximately 75 percent of the land statewide that is zoned for agricultural conservation falls into one of these two categories. Five counties fit into the "high" category (Allegany, Baltimore, Frederick, Montgomery and Worcester).

The five counties that offer a high level of protection in their agricultural conservation zones adopted the zoning at least 10 years ago (i.e., prior to 1988), and, in one county (Worcester County), the zoning was adopted 30 years ago. Adopting a strong agricultural conservation zoning ordinance is likely to be more challenging now because concerns about property rights and the equity of land are more prevalent now than they were 10 years ago. In many communities, therefore, political support for zoning must be stronger now than in the past. Of the eight agricultural conservation zoning ordinances adopted in the 1990s, only three (Caroline, Queen Anne's and Talbot counties) offer a moderate level of protection and the rest offer a low level of protection.

Another factor used to determine the effectiveness of the zoning is whether the counties have established a requirement for the maximum size of a building lot in the agricultural conservation zone. Four counties (Baltimore, Frederick, Howard and Kent) have done so. In most cases, maximum lot size is less than or equal to two acres, which is the guideline established for the model program. In Baltimore County, the maximum lot size is 60,000 square feet (approximately 1.5 acres). In Frederick County, the maximum lot size is two acres, but it only applies to development that is clustered. In Howard County, the maximum lot size is 60,000 square

feet if development is clustered, three acres without clustering. And in Kent County, the maximum lot size is five acres if development occurs at a density of one dwelling unit per 20 acres, and one acre if the development occurs at a density of one dwelling unit per 10 acres.

Overall, Baltimore and Frederick counties have the most effective agricultural conservation zoning. Both receive the highest score, meaning they have all the criteria established in the model program. Allegany, Montgomery and Worcester counties also have highly effective agricultural conservation zoning overall, although they do not receive the top score.

A criterion that is listed in the model program but not considered in the cooperative assessment is how often, if at all, the county approves requests to rezone farmland located in areas that are not designated for growth. Approving such requests can lead to a decrease in the size of the agricultural conservation zone, which is a particular concern when the level of protection in the zone is high. This criteria was not included in the assessment because the time to obtain sufficient data was not available. Anecdotal evidence from county farmland program administrators indicates that rezoning requests in the non-growth areas are minimal.

While most zoning ordinances are adopted at the county level, Maryland's Critical Farms Program also plays a role. Through the program, the maximum development density on all land within 1,000 feet of the shoreline is one dwelling unit per 20 acres. For a few counties, most notably Somerset County, a significant amount of agricultural land lies within the jurisdiction of the Critical Farms Program. However, this is not the case in the majority of the state's counties.

2) Cluster Zoning: Nineteen counties have a cluster zoning ordinance. (See Table 5 on page 52.) But only seven counties have mandatory ordinances, and in four it is either mandatory or voluntary, depending on the allowable development density. Only Baltimore, Calvert and Carroll counties mandate clustering for all development in the primary agricultural conservation zone.

Other factors weaken the effectiveness of cluster zoning in Maryland. Few ordinances are designed to support the agricultural industry. For instance, only three counties (Calvert, Howard and Queen Anne's) require that the clustered development be restricted to 20 percent of the parcel, or less, leaving at least 80 percent of the parcel available for farming or open space. Nine counties do not have any percentage requirement. Some, however, impose or encourage maximum lot sizes. Also, none of the counties deduct undevelopable land before determining how much land must remain as farmland. Finally, six of the counties require a permanent conservation easement, which is considered to be the best means for ensuring that the land will remain in agriculture in perpetuity.

A common weakness of the...TDR programs... is that the supply of development rights is significantly higher than the demand to acquire development rights.

3) Right-to-Farm: Fifteen counties have adopted right-to-farm provisions. (See Table 3 on page 48.) Most of the provisions are spelled out in a right-to-farm ordinance, but some are included in zoning or subdivision regulations. The state also has a right-to-farm ordinance. The state law is outdated and provides limited protections that mainly cover protection from nuisance lawsuits.

4) TDR Programs: Nine counties have TDR programs but only the program in Montgomery County receives a high* ranking because it meets all the criteria established in the model farmland protection program. (See Table 6 on page 54.) In Montgomery County, more than 38,000 acres are protected as a result of the TDR program created in 1980. Several factors contribute

to the success of the program. One is that the county has established 18 receiving areas, most of which generally welcome new development and have the physical capacity to absorb it. Also, most landowners receive reasonable offers for their development rights. This is partly the result of the county PDR program, which was created in 1989. The PDR program drives up the value of TDRs because it lowers the supply of development rights and, through its easement valuation formula, establishes a minimum price for easements. Montgomery County's agricultural conservation zoning also contributes to the success of the TDR program. Just before creating the TDR program, Montgomery County downzoned the rural area from one dwelling unit per five acres to one dwelling unit per 25 acres. To realize the full equity of their land under the old zoning, landowners can sell their development rights at a rate of one development right per five acres. In this sense, the program is loosely defined as "mandatory" because, with the exception of one development right per 25 acres, landowners in the sending areas can transfer their development rights but not use them to build on their land.

Although it does not receive the highest possible score, the TDR program in Calvert County is very effective, resulting in a "high" ranking. It is the only county to receive this ranking. The Calvert County program has protected more than 6,000 acres of land in 10 years. One of its strengths is that the receiving areas were proposed by developers when the program was created. All of the receiving areas are located outside of the agricultural conservation zone. With buy-in from developers—as well as a good real estate market—the demand for development rights almost equals the supply, resulting in reasonable prices for sellers and buyers.

A common weakness of the other TDR programs (Caroline, Charles, Harford, Howard, Queen Anne's, St. Mary's and Talbot counties) is that the supply of development rights is significantly higher than the demand to acquire development rights. Generally, this occurs because the base density in the receiving area is not low enough to create a demand for development rights. Another factor—or an additional factor in some counties—is that development pressure is not high enough to create enough demand for new construction. Montgomery County is beginning to experience the opposite scenario: The supply is lower than the demand. This imbalance is believed to result from landowners' decisions to delay the sale of their development rights until the value of those rights increases. These people are likely not to have an immediate need for cash.

5) PDR Programs: Purchased conservation easements protect approximately 180,000 acres of farmland in Maryland—more acreage than any other state in the nation. The acquisitions are made through a state PDR program and 11 county-level PDR programs. (See Table 7 and Table 8 on pages 56 to 58.) Despite these numbers, the effectiveness of PDR varies between programs. The most limiting factor is funding. This is more evident in the state PDR program than in the county PDR programs, some which are moving at a faster pace than the state program.

State PDR Program:

The state PDR program was created in 1978, making it one of the nation's oldest. The first 10 years of the initiative were the program's best. The program was well-funded—funding was as high as \$35 million one year—allowing the state to protect more than 91,000 acres of farmland in one decade¹². This achievement earned the state the title of the best farmland protection program in the nation, a ranking the state still held as of 1998. The ranking is based entirely on the number of acres protected.

State PDR Program, cont.:

The state PDR program is most effective in Carroll County. Here, the program receives the highest possible score: high*. In Carroll County, one of the first counties to participate in the state PDR program, the state holds easements on approximately 25,000 acres. One of the most significant factors contributing to the success of the program is the financial commitment from the county. In addition to earmarking its share of agricultural transfer tax revenue (a total of \$4.2 million) to the program, the county has spent approximately \$8.2 million in general funds for the acquisition of easements through the state program and its own PDR program. For the state program, the money is used as a match. Half of the state funding only is allocated to counties that provide a 40 percent match. The commitment from Carroll County is long term, too. In 1997, the county decided to dedicate funding to the program for five years.

The state PDR program is not highly effective in any other county. In 13 counties, the program is "moderate" in terms of its effectiveness and in nine counties the level of effectiveness is "low." Almost across the board, funding is the limiting factor. This is a common challenge nationwide, too. Most counties in Maryland rely entirely on their portion of the agricultural transfer tax revenue to help fund the acquisition of easements through the state PDR program. (Specifically, the funding is used to match state funds.) For some counties, the revenue from this tax is low—sometimes as low as \$25,000 per year—because the amount of development in the county is low. The tax is assessed when agricultural land is transferred for nonagricultural use. The amount of revenue also is low in counties that do not have a state-certified farmland protection program. State certification allows a county to retain 75 percent of the agricultural transfer tax revenue generated within its borders. The funding must be used within three years to support acquisitions made through the state or county PDR program. Without state certification, the percentage drops to 33. In eight of the nine counties where the state PDR program is least effective, the farmland protection programs are not certified by the state. Most of the counties that fit into this category are located on the Eastern Shore or western corner of the state.

As a result of limited funding, no counties other than Carroll have dedicated funding for the state PDR program beyond the current year¹³. Some counties do not even have enough funding to provide a match to the PDR program during the current year. They hold the funding until the next year, when they combine it with their latest share of the agricultural transfer tax and hope to have enough funding to use as a match. However, state law requires them to remit the funding to the state if they do not use it in three years. This affects the success of PDR because it prevents some counties from ever being able to build up enough funding to buy easements.

Several other sources of funding for the state PDR program exist. One is revenue from the state's property transfer tax, which is assessed on all transfers of real property. In 1997, 14.5 percent of the revenue generated from this tax was used to support the state PDR program. Most of the remaining funding is used to support the state's Program Open Space, which also acquires easements, but not just on farmland. This percentage gradually has increased over the years, which is seen by some as a benefit to the state PDR program but a detriment to Program Open Space. Another source of

State PDR Program, cont.:

funding is the state's Rural Legacy Program, established in 1997 for the acquisition of easements and land in agricultural, forest and natural areas. The state has authorized \$71.3 million for the program for fiscal years 1998 to 2002. In fiscal year 1998, approximately \$2.5 million will be diverted from the Rural Legacy Program to the state's PDR program. Some federal funds are available to help support the state PDR program. The Federal Farmland Protection Program, established by the 1996 Farm Bill, authorizes the expenditure of \$35 million to assist states and localities in farmland protection efforts. Maryland has aggressively pursued funding through this program. In 1996, Maryland's state PDR program received \$1 million in federal funds (the second highest allocation in the country) and five county PDR programs each received \$100,000. In 1997, Baltimore County's PDR program received \$100,000 in federal funds.

Another source of funding for protecting Maryland's farmland (although the land is not protected through the state PDR program) is the Conservation Reserve Enhancement Program, which was created in 1997. Through the program, approximately \$200 million in federal and state dollars will be spent to enroll up to 100,000 acres of cropland in the federal Conservation Reserve Program. The CRP restores wetlands, creates forest buffers along rivers and streams, and protects cropland from erosion. A portion of the funding will be used to place long-term or permanent easements on this land.

The effectiveness of the state PDR program also is limited in some counties because the state uses its own system—not the county's system—for ranking easement applications. When landowners apply to the state program, they submit their applications to their county. The county ranks the applications. Most counties have their own systems for ranking easements, while a few use the state's ranking system. This allows counties to establish their own priorities for land protection (i.e., to decide what land is strategic) and to be able to tell landowners what the likelihood is of their easement application being approved. Regardless of the county ranking systems, the state uses its own system when it receives all the applications. In 1998, legislation offering counties a choice between their's or the state's ranking system was rejected by the General Assembly.

Two final factors limit the effectiveness of the state easement program: easements are monitored once every 10 years (in the model program, easements are monitored at least once every two years), and the incentives to create an agricultural preservation district are weak. When a district is created, the landowner agrees to maintain the land in agricultural use for a minimum of five years. The primary incentive to create a district is eligibility to submit an application to sell an easement to the state. Other benefits offered by the state for enrolling land in an agricultural district are:

- Direct and indirect support of agriculture.
- Recognition from the county and state by a recorded document in the land records of the county that the preferred use of the property is agriculture.

*...the incentives to
create an agricultural
preservation district
are weak.*

State PDR Program, cont.:

- Insulation of normal agricultural activities from nuisance complaints.
- Possible tax credits, if the county where the property is located has developed a tax credit program¹⁴.

Benefits to enrolling in an agricultural district do not include eligibility for use value assessment¹⁵ and limitations on the use of eminent domain.

*Farming on the edge
in Maryland.*

Photo: David Harp



County PDR Programs:

Largely in response to gaps in the state program, 11 counties have created their own PDR programs. Most of the county programs are having some success. The best programs are in Calvert, Harford, Howard and Montgomery counties, which collectively have protected nearly 40,000 acres in less than eight years. This success primarily is due to each county's financial commitment—in the short term and, in some cases, longterm—to PDR. Howard and Harford counties, which have protected the most acreage, have taken the most creative approaches to funding. Both counties pay for easements using installment purchase agreements. In Howard County, the agreements allow the county to spread the payments out over 30 years, and in Harford County, the payments are made over 20 years. Tax-free interest payments are made every year in Harford and Howard Counties, and a lump sum payment is received at the end of the 20- or 30-year period. In both counties, a combination of real estate tax revenue and zero-coupon bonds are used to pay the interest payments and lump sum payments.

County PDR Programs, cont.:

Harford and Howard counties also use a point system rather than an appraisal system to determine the value of an easement. The nation's first point system was created in Montgomery County. A point system establishes a minimum or maximum price for an easement, then adds or subtracts points (which translate into dollars) for characteristics of the farm that pertain to the agricultural and scenic values that it provides.

Characteristics often include farm acreage, soil type, crop value and road frontage. Point systems, therefore, are based on the strength of the farm operation and quality of the land for agriculture, rather than the fair market value of the land. Through the state PDR program, the value of the easement is the difference between the appraised fair market value of the property and the agricultural value of the property (calculated through a multi-step formula). Point systems are considered by some to be better than the system used by the state. Point systems are said to be faster and more fair because they do not rely on the real estate market.

A weakness of some of the county programs is that there is not a long-term (at least five years) commitment to funding the program. In Baltimore County, there is a one-year commitment, but in seven counties with PDR programs, no funds are committed beyond the current year. Only Carroll, Harford and Howard counties have made a long-term commitment. Also a weakness in some of the programs is that easements are not monitored often (at least once every two years). In four counties, easements are monitored once every 10 years, which is the same period used by the state PDR program.

Frederick County has no requirement for how often easements should be monitored. They are monitored only when a subdivision of land with an easement is requested.

A strength of all of the county programs is that they require soil and water conservation plans on eased property.

6) Donations of Development Rights and Land: Maryland has 41 land trusts. Thus, opportunities abound for private land protection efforts. The land trusts have protected approximately 70,000 acres, mostly through easement donations. About half of this land is farmland, the majority of which is protected by the eight land trusts that have made farmland protection a high priority.

The most active land trust is Maryland Environmental Trust. MET is a quasi-public/private land trust that holds easements on approximately 40,000 acres and co-holds easements with other land trusts on 15,000 additional acres. MET also provides reimbursable grants to local land trusts and conservation organizations to purchase land and development rights, gives administrative grants to local land trusts to support outreach and easement solicitation work, and supports local land trusts with training and assistance through the Maryland Land Trust Alliance¹⁶.

Despite limited staff and funding, many of the state's land trusts do outreach to landowners in targeted areas, work cooperatively with government agencies to protect land and work locally to advocate good land use planning.

7) **Property Tax Credit Program:** Legislation adopted by the Maryland General Assembly in 1955 stipulates that land actively used for farm or agricultural use is valued on the basis of its use for agriculture rather than its "highest and best use." The land is assessed on the basis of 50 percent of its use value. Maryland was the first state in the country to adopt differential assessment legislation. Every state in the nation has since followed suit, although the name differs in some areas. It is also known as current use assessment, current use valuation, farm use valuation and use assessment.

Nine counties have additional property tax credit programs. (See Table 3 on page 48.) What the credit applies to varies between counties. All but one county (Montgomery County) offers the credit for land enrolled in an agriculture preservation district. Five counties (Anne Arundel, Charles, Harford, Howard and Washington) also apply the tax credit to easement property. Some counties (Calvert, Charles, St. Mary's and Washington counties) apply the credit to buildings on agricultural district and/or easement properties. The amount of the credit ranges from 50 to 100 percent.

8) **Agricultural Economic Development Program:** Six counties have agricultural economic development programs. (See Table 3 on page 48.) The most effective programs are in Harford, Howard and Montgomery counties, each of which have hired one full-time person to work exclusively on creating, administering and promoting the program. (In Montgomery County, three employees work on both the farmland protection program and agricultural economic development.) Staff are employed by the economic development office and work jointly with the county's farmland program administrator. Each county assists farmers in developing new products and creating alternative markets for products. This is done by creating farmer's markets and labels for local products, offering one-on-one technical assistance to farmers and conducting workshops, among other things. According to the CFFB's model program, the agriculture economic development programs are well-funded: annually, approximately \$150,000 in Harford, \$50,000 in Howard and \$600,000 in Montgomery County.

In St. Mary's County, the farmland program administrator is an employee of the Department of Economic and Community Development. The staffer is responsible for administering the program and overseeing all activities related to agricultural economic development. Queen Anne's and Kent counties also are working to promote their agricultural industries. Although neither county has a budget or full-time person who dedicates all of their time to this effort, they both are making progress. The tourism office and Cooperative Extension Service office from each county work together on several projects, including sponsoring a workshop on alternative agriculture and creating and carrying out a program that matches chefs with local growers to provide local produce at restaurants.

At the state level, the Department of Agriculture has an Agriculture Development Program staffed by one person who, among other things, helps farmers obtain financing for their farming operations. The department also has a Marketing Program staffed by six people who help establish farmer's markets throughout the state and promote Maryland agriculture nationally and internationally. The Cooperative Extension Service provides technical assistance on agricultural economic development issues. The Department of Business and Economic Development Office administers a loan fund for aquaculture. Due to limited time and resources, these programs were not evaluated by the CFFB.

*The Smart Growth and
Neighborhood
Conservation Initiative
adopted in 1997 by the
Maryland General
Assembly establishes the
framework for limiting
the extension of infra-
structure into the
state's rural areas.*

9) Targeting Public Services to Existing Developed Areas: The Smart Growth and Neighborhood Conservation Initiative adopted in 1997 by the Maryland General Assembly establishes the framework for limiting the extension of infrastructure into the state's rural areas. The initiative encourages the state to target funding for infrastructure improvements to "Priority Funding Areas," which includes municipalities, areas inside the Washington Beltway and Baltimore Beltway, and areas already designated as enterprise zones, neighborhood revitalization areas, heritage areas and existing industrial land. Less than one year old, the initiative is too young to evaluate.

Counties also have the authority to establish restrictions on infrastructure. All of the counties prohibit water and sewer service extensions into their growth areas. (See Table 3 on page 48.) In some cases, a public hearing can be held to try to get an exception granted. Only three counties take this one step further. Dorchester, Montgomery and Washington counties also restrict the width of roads in rural areas. And Washington County does not allow development in areas with overcrowded schools unless the developer agrees to contribute to the cost of building additional classroom space. Frederick County has laid out similar restrictions in its adequate public facilities ordinance, but the ordinance is said to be weak because it only applies to the unincorporated area of the county. Such areas liberally annex unincorporated land, so the ordinance does not apply.

10) Staffing: Seven counties have a full-time employee who dedicates 100 percent of his or her work time to administering the county's farmland protection program. (See Table 3 on page 48.) The exception is St. Mary's County, where the staff person also is responsible for agricultural economic development. In one county, Calvert, the program is administered jointly by a full-time staff person who dedicates 10 percent of his time to the program and a half-time person who dedicates 100 percent of her work hours to the program. Most of these counties are in the central or southern part of the state. In the majority of the Eastern Shore and western region counties, a small percentage (10 to 30 percent) of one person's work hours are spent on each county's farmland protection program.

11) Goals of the County Comprehensive Plan and State Initiatives: Most of the county comprehensive plans include ambitious farmland protection objectives. This is due in part to the Maryland Economic Growth, Resource Protection, and Planning Act of 1992, which required municipalities and counties to update their comprehensive plans by July 1, 1997. According to the act, the plans must incorporate objectives that address seven "visions," including the concentration of development into suitable areas, protecting sensitive areas, conserving resources and encouraging economic growth.

Although most counties have established good objectives for land preservation, few have created and implemented farmland protection programs that effectively address those objectives. (See Table 3 on page 48.) For example, the programs do not define or identify strategic farmland, agricultural conservation zoning ordinances are weak, and PDR programs are not well-funded. The exception is the 11 counties whose farmland protection programs have been certified by the state. Counties are not certified unless they demonstrate that they have established an effective program to encourage participation by farmers in agricultural land preservation efforts. Even here, however, the law is weak because the county only has to demonstrate that the program is "likely to be successful."

TABLE TWO: COVERAGE

County	Acreage Goal blank = no Y = yes	% of Land Categorized as Ag. Land Use/Land Cover that is Zoned for Ag. Conservation ¹	% of Ag. Land with Prime or Productive Soils Protected by Easements	% of Ag. Land with Prime or Productive Soils Protected by Ag. Districts
MODEL PROGRAM	Y	80% or greater	varies	varies
Allegany		53.8	0.9	1.0
Anne Arundel	Y	71.3	5.2	5.5
Baltimore		67.1	10.6	6.4
Calvert	Y	61.8	24.6	4.9
Caroline	Y	90.9	9.6	9.0
Carroll	Y	77.1	11.5	11.2
Cecil		72.6	4.0	8.4
Charles		67.9	0.8	3.4
Dorchester	Y	76.7	1.2	1.7
Frederick		79.9	5.7	3.8
Garrett		89.9	4.1	1.8
Harford	Y	85.6	6.1	8.9
Howard	Y	86	14.0	2.7
Kent	Y	76	6.6	2.4
Montgomery	Y	71	26.0	1.0
Prince George's		16	1.3	0
Queen Anne's		90.3	5.7	5.9
Somerset		87.9	0.3	1.2
St. Mary's		88	1.7	0.9
Talbot		54.4	3.5	6.7
Washington	Y	73.7	2.6	11.0
Wicomico		79	1.2	0.3
Worcester		86.1	0.4	0.5
Statewide		76.6	6.5	5.0

% of Ag. Land with Important Environmental, Cultural, and/or Historic Features Protected by Easements	% of Ag. Land with Important Environmental, Cultural, and/or Historic Features Protected by Ag. Districts	% of Ag. land with Projected Mod. to High Increase in Residential Development Protected by Easements	% of Ag. land with Projected Mod. to High Increase in Residential Development Protected by Ag. Districts
varies	varies	varies	varies
0.5	0.1	2.9	0
5.5	3.4	3.3	2.4
10.0	6.7	2.2	2.2
29.5	5.4	29.6	4.5
8.9	4.9	0	0
8.7	9.5	7.5	9.4
5.3	7.4	0.5	1.5
1.3	2.4	2.8	2.4
2.4	0.7	0	0
5.8	4.1	3.5	1.1
2.7	2.0	0	0
6.4	8.2	4.9	3.3
10.2	1.4	13.3	2.5
14.7	0	0	9.0
21.6	0.8	5.9	0
0	0	1.3	0
7.6	5.1	15.6	0.1
1.1	0.7	0	0
1.1	1.6	1.6	0.5
7.0	2.5	7.9	0
2.7	10.7	1.8	9.3
0.7	2.4	0.1	1.4
0.8	0.7	0	0
5.0	3.5	6.4	3.4

¹ Land zoned for agricultural conservation is all of the land located in a zoning district, where, according to the local zoning ordinance, agriculture is the primary use. For the purpose of this project, all land in Prince George's County that is zoned for Residential-Agriculture is considered to be land zoned for agricultural conservation because the county does not have a zoning district where agriculture is stated to be the primary use. In Garrett County, which has subdivision requirements but no agricultural conservation zoning, all land categorized as agricultural land use/land cover that is not zoned for anything is considered to be land zoned for agricultural conservation.

TABLE THREE: COMPREHENSIVENESS OF FARMLAND PROTECTION PROGRAMS

County	Agricultural Conservation Zoning (Level of Effectiveness)	Cluster Zoning (Level of Effectiveness)	Right-to-Farm Protection (Does County Have Provisions?)	TDR Program (Level of Effectiveness)	County PDR Program (Level of Effectiveness)
MODEL PROGRAM	***+	***+	***	***+	***+
Allegany	***	*	***		
Anne Arundel	**	*			**
Baltimore	***+	***	***		**
Calvert	*	***	***	***	***
Caroline	**		***	*	
Carroll	**	**	***		**
Cecil	*	**	***		
Charles	*	**		*	Program too new to evaluate
Dorchester	*				
Frederick	***+	*	***		**
Garrett	*	**	***		
Harford	*	**	***	*	***
Howard	**	***	***	**	***
Kent	**	*	***		
Montgomery	***	**	***	***+	***
Prince George's	*				
Queen Anne's	**	***	***	**	
St. Mary's	*	**		*	Program too new to evaluate
Somerset	*	*			
Talbot	**	**	***	*	
Washington	*	*			*
Wicomico	*		***		
Worcester	***	*			

KEY:

Agricultural Conservation Zoning: blank = no agricultural conservation zoning, * = low, ** = moderate, *** = high, ***+ = best

Cluster Zoning: blank = no cluster zoning, * = low, ** = moderate, *** = high, ***+ = best

Right-to-Farm: blank = none, *** = yes

TDR Program: blank = no TDR Program, * = low, ** = moderate, *** = high, ***+ = best

County PDR Program: blank = no PDR Program, * = low, ** = moderate, *** = high, ***+ = best

Property Tax Credit Program (Does County Have Program?)	Program To Promote Ag. Industry (Level of Effectiveness)	Infrastructure Restrictions (Level of Restrictions)	Staffing (% of time full-time staff person devotes to farmland pres.)	County Comprehensive Plan Includes Goals for Protecting Farmland
***	***+	***+	***+	***+
		*	*	*
***		*	***+	***
***		*	***+	***
***		*	***	**
		*	**	*
		*	***+	**
		*	*	***
***		*	**	**
		**	*	**
		*	*	*
		*	*	***
***	***+	*	***+	***
***	***+	*	***+	***
	**	*	**	***
***	***+	**	***+	*
		*	*	**
	**	*	*	***
***	***	*	***	*
		*	*	***
		*	*	**
***		**	***	*
		*	*	**
		*	*	

Property Tax Credit: blank = no program, *** = yes

Program to Promote Ag. Industry: blank = no program, * = low, ** = moderate, *** = high, ***+ = best

Infrastructure Restrictions: * = low, ** = moderate, *** = high, ***+ = best

Staffing: * = <33%, ** = 34-67%, *** = 68-99%, ***+ = 100% (best)

County Comprehensive Plan: * = low, ** = moderate, *** = high, ***+ = best

TABLE FOUR: AGRICULTURAL CONSERVATION ZONING¹

County	Level of Protection	Maximum Lot Size Requirement	Overall Effectiveness of Zoning
MODEL PROGRAM	High +	< or equal to 2 acres	High*
Allegany	High +	No requirement	High
Anne Arundel	Moderate	No requirement	Moderate
Baltimore	High +	60,000 square feet	High*
Calvert	Low	No requirement	Low
Caroline	Moderate	No requirement	Moderate
Carroll	Moderate	No requirement	Moderate
Cecil	Low	No requirement	Low
Charles	Low	No requirement	Low
Dorchester	Low	No requirement	Low
Frederick	High +	2 acres if development is clustered	High*
Garrett ²	Low	No requirement	Low

KEY:

Level of Protection: Low = average lot size is less than 10 acres (1 point), Moderate = average lot size is 10 acres up to 20 acres (2 points), High = average lot size is 20 acres or larger (3 points), High + = average lot size is 20 acres or larger and zoning regulations > 10 years old (4 points)

Maximum Lot Size Requirement: No requirement (0 points), > 2 acres (1 point), < or equal to 2 acres (2 points)

Overall Effectiveness of Zoning: Low (1 point), Moderate (2 to 3 points), High (4 to 5 points), High* (6 points)

TABLE FOUR: AGRICULTURAL CONSERVATION ZONING¹ (CONTINUED)

County	Level of Protection	Maximum Lot Size Requirement	Overall Effectiveness of Zoning
Harford	Low	No requirement	Low
Howard	Low	60,000 square feet if development is clustered; 3 acres without clustering	Moderate
Kent	Moderate	No requirement when density is one dwelling unit per 30 acres; five acres when density is one dwelling unit per 20 acres; one acre when density is one dwelling unit per 10 acres	Moderate
Montgomery	High +	No requirement	High
Prince George's ³	Low	No requirement	Low
Queen Anne's	Moderate	No requirement	Moderate
St. Mary's ⁴	Low	No requirement	Low
Somerset	Low	No requirement	Low
Talbot	Moderate	No requirement	Moderate
Washington	Low	No requirement	Low
Wicomico	Low	No requirement	Low
Worcester	High +	No requirement	High

¹ Information about rezoning requests on strategic farmland outside of designated growth areas is not included, due to limited time to conduct the appropriate research.

² For this report, all land that is categorized as agricultural land use/land cover and is not zoned is considered to be land zoned for agricultural conservation. This was done because Garrett County has subdivision regulations but no zoning in the rural areas.

³ For this report, all land zoned as Residential-Agriculture is considered to be land zoned for agricultural conservation. This was done because the county does not have an exclusive agriculture zone.

⁴ Permitted density is 1 dwelling unit per 20 acres in the zoning district called the Agriculture Preservation District. This is a voluntary zone, currently with no acreage.

TABLE FIVE: CLUSTER ZONING

County	Type of Restrictions	Percentage of Parcel that Can be Developed
MODEL PROGRAM	Mandatory	< or equal to 20 percent
Allegany	Voluntary	No requirement
Anne Arundel	Voluntary	No requirement
Baltimore	Mandatory	30 percent
Calvert	Mandatory	20 percent
Carroll	Mandatory	No requirement but landowners are encouraged to keep lot size as close to 1 acre as possible
Cecil	Voluntary	40 percent
Charles	Voluntary	40 percent
Frederick	Mandatory or voluntary (depends on dev. density)	No requirement
Garrett	Voluntary	50 percent if sewer/water services are not available; 40 percent if sewer/water services are available
Harford	Voluntary	No requirement but lots cannot be larger than 2 acres
Howard	Mandatory or voluntary (depends on dev. density)	Approximately 20 percent
Kent	Voluntary	No requirement
Montgomery	Mandatory or voluntary (depends on dev. density)	40 percent in Rural Cluster Zone; No percentage in Rural Density Transfer Zone but average size of lots cannot exceed 5 acres
Queen Anne's	Voluntary	15 percent
St. Mary's	Voluntary	40 percent
Somerset	Voluntary	No requirement
Talbot	Voluntary	25 to 75 percent (depends on size of parcel)
Washington	Voluntary	No requirement
Worcester	Mandatory, voluntary or prohibited (depends on dev. density)	No requirement

KEY:

Type of Restrictions: Voluntary (1 point), Mandatory or voluntary (2 points), Mandatory (3 points)

Percentage of Parcel that Can be Developed: No requirement (0 points), > 50 percent (1 point), 21 percent to 50 percent (2 points), < or equal to 20 percent (3 points)

Undevelopable Land is Deducted Before Determining How Much Land Must Remain as Farmland	How is Open Space Recorded?	Overall Effectiveness of Cluster Zoning
Yes	Easement	High*
Not applicable	Written on plat	Low
Not applicable	Written on plat	Low
No	Easement	High
No	Easement	High
Not applicable	Written on plat	Moderate
No	Written on plat	Moderate
No	Deed restriction	Moderate
Not applicable	Written on plat	Low
No	Easement	Moderate
Not applicable	Easement	Moderate
No	Easement	High
Not applicable	Deed restriction	Low
No	Deed restriction (in Rural Cluster Zone only)	Moderate
No	Easement	High
No	Written on plat	Moderate
Not applicable	Deed restriction	Low
No	Reservation of development rights restriction	Moderate
Not applicable	No recording	Low
Not applicable	Varies (responsibility of developer)	Low

Undevelopable Land is Deducted Before Determining How Much Land Must Remain as Farmland:

No or not applicable (0 points), Yes (1 point)

How is Open Space Recorded? No recording (0 points), Written on plat (1 point), Covenant or deed restriction (2 points), Easement (3 points)

Overall Effectiveness of Cluster Zoning: Low (1 to 3 points), Moderate (4 to 6 points), High (7 to 9 points), High* (10 points)

TABLE SIX: TRANSFER OF DEVELOPMENT RIGHTS PROGRAMS

County	Total Number of Acres Protected	Average Number of Acres Protected Per Year ¹	Type of Program
MODEL PROGRAM	Informational only; not used in evaluation	> 1,000 acres	Mandatory
Calvert	6,641 acres	664 acres	Voluntary
Caroline	100 acres	14 acres	Voluntary
Charles	105 acres	21 acres	Voluntary
Harford	0 acres (no easement required)	0 acres (no easement required)	Voluntary
Howard	735 acres	147 acres	Voluntary
Montgomery	39,180 acres	2,304 acres	Mandatory
Queen Anne's	2,407 acres	240 acres	Voluntary
St. Mary's	0 acres	0 acres	Voluntary
Talbot	580 acres	96 acres	Voluntary

KEY:

Average Number of Acres Protected Per Year: < 99 acres (0 points), 100-500 acres (1 point), 501-999 acres (2 points), > 1,000 acres (3 points)

Type of Program: Voluntary (1 point), Mandatory² (2 points)

Designated Receiving Area: No (0 points), Yes (2 points)

Supply of Development Rights Equals Demand to Buy Development Rights: No (0 points), Moderately (2 points), Yes (3 points)

Overall Effectiveness of Program: Low (1 to 3 points), Moderate (4 to 6 points), High (7 to 9 points), High* (10 points)

¹ The average is determined by dividing the total number of acres protected by the number of years the county TDR program has been in existence.

² In a mandatory TDR program, agricultural conservation zoning is used to reduce the amount of development that can occur in the sending area.

Designated Receiving Area	Supply of Development Rights Equals Demand to Buy Development Rights	Overall Effectiveness of Program
Yes	Yes	High*
Yes	Moderately	High
No	No	Low
Yes	No	Low
Yes	Not applicable	Low
Yes	Moderately	Moderate
Yes	Yes	High*
Yes	No	Moderate
Yes	No	Low
Yes	No	Low

TABLE SEVEN: STATE PURCHASE OF DEVELOPMENT RIGHTS PROGRAM¹

County	Total Number of Acres Protected	Average Number of Acres Protected Per Year ²	Funding Source ³
MODEL PROGRAM	Informational only; not used in evaluation	>1,000 acres	All or portion of 75 percent of ag. transfer tax rev. and other source
Allegany	183 acres	13 acres	All or portion of 33 percent of ag. transfer tax rev.
Anne Arundel	3,699 acres	217 acres	All or portion of 75 percent of ag. transfer tax rev.; gen. funds; bonds
Baltimore	12,382 acres	773 acres	All or portion of 75 percent of ag. transfer tax rev.; gen. funds; bonds
Calvert	3,454 acres	215 acres	All or portion of 75 percent of ag. transfer tax rev.; gen. funds
Caroline	19,196 acres	1,279 acres	All or portion of 33 percent of ag. transfer tax rev.
Carroll	25,590 acres	1,505 acres	All or portion of 75 percent of ag. transfer tax rev.; gen. funds
Cecil	7,564 acres	756 acres	All or portion of 33 percent of ag. transfer tax rev.
Charles	677 acres	75 acres	All or portion of 75 percent of ag. transfer tax rev.; rev. from sale of property
Dorchester	3,388 acres	423 acres	All or portion of 33 percent of ag. transfer tax rev.
Frederick	10,061 acres	628 acres	All or portion of 75 percent of ag. transfer tax rev.; and gen. funds
Garrett	3,398 acres	212 acres	All or portion of 33 percent of ag. transfer tax rev.
Harford	8,529 acres	533 acres	All or portion of 75 percent of ag. transfer tax rev.
Howard	3,955 acres	232 acres	No funding since 1983
Kent	5,977 acres	498 acres	All or portion of 75 percent of ag. transfer tax rev.
Montgomery	1,805 acres	112 acres	All or portion of 75 percent of ag. transfer tax rev.
Prince George's	0 acres	0 acres	All or portion of 33 percent of ag. transfer tax rev.
Queen Anne's	12,034 acres	859 acres	All or portion of 33 percent of ag. transfer tax rev.
St. Mary's	2,177 acres	155 acres	All or portion of 75 percent of ag. transfer tax rev.
Somerset	2,364 acres	214 acres	All or portion of 33 percent of ag. transfer tax rev.
Talbot	3,363 acres	258 acres	All or portion of 33 percent of ag. transfer tax rev.
Washington	5,012 acres	334 acres	All or portion of 75 percent of ag. transfer tax rev.
Wicomico	3,667 acres	366 acres	All or portion of 33 percent of ag. transfer tax rev.
Worcester	1,344 acres	192 acres	All or portion of 33 percent of ag. transfer tax rev.

KEY:

Average Number of Acres Protected Per Year: <99 acres (0 points), 100 - 500 acres (1 point), 501 - 999 acres (2 points), > 1,000 acres (3 points)

Funding Source: All or portion of 33 percent of ag. transfer tax rev. (1 point), all or portion of 75 percent of ag. transfer tax rev. (2 points), all or portion of 75 percent of ag. transfer tax rev. and other source (3 points)

¹ County-by-county information about the monitoring of easements, the requirement of a soil and water conservation plan, and whether enrollment in an agricultural district is required to sell an easement is not included because this information is consistent statewide. In Maryland, easements held by the state PDR program are monitored once every 10 years; a soil and water conservation plan is required for all land protected by an easement that is acquired through the state PDR program; and land must be enrolled in an agricultural district to be eligible for the state PDR program. Also not included is information about the percentage of easement offers made that are accepted. With a few exceptions, all easement offers made by the state PDR program are accepted.

No. of Years (other than current year) for Which Funds are Dedicated ⁴	Easement Ranking System	Overall Effectiveness of Program
> or equal to 5 years	Yes	High*
0	No	Low
0	Yes	Moderate
0	Yes	Moderate
0	Yes	Moderate
0	Yes	Moderate
5	Yes	High*
0	Yes	Moderate
0	Yes	Moderate
0	Yes	Low
0	Yes	Moderate
0	No	Low
0	Yes	Moderate
0	No	Low
0	Yes	Moderate
1	Yes	Moderate
0	No	Low
0	Yes	Moderate
0	Yes	Moderate
0	Yes	Low
0	Yes	Low
0	Yes	Moderate
0	No	Low
0	No	Low

No. of Years (other than current year) for Which Funds are Dedicated: 0 years (0 points), 1 to 4 years (1 point), > or equal to 5 years (2 points)

Easement Ranking System: No (0 points), Yes (1 point)

Overall Effectiveness of Program: Low (1 to 3 points), Moderate (4 to 6 points), High (7 to 8 points), High* (9 points)

² The average is determined by dividing the total number of acres protected by the number of years since the county began participating in the state PDR program. Starting dates for participation range from 1980 to 1990.

³ Counties with state-certified farmland preservation programs retain 75 percent of the agricultural transfer tax revenue generated in their county. Counties without a certified program retain 33 percent of the revenue.

⁴ Dedicated funds are funds that are earmarked for the program, but might not necessarily be available during the current fiscal year.

TABLE EIGHT: COUNTY PURCHASE OF DEVELOPMENT RIGHTS PROGRAMS¹

County	Total Number of Acres Protected	Average Number of Acres Protected Per Year ²	Funding Source
MODEL PROGRAM	Informational only; not used in evaluation	> 1,000 acres	Ag. transfer tax revenue and/or at least one other source
Anne Arundel	1,840 acres	306 acres	Ag. transfer tax revenue, gen. funds and bonds
Baltimore ¹	148 acres	37 acres	Bonds
Calvert	7,630 acres	1,526 acres	Ag. transfer tax revenue and gen. funds
Carroll	576 acres	115 acres	Ag. transfer tax revenue and gen. funds
Charles	0 acres (program is new and not yet funded)	Not applicable	None
Frederick	767 acres	127 acres	Ag. transfer tax revenue and gen. funds
Harford	10,992 acres	2,198 acres	Local real estate transfer tax
Howard	12,329 acres	821 acres	Bonds
Montgomery	5,398 acres	674 acres	Ag. transfer tax revenue and bonds
St. Mary's	0 acres (program is new and not yet funded)	Not applicable	None
Washington	124 acres	20 acres	Ag. transfer tax revenue

KEY:

Average Number of Acres Protected Per Year: < 99 acres (0 points), 100 - 500 acres (1 point), 501 - 999 acres (2 points), > 1,000 acres (3 points)

Funding Source: Ag. transfer tax revenue³ (1 point), Ag. transfer tax revenue and/or at least one other source (3 points)

¹ Information about the percentage of easement offers made that are accepted is not included because, with a few exceptions, all easement offers made are accepted.

² The average is determined by dividing the total number of acres protected by the number of years the county PDR program has been in existence. In some counties, the average is low because the county PDR program is not funded annually and, as a result, there are some years when no land is protected via the county PDR program. In most of these counties, the funding that would have supported the county PDR program is sometimes earmarked for the state PDR program instead.

³ Counties with state-certified farmland protection programs (which includes all the counties with county PDR programs) retain 75 percent of the agricultural transfer tax revenue generated in their county. Counties without a state-certified program retain 33 percent. This money must be used to support the farmland protection program.

Number of Years (other than current year) for Which Funds are Dedicated ⁴	Enrollment in County Ag. District is Prerequisite to Selling Easement	Frequency for Monitoring Easements	Soil and Water Conservation Plan Required	Overall Effectiveness of Program
> or equal to 5 years	Yes	> Once every 3 years	Yes	High*
0	Yes	Once every 10 years	Yes	Moderate
1 year	No	Once every 10 years	Yes	Moderate
0	Yes	Once per year	Yes	High
5 years	No	Once every 10 years	Yes	Moderate
0	Yes	Once every 10 years	Yes	Program too new to evaluate
0	No	No plan; monitored when subdivision is requested	Yes	Moderate
20 years	No	Annually monitor 15%	Yes	High
30 years	No	Ave. once every 2 years	Yes	High
1 year	No (unless outside of Ag. Reserve)	Once every 2 years	Yes	High
0	Yes	Once every 10 years	Yes	Program too new to evaluate
0	No	Once every 5 years	Yes	Low

Number of Years (other than current year) for Which Funds are Dedicated: 0 years (0 points), 1 - 4 yrs (1 point), > or equal to 5 years (2 points)

Enrollment in County Ag. District is Prerequisite to Selling Easement: No (0 points), Yes (1 point)

Frequency for Monitoring Easements: < Once every 3 yrs (0 points), > Once every 3 yrs (1 point)

Soil and Water Conservation Plan Required: No (0 points), Yes (1 point)

Overall Effectiveness of Program: Low (1-3 points), Moderate (4-7 points), High (8-10 points), High* (11 points)

⁴ Dedicated funds are funds that are earmarked for the program, but might not necessarily be available during the current fiscal year.

DISCUSSION

Farmland protection is not a new idea in Maryland. The state has one of the oldest PDR programs and several of the oldest agricultural conservation zoning ordinances in the country. Farmland protection is not lacking in innovation, either. State and county agencies have been leaders in developing programs that use point systems instead of appraisals to determine the value of easements, pay landowners for easements in installments, offer tax credits to landowners who enroll their land in an agricultural district and limit development to growth areas.

As a result of those efforts, approximately 286,000 acres of farmland are permanently protected by conservation easements. This includes nearly 40,000 acres protected by Montgomery County's TDR program, which is the best program of its kind in the country, and 35,000 acres of farmland protected by land trusts, making the state's land trust movement one of the most successful in the country. Nearly 300,000 acres are enrolled in agricultural districts. And effective agricultural conservation zoning (i.e., permitted lot size is 20 acres or larger) protects more than 800,000 acres of land.

The farmland protection movement has helped strengthen the state's agriculture, a 13,700-farm industry with annual cash receipts of approximately \$1.5 billion¹⁷. It, too, has helped protect wildlife habitat, hunting grounds, scenic vistas and water quality. Protected farmland, instead of developed farmland, also ensures a healthier Chesapeake Bay.

But despite these efforts, the state is losing farmland at a dramatic rate. For every one acre of farmland the state protects with an easement, it loses three acres of farmland. The loss is due in part to the lack of strategic farmland protection plans at the county, state and federal levels. The plans should identify what land to protect and what mix of techniques to use to protect that land.

The maps, model farmland protection program and cooperative assessment done designed by the CFFB are meant to be used to develop and implement strategic farmland protection plans in Maryland. They are tools for enhancing and expanding existing county-level, statewide and federal farmland protection programs. Since they were created through a consensus-building process, the tools address the concerns and issues of a diverse group of stakeholders. We hope they are used as a model for other states facing problems similar to Maryland's.

Recommendations

RECOMMENDATIONS

The CFFB recommends several steps that should be taken to ensure the successful development and implementation of strategic farmland protection plans. Most importantly, **the CFFB recommends that the plans incorporate all of the elements of the model farmland protection program.** This means that the plans should:

- **Use the maps created by the CFFB to identify strategic farmland; and**
- **Include a mix of incentive-based and regulatory techniques to protect all strategic farmland. Having a mix is not enough. The techniques must be effective enough to help communities protect strategic farmland while allowing growth to occur on farmland less important to agriculture and the environment.**

Specifically, this means that all county and state agencies that protect farmland should establish a goal for the quality and quantity of farmland to protect, then identify this land on a map. The level of protection offered through zoning should be “high.” Clustering should be mandatory in the primary agricultural conservation zones, and non-farm development in clustered subdivisions should be restricted to no more than 20 percent of the parcel. Appropriate receiving areas should be delineated when TDR programs are created. Incentives for enrolling land in an agricultural district program should be strengthened. PDR funding should be adequate enough to protect strategic farmland before it is developed. Each county farmland protection program should have an agricultural economic development component. Also, the county comprehensive plan should include goals and objectives for protecting farmland that are adhered to when requests to rezone farmland with strategic characteristics are being reviewed by the county. And the zoning ordinance and land use element of the comprehensive plan should be consistent with the goals and objectives for protecting farmland.

Other recommendations are:

- The state Department of Agriculture should establish a matching grant program that provides counties with funding to enhance their farmland protection programs. Eligible projects should include public education and outreach, developing land use planning tools (i.e., maps, comprehensive plans, studies that demonstrate the value of agricultural land), and developing county-wide agricultural economic development plans.
- The state Department of Agriculture should establish a “Critical Farms Program” that provides interim financing for the acquisition of agricultural conservation easements on critical farms (i.e., farms with strategic characteristics) when funding through the state PDR program is limited.
- The General Assembly should, at a minimum, support the current level of funding for the state PDR program and Program Open Space. When available, surplus funds should be used to restore funding that had been earmarked for the state PDR program in 1990 but was diverted because

of a budget shortfall. Also, alternative methods for funding the state PDR program and Program Open Space should be researched. This includes an installment purchase agreement program that offers payments over a period equal to or longer than 20 years.

- To help strengthen the agricultural industry while permanently protecting farmland, the state Department of Agriculture or Department of Business and Economic Development should create a program that provides participants in the state's agricultural districts program and/or state's easement program with funding to develop a business plan for their farming operations.
- The General Assembly should establish a study committee to evaluate inter-jurisdictional tax revenue-sharing programs.
- The General Assembly should continue to fully fund the Rural Legacy Program until all farmland with strategic characteristics is permanently protected. The funding should be as proposed by Governor Parris Glendening during the 1997 legislative session, or additional methods for funding the program should be considered.
- State agencies should fully implement the Smart Growth and Neighborhood Conservation Initiative.
- As new information becomes available, the state Department of Agriculture or state Department of Natural Resources should update the maps created by the CFFB. This should be done in conjunction with an advisory committee made up, at a minimum, of a representative from the Maryland Farm Bureau, Maryland Land Trust Alliance, Maryland Agricultural Land Preservation Foundation and the state departments of Agriculture, Natural Resources, and Planning.
- Public agencies and private organizations should encourage landowners to seek funding from:

- Conservation Reserve Program
- Wetlands Reserve Program
- Conservation Reserve Enhancement Program
- Forest Legacy Program
- Environmental Quality Incentives Program
- Wildlife Habitat Incentives Program
- Maryland's Agriculture Cost Share Program

Also, stakeholders should encourage state and federal agencies to continue to fund these programs and to target the funding to farmland with strategic characteristics.

- Agencies, communities, landowners and others in Maryland should encourage the U.S. Congress to strengthen and enforce the Federal Farmland Protection Policy Act and expand the Federal Farmland Protection Program.

- Private land trusts should target their public education and outreach efforts to landowners who own farmland with strategic characteristics. Public education and outreach efforts should include information about public and private farmland protection programs, including the dissemination of data and analysis provided in this report.
- Private land trusts should work cooperatively with other entities, including other land trusts and public agencies, to protect contiguous blocks of farmland with strategic characteristics.
- Private land trusts should fully engage the farm community by involving farmers on their boards and advisory committees.



Riparian buffers on farmland help protect the health of the Chesapeake Bay.

Photo: David Harp

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Endnotes

ENDNOTES

1. *Chesapeake Bay Foundation Fact Sheet: Growth, Sprawl, and the Bay* (Annapolis, Md.: Chesapeake Bay Foundation, 1997).
2. A PDR program pays farmers to keep their land available for agriculture. Landowners sell an agricultural conservation easement to a qualified government agency or private conservation organization. Landowners retain full ownership and use of their land for agricultural purposes. Development rights are extinguished in exchange for compensation. A TDR program allows landowners to transfer their right to develop one parcel of land to a different parcel of land to prevent farmland conversion. When the development rights are sold on a parcel, a conservation easement is recorded and enforced by the local government.
3. *Farming on the Edge* (Washington, D.C.: American Farmland Trust, 1997).
4. *Land Use and Development Patterns in Maryland*, 1993 (Baltimore, Md.: Maryland Office of Planning, 1994).
5. The soil units within the STATSGO database do not account for the proportions of each soil type within the database and, consequently, the yield information is overgeneralized.
6. *1992 Census of Agriculture* (Washington, D.C.: United States Department of Commerce, 1994).
7. A low level of protection is defined by the CFFB as an average lot size that is less than 10 acres. A moderate level of protection is an average lot size that ranges from 10 acres up to 20 acres and a high level of protection is an average lot size that is 20 acres or larger.
8. *Smart Growth Options for Maryland's Tributary Strategies* (Baltimore, Md.: Maryland Office of Planning, 1998).
9. *The Cost of Community Services in Frederick County, Maryland* (Washington, D.C.: American Farmland Trust, 1997).
10. The amount of strategic land varies between counties. Therefore, some counties do not receive a high ranking in certain categories because they do not have a high percentage of that type of strategic farmland within their boundaries.
11. The evaluation of zoning was limited to zoning districts where agriculture is listed in the zoning ordinance as the primary use of the land.
12. *1990 Annual Report* (Annapolis, Md.: Maryland Agricultural Land Preservation Foundation, 1991).
13. Montgomery County levies a local agricultural transfer tax and could, if necessary, consider using the revenue from this tax to fund the acquisition of easements.
14. *1996 Annual Report* (Annapolis, Md.: Maryland Agricultural Land Preservation Foundation, 1997).
15. Differential assessment also is known as use value assessment, current use assessment, current use valuation, farm use valuation and use value.
16. Personal communication with Nick Williams of Maryland Environmental Trust, 1998.
17. Maryland Agricultural Statistics Service.

Glossary

GLOSSARY

Adequate Public Facilities Ordinance

A form of comprehensive growth management that prevents new homes from being built in a community until municipal services such as sewers, roads, public water supplies and schools are available to serve the new residents.

Agricultural District

A legally recognized geographic area formed by one or more landowners and approved by one or more government agencies, designed to keep land in agriculture. Agricultural districts are created for fixed, renewable terms. Enrollment is voluntary; landowners receive a variety of benefits that may include eligibility for differential assessment, limits on annexation and eminent domain, protection against unreasonable government regulation and private nuisance lawsuits, and eligibility for purchase of agricultural conservation easement programs. Also known as agricultural preserves, agricultural security areas, agricultural preservation districts, agricultural areas, agricultural incentive areas, agricultural development areas and agricultural protection areas.

Agricultural Protection Zoning (APZ)

Zoning is a form of local land use regulation. Agricultural protection zoning ordinances protect the agricultural land base by limiting non-farm uses, prohibiting high-density development, requiring houses to be built on small lots and restricting subdivision of land into parcels that are too small to farm.

APZ takes many forms:

Exclusive agricultural zoning prohibits non-farm residences and most non-agricultural activities; exceptions are made for parcels of land that are not suitable for farming.

Large minimum lot size zoning ordinances require a certain number of acres for every non-farm dwelling, typically at least 20 acres in the eastern United States or at least 35 acres in other regions.

Area-based allowance ordinances establish a formula for the number of non-farm dwellings permitted per acre, but houses are typically built on small lots.

Fixed area-based allowance ordinances specify a certain number of units per acre.

Under **sliding scale area-based allowance** ordinances, the number of dwellings permitted varies with the size of the tract. Owners of smaller parcels are allowed to divide their land into more lots on a per-acre basis than owners of larger parcels.

Cluster Zoning

A form of zoning that allows houses to be built close together in areas where large minimum lot sizes are generally required. By grouping houses on small sections of a large parcel of land, cluster zoning can be used to protect open space. Also known as cluster development, land preservation subdivision, open land subdivision and open space subdivision.

Comprehensive Plan

A regional, county or municipal document that contains a vision of how the community will grow and change and a set of plans and policies to guide land use decisions. Comprehensive plans are also known as general plans and master plans.

Conservation Easement

Legally recorded, voluntary agreements that limit land to specific uses. Easements may apply to entire parcels of land or to specific parts of the property. Most are permanent; term easements impose restrictions for a limited number of years. Land protected by conservation easements remains on the tax rolls and is privately owned and managed; landowners who donate permanent conservation easements are generally entitled to tax benefits. See also purchase of development rights and transfer of development rights.

Deferred Taxation

A form of differential assessment that permits eligible land to be assessed at its value for agriculture. Taxes are based on how much money the land could produce in crops or livestock, instead of its speculative value for development. Deferred taxation is similar to preferential assessment, but landowners must pay some or all of the taxes that were excused if they later convert land to ineligible uses. Rollback taxes assess the difference between taxes paid under differential assessment and taxes that would have been due if the land was assessed at fair market value.

Development Rights

Development rights entitle property owners to develop land in accordance with local land use regulations. These rights may be sold to public agencies or qualified nonprofit organizations through a PACE (or PDR) program. Sale of development rights to a government agency or land trust generally does not pass any affirmative interest in the property. Rather than the right to develop the land, the buyer acquires the responsibility to enforce the negative covenants or restrictions stipulated in the development rights agreement.

Development rights may also be sold to individuals or a government agency through TDR (or TDC) programs. In this case, the buyer does acquire a positive right to develop land, but the right is transferred to a site that can accommodate growth.

Differential Assessment

An agricultural property tax relief program that allows eligible farmland to be assessed at its value for agriculture rather than its fair market value, which reflects “highest and best” use. Takes three different forms: preferential assessment, deferred taxation and restrictive agreements. Also known as current use assessment, current use valuation, farm use valuation and use assessment.

Geographic Information System (GIS)

A method of storing geographic information on computers. Geographic information can be obtained from a variety of sources, including topographical maps, soil maps, aerial and satellite photographs, and remote sensing technology. This information can then be used to create special maps for recordkeeping and decision-making purposes. GIS systems may be used to maintain maps of protected land or make decisions about which farmland to protect.

Land Trust

A private, nonprofit conservation organization formed to protect natural resources such as productive farm and forest land, natural areas, historic structures and recreational areas. Land trusts purchase and accept donations of conservation easements. They educate the public about the need to conserve land, and some provide land use and estate planning services to local governments and individual citizens.

Purchase of Development Rights (PDR)

PDR programs pay farmers to keep their land available for agriculture. Landowners sell an agricultural conservation easement to a qualified government agency or private conservation organization. Landowners retain full ownership and use of their land for agricultural purposes. PDR programs do not give government agencies the right to develop land. Development rights are extinguished in exchange for compensation. PDR is often known as purchase of agricultural conservation easements (PACE) among other names.

Receiving Area

Areas designated to accommodate development transferred from agricultural or natural areas through a TDR (or TDC) program.

Right-to-Farm Law

A state law or local ordinance that protects farmers and farm operations from public and private nuisance lawsuits. A private nuisance interferes with an individual's use and enjoyment of his or her property. Public nuisances involve actions that injure the public at large.

Sending Area

Area to be protected through a transfer of development rights program. Landowners may sell their development rights to private individuals or a government agency; the rights are used to build homes in a designated receiving area.

Transfer of Development Rights (TDR) Program

A program that allows landowners to transfer the right to develop one parcel of land to a different parcel of land to prevent farmland conversion. TDR programs establish "sending areas" where land is to be protected by agricultural conservation easements and "receiving areas" where land may be developed at a higher density than would otherwise be allowed by local zoning. Landowners in the sending area sell development rights to landowners in the receiving area, generally through the private market. When the development rights are sold on a parcel, a conservation easement is recorded and enforced by the local government. In some cases, the local government may establish a "TDR bank" to buy and sell development rights. The development rights created by TDR programs are referred to as transferable development rights (TDRs) or transferable development credits (TDCs).

Urban Growth Boundary

A theoretical line drawn around a community that defines an area to accommodate anticipated growth for a given period of time, generally 20 years. Urban growth boundaries are a growth management technique designed to prevent sprawl. They are often used to guide decisions on infrastructure development, such as the construction of roads and the extension of municipal water and sewer services.

COUNTY FACT SHEETS



1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	53.8%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	0.9%
Agricultural districts	1.0%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	0.5%
Agricultural districts	0.1%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	2.9%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	10.4%
Significant environmental, cultural and/or historic features	19.1%
Projected moderate to high increase in residential development	14.9%
G. Percentage of ag. land protected by an agricultural district that has:	
Prime or productive soils	69.5%
Significant environmental, cultural and/or historic features	38.5%
Projected moderate to high increase in residential development	0%
H. Acres of ag. land protected by:	
State PDR program	183 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	852 acres
State agricultural districts	335 acres
County agricultural districts	No program
Agricultural conservation zoning	79,907 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	High: 5 d.u. per parcel, plus 1 lot for each 50 acres over 100 acres
Year zoning ordinance was adopted	1981
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	High
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Written on plat
Overall effectiveness of clustering (high*, high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate or low)	
E. State PDR program	
Average number of acres protected per year	13 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Low

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	10%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	20,000 acres
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	71.3%
C. Percentage of ag. land with prime or productive soil that is protected by:	
Easements	5.2%
Agricultural districts	5.5%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	5.5%
Agricultural districts	3.4%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	3.3%
Agricultural districts	2.4%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	41.0%
Significant environmental, cultural and/or historic features	19.7%
Projected moderate to high increase in residential development	9.3%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	52.5%
Significant environmental, cultural and/or historic features	15.1%
Projected moderate to high increase in residential development	8.4%
H. Acres of land protected by:	
State PDR program	3,699 acres
County PDR program	1,840 acres
TDR program	No program
MET/private land trusts	117 acres
State agricultural districts	8,893 acres
County agricultural districts	1,395 acres
Agricultural conservation zoning	80,911 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Moderate: 1 d.u. per 20 acres, plus 1 lot for any remainder of 10 acres or more, plus one additional lot; family conveyances permitted on lots that are a min. of 1 acre; density for family conveyances is 1 d.u. per 2 acres for the first 10 acres and 1 d.u. per 5 acres for remaining acreage
Year zoning ordinance was adopted	1981
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster Zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Written on plat
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	No
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate or low)	
E. State PDR program	
Average number of acres protected per year	217 acres
Funding source	Ag. transfer tax revenue, gen. funds, bonds
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	
Average number of acres protected per year	306 acres
Funding source	Ag. transfer tax revenue, gen. funds, bonds
No. of years (other than current year) for which funds are committed	0
Frequency for monitoring easements	Once every 10 years
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. district program is prerequisite to selling easement (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	100%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Moderate

NOTES:

* Minimum acreage requirement for county PDR program is 50 acres.

* Comprehensive plan adopted in 1997 includes the following items: adopt a right-to-farm ordinance; conduct a fiscal impact study and cost of community services study to determine infrastructure costs; create a TDR program; adopt regulations for rural residential clustering; develop a countywide marketing strategy for rural Anne Arundel County agricultural land and Chesapeake Bay products; develop demonstration programs for alternative agriculture; develop an agriculture awareness campaign; and continue to support the Soil Conservation District in its efforts to educate and assist farmers in establishing best management practices.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	80,000 acres
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	67.1%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	10.6%
Agricultural districts	6.4%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	10.0%
Agricultural districts	6.7%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	2.2%
Agricultural districts	2.2%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	73.7%
Significant environmental, cultural and/or historic features	21.3%
Projected moderate to high increase in residential development	2.6%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	67.2%
Significant environmental, cultural and/or historic features	21.3%
Projected moderate to high increase in residential development	3.8%
H. Acres of land protected by:	
State PDR program	12,382 acres
County PDR program	148 acres
TDR program	No program
MET/private land trusts	8,089 acres
State agricultural districts	24,659 acres
County agricultural districts	0 acres (districts not required)
Agricultural conservation zoning	129,282 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	High: Can subdivide 1 time on lots of record that are between 2 and 100 acres, then build 1 d.u. per 50 acres; this is the density of the RC-4 District
Year zoning regulations were adopted	1979
Restrictions on maximum lot size permitted (yes or no)	Yes: 60,000 square feet
Overall effectiveness of zoning (high*, high, moderate, or low)	High*
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Mandatory
Maximum percentage of parcel that can be developed	30%
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Easement
Overall effectiveness of clustering (high*, high, moderate or low)	High
C. Right-to-farm protection (yes or no)	Yes: applies to RC-4 District only
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate or low)	
E. State PDR program	
Average number of acres protected per year	773 acres
Funding source	Ag. transfer tax revenue, gen. funds, bonds
No. of years (other than current year) for which funds are committed	0 (bonds authorized for 5 years but not committed)
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	
Average number of acres protected per year	37 acres
Funding source	Bonds
No. of years (other than current year) for which funds are committed	1
Frequency for monitoring easements	Once every 10 years
Soil and water conservation plans required (yes or no)	Yes: soil and water conservation plans and nutrient management plans
Enrollment in county ag. district program is prerequisite to selling easement (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	100%
K. Farmland protection program addresses goals and objectives of local comprehensive plan; state's Economic Growth, Resource Protection, and Planning Act of 1992; Smart Growth and Neighborhood Conservation Initiative (high, moderate or low)	Moderate

NOTES:

* Zoning regulations are generally effective at limiting density on large tracts but not small tracts. Effectiveness also depends on how much the county can reasonably dictate housing, as well as how much time is involved with enforcing regulations.

* County has signed an agreement with Cecil, Carroll and Harford counties that promises cooperation to limit farm and construction runoff that affects the Chesapeake Bay.

* County PDR program provides landowners with option of using a formula to determine easement values. Ag. values, not fair market values, are given highest consideration when using formula.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	80% of land in Farm Community District and Resource Pres. District
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	61.8%
C. Percentage of ag. land with prime or productive soil that is protected by:	
Easements	24.6%
Agricultural districts	4.9%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	29.5%
Agricultural districts	5.4%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	26.9%
Agricultural districts	4.5%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	35.9%
Significant environmental, cultural and/or historic features	50.2%
Projected moderate to high increase in residential development	77.0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	44.9%
Significant environmental, cultural and/or historic features	57.3%
Projected moderate to high increase in residential development	80.4%
H. Acres of land protected by:	
State PDR program	3,454 acres
County PDR program	7,630 acres
TDR program	6,641 acres
MET/private land trusts	1,921 acres
State agricultural districts	6,083 acres
County agricultural districts	12,136 acres
Agricultural conservation zoning	46,517 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Low: 1 d.u. per 5 acres
Year zoning ordinance was adopted	1974
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster Zoning	
Type of restrictions (mandatory or voluntary)	Mandatory
Maximum percentage of parcel that can be developed	20%
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Easement
Overall effectiveness of clustering (high*, high, moderate or low)	High
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	664 acres
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	Moderately: supply is greater than demand
Overall effectiveness of program (high*, high, moderate or low)	High
E. State PDR program	
Average number of acres protected per year	215 acres
Funding source	Ag. transfer tax revenue and gen. funds
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Low

F. County PDR program	
Average number of acres protected per year	1,526 acres
Funding source	Ag. transfer tax revenue and gen. funds
No. of years (other than current year) for which funds are committed	0
Frequency for monitoring easements	Once per year
Soil and water conservation plan required (yes or no)	Yes: soil and water conservation plans; forest management plans for properties with Class 1 or 2 soils
Enrollment in county ag. districts is prerequisite to selling easement (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	High
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	
No. of employees	No
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person devotes to administering employee and farmland protection program)	100% for 1 part-time employee 10% for 1 full-time employee
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	High

NOTES:

* For land enrolled in an ag. preservation district or protected by an easement, development density is 1 lot per 25 to 49 acres, 2 lots per 50 to 74 acres and 3 lots per 75+ acres. Location and size of the lots must be approved by county ag. preservation board.

* County tries to reduce waiting period for county PDR program by spreading its funds: acquisition of development rights is limited to 10 per year per landowner. As a result, county usually has enough funding to acquire 50% of the easements landowners are interested in selling.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	100,000 acres by 2020
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	90.9%
C. Percentage of ag. land with prime or productive soil that is protected by:	
Easements	9.6%
Agricultural districts	9.0%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	8.9%
Agricultural districts	4.9%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	89.0%
Significant environmental, cultural and/or historic features	20.1%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	93.8%
Significant environmental, cultural and/or historic features	12.6%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	19,196 acres
County PDR program	No program
TDR program	100 acres
MET/private land trusts	709 acres
State agricultural districts	36,692 acres
County agricultural districts	No program
Agricultural conservation zoning	182,872 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Moderate: 4 lots permitted from original parcel (as of Dec. 1, 1972), then development is permitted at a density of 1 d.u. per 20 acres
Year zoning ordinance was adopted	1990
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster zoning	No
Type of restrictions (mandatory or voluntary)	
Maximum percentage or parcel that can be developed	
Exclusion of undevelopable land from total land protected (yes or no)	
Method for recording open space (easement, covenant or deed restriction, or written on plat)	
Overall effectiveness of clustering (high*, high, moderate or low)	
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	14 acres
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	No
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	No: supply is greater than demand
Overall effectiveness of TDR program (high*, high, moderate or low)	Low
E. State PDR program	
Average number of acres protected per year	1,279 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Low

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	60%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to preserve	100,000 acres
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	77.1%
C. Percentage of ag. land with prime or productive soil that is protected by:	
Easements	11.5%
Agricultural districts	11.2%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	8.7%
Agricultural districts	9.5%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	7.5%
Agricultural districts	9.4%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	55.6%
Significant environmental, cultural and/or historic features	8.1%
Projected moderate to high increase in residential development	47.5%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	52.2%
Significant environmental, cultural and/or historic features	8.6%
Projected moderate to high increase in residential zoning	57.4%
H. Acres of land protected by:	
State PDR program	25,590 acres
County PDR program	576 acres
TDR program	No program
MET/private land trusts	536 acres
State agricultural districts	43,867 acres
County agricultural districts	0 acres (not required)
Agricultural conservation zoning	191,444 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Moderate: 1 d.u. per 20 acres plus 2 off-conveyances; effective density is 1 d.u. per 15 acres; size of lots is to be as near the 1-acre minimum as possible
Year zoning ordinance was adopted	1978
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster zoning	
Type of restriction (mandatory or voluntary)	Mandatory
Maximum percentage of parcel that can be developed	Lot should be as close to 1 acre as possible so undeveloped land is large enough to be "suitable" for agriculture
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Written on plat
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate or low)	
E. State PDR program	
Average number of acres protected per year	1,505 acres
Funding source	Ag. transfer tax revenue, gen. funds
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	High

F. County PDR program	
Average number of acres protected per year	115 acres
Funding source	Ag. transfer tax revenue, gen. funds
No. of years (other than current year) for which funds are committed	5 years
Frequency for monitoring easements	Once every 10 years
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	No
Overall competitiveness of PDR program (high*, high, moderate or low)	High
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Program budget	
Primary activities/services	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	100%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Moderate

NOTES:

* Citizens group appointed by Planning and Zoning Commission has recommended creating an Installment Purchase Agreement program, instituting a 0.5 to 1.0% property tax on property transferred, supporting the Cooperative Extension Office in improving the profitability and competitiveness of county farmers in both traditional and non-traditional ag. and pursuing additional state and federal funds.

* TDR program is limited to farms with viable mineral resources. County decided in 1997 not to broaden the scope of the program.

* County PDR program is called "Critical Farms Program" and is an option only for contract purchasers and new landowners. County purchases option to buy easement. County pays landowner 75% of appraised easement value. In return, landowner must submit application to state PDR program. If state makes an offer, landowner must accept offer and repay the county. If no offer is made in 5 years, county owns the easement, unless landowner repays county (with interest) in 30 days.

* County does not have a program to promote agricultural industry but it has an 18-member Agriculture Commission that strongly supports Cooperative Extension Service programs. County farmland protection program administrator is executive secretary of the commission.

* County has signed an agreement with Baltimore, Cecil and Harford counties that promises cooperation to limit farm and construction runoff that affects the Chesapeake Bay.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	72.6%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	4.0%
Agricultural districts	8.4%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	5.3%
Agricultural districts	7.4%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0.5%
Agricultural districts	1.5%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	74.9%
Significant environmental, cultural and/or historic features	48.7%
Projected moderate to high increase in residential development	1.0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	93.9%
Significant environmental, cultural and/or historic features	40.9%
Projected moderate to high increase in residential development	1.9%
H. Acres of land protected by:	
State PDR program	7,564 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	2,506 acres
State agricultural districts	13,999 acres
County agricultural districts	No program
Agricultural conservation zoning	125,467 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Low: 1 d.u. per 5 acres in Rural Conservation District and 1 d.u. per 8 acres in Resource Protection District
Year zoning ordinance was adopted	1993
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	
Type of restriction (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	40%
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Written on plat
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm Protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year (mandatory or voluntary)	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy rights (no, mod., or yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	756 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	30%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

NOTES:

* County has signed an agreement with Baltimore, Carroll and Harford counties that promises cooperation to limit farm and construction runoff that affects the Chesapeake Bay.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	67.9%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	0.8%
Agricultural districts	3.4%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	1.3%
Agricultural districts	2.4%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	2.8%
Agricultural districts	2.4%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	10.8%
Significant environmental, cultural and/or historic features	19.2%
Projected moderate to high increase in residential development	11.9%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	33.8%
Significant environmental, cultural and/or historic features	25.9%
Projected moderate to high increase in residential development	7.5%
H. Acres of land protected by:	
State PDR program	677 acres
County PDR program	No program
TDR program	105 acres
MET/private land trusts	2,496 acres
State agricultural districts	8,919 acres
County agricultural districts	No program
Agricultural conservation zoning	165,745 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Low: 1 d.u. per 3 acres
Year zoning ordinance was adopted	1995
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	40%
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Deed restriction
Overall effectiveness of clustering (high*, high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	No
D. TDR program	
Average number of acres protected per year	21 acres
Mandatory or Voluntary	Voluntary
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	No
Overall effectiveness of TDR program (high*, high, moderate, or low)	Low
E. State PDR program	
Average number of acres protected per year	75 acres
Funding source	Ag. transfer tax revenue; revenue from sale of surplus property owned by county
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	High

F. County PDR program	
Average number of acres protected per year	Not applicable
Funding source	None
No. of years (other than current year) for which funds are committed	0
Frequency for monitoring easements	Once every 10 years
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Not applicable (program too new to evaluate)
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one person spends administering farmland protection program)	60%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

NOTES:

* County is considering creating Installment Purchase Agreement program that would spread easement payments over a 30-year time period and establishing program that allows landowners the opportunity to rent their development rights to county for a minimum of 10 years.

* Right-to-farm ordinance has been drafted and is being reviewed by county attorney.

* County is developing a plan for the quality and quantity of land to protect. Factors to be considered include productivity of soils, and whether the land is assessed for agriculture and in the Agriculture Conservation or Rural Conservation zones.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	100,000 acres
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	76.7%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	1.2%
Agricultural districts	1.7%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	2.4%
Agricultural districts	0.7%
E. Percentage (acres) of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	18.8%
Significant environmental, cultural and/or historic features	57.6%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	64.5%
Important environmental, cultural and/or historic features	46.0%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	3,388 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	5,622 acres
State agricultural districts	7,755 acres
County agricultural districts	No program
Agricultural conservation zoning	252,170 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Low: 3 d.u. per acre, plus one additional d.u. per 15 acres
Year zoning ordinance was adopted	1997
Restrictions of maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	No
Type of restriction (mandatory or voluntary)	
Maximum percentage of parcel that can be developed	
Exclusion of undeveloped land from total land protected (yes or no)	
Method for recording open space (easement, covenant or deed restriction, or written on plat)	
Overall effectiveness of clustering (high*, high, moderate or low)	
C. Right-to-farm protection (yes or no)	No
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	423 acres
Funding source	Ag. transfer tax revenue
No. of years, other than current year, for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Moderate
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	25%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

NOTES:

* County is drafting a right-to-farm ordinance and cluster zoning ordinance.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/cover that is zoned for agricultural conservation	79.9%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	5.7%
Agricultural districts	3.8%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	5.8%
Agricultural districts	4.1%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	3.5%
Agricultural districts	1.1%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	69.9%
Significant environmental, cultural and/or historic features	14.2%
Projected moderate to high increase in residential development	17.0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	64.4%
Significant environmental, cultural and/or historic features	14.0%
Projected moderate to high increase in residential development	7.5%
H. Acres of land protected by:	
State PDR program	10,061 acres
County PDR program	767 acres
TDR program	No program
MET/private land trusts	1,744 acres
State agricultural districts	20,251 acres
County agricultural districts	0 acres (not required)
Agricultural conservation zoning	260,371 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	High: 3 d.u. for first 25 acres, then 1 additional d.u. per 50 acres, plus 1 remainder, on parcels in existence as of August 18, 1976; no development on parcels created after that time
Year zoning ordinance was adopted	1985
Restrictions on maximum lot size permitted (yes or no)	Yes: 2 acres if development is clustered
Overall effectiveness of zoning (high*, high, moderate or low)	High*
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Mandatory if 1 d.u. per 50 acre option is used; otherwise, clustering is voluntary
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Written on plat
Overall effectiveness of clustering (high*, high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equal to demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	628 acres
Funding source	Ag. transfer tax revenue, gen. funds
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	
Average number of acres protected per year	127 acres
Funding source	Ag. transfer tax revenue, gen. funds
No. of years (other than current year) for which funds are committed	0
Frequency for monitoring easements	No plan; monitored when subdivision is requested
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	30%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Moderate

NOTES:

* AgriFuture Roundtable, a grassroots group, was formed in 1995 to develop a strategy for saving farms and farming.

* County has a Critical Farms Program. County purchases options to buy the development rights on farms. County pays 75% of the appraised easement value for the option. In return, landowner must submit application to state PDR program. Any offer from the state that equals or exceeds the amount of the option must be accepted by the landowner, who also must repay the county original option price. If no offer is made in six months, county owns the easement.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much ag. land to protect	No
B. Percentage of land categorized as ag. land use/cover that is zoned for agricultural conservation	None
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	4.1%
Agricultural districts	1.8%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	2.7%
Agricultural districts	2.0%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	16.7%
Significant environmental, cultural and/or historic features	14.5%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	11.7%
Significant environmental, cultural and/or historic features	17.0%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	3,398 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	245 acres
State agricultural districts	5,531 acres
County agricultural districts	No program
Agricultural conservation zoning	90,008 acres (land is classified via subdivision ordinance)

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, low)	Low: "density standard" of 1 d.u. per 3 acres
Year zoning ordinance was adopted	1997
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	50 percent if sewer and water services are not available; 40 percent if sewer and water services are available
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Easement
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	212 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time devoted to administering farmland protection program)	10%
K. Comprehensive plan includes goals to protect farmland (high, moderate or low)	Low

NOTES:

* County does not have zoning restrictions for most land in the rural areas but it does have subdivision requirements.

* For the purpose of this project, all land categorized as agricultural land use/land cover that is not zoned is considered to be land zoned for agricultural conservation.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	30,000 acres by 2005
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	85.6%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	6.1%
Agricultural districts	8.9%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	6.4%
Agricultural districts	8.2%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	4.9%
Agricultural districts	3.3%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	77.6%
Significant environmental, cultural and/or historic features	41.0%
Projected moderate to high increase in residential development	29.2%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	79.7%
Significant environmental, cultural and/or historic features	37.2%
Projected moderate to high increase in residential development	14.0%
H. Acres of land protected by:	
State PDR program	8,529 acres
County PDR program	10,992 acres
TDR program	0 acres
MET/private land trusts	2,472 acres
State agricultural districts	23,025 acres
County agricultural districts	1,592 acres
Agricultural conservation zoning	174,548 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Low: 1 d.u. per 10 acres; family conveyances permitted on parcels created prior to Feb. 7, 1977
Year zoning ordinance was adopted	1977
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	
Type of restriction (mandatory or voluntary)	Voluntary
Maximum percentage of land that can be developed	No requirement but lots cannot be larger than 2 acres
Exclusion of undevelopable land from land protection (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Easement
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	0 acres; no easement required
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	Yes: only can transfer to parcels in the agricultural zone that are contiguous or within 500 feet of the sending parcel
Supply of dev. rights equal to demand to buy dev. rights (no, mod., yes)	No
Overall effectiveness of TDR program (high*, high, moderate, or low)	Low
E. State PDR program	
Average number of acres protected per year	533 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	High

F. County PDR program	
Average number of acres protected per year	2,198 acres
Funding source	Local real estate transfer tax revenue
No. of years (other than current year) for which funds are committed	20
Frequency for monitoring easements	Annually monitor 15% of easements
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	High
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	
No. of employees	1
Employee works with or for economic development office (yes or no)	Yes
Primary activities/services	Marketing and education
Program budget	\$150,000/year
Overall effectiveness of program (high*, high, moderate or low)	High
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	100%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	High

NOTES:

* County has signed an agreement with Cecil, Baltimore and Carroll counties that promises cooperation to limit farm and construction runoff that affects the Chesapeake Bay.

* County has an Installment Purchase Agreement Program that offers landowners the opportunity to be paid for county-held easements in annual installments over a 20-year time period.

* A point system, not an appraisal system, is used to determine the value of easements acquired through county PDR program.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	30,000 acres
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	86.0%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	14.0%
Agricultural districts	2.7%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	10.2%
Agricultural districts	1.4%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	13.3%
Agricultural districts	2.5%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	84.8%
Significant environmental, cultural and/or historic features	7.0%
Projected moderate to high increase in residential development	98.6%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	62.5%
Significant environmental, cultural and/or historic features	5.2%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	3,955 acres
County PDR program	12,329 acres
TDR program	735 acres
MET/private land trusts	1,127 acres
State agricultural districts	30 acres
County agricultural districts	0 acres (not required)
Agricultural conservation zoning	93,807 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Low: Parcels smaller than 20 acres can be developed at a density of 1 d.u. per 4.25 acres if the development is clustered or 1 d.u. per 3 acres if clustering is not done; parcels larger than 20 acres may be developed at a density of 1 d.u. per 4.25 acres and the development must be clustered on 1-acre lots; parcels larger than 100 acres can be subdivided into lots of at least 50 acres
Year zoning ordinance was adopted	1992
Restrictions on maximum lot size permitted (yes or no)	Yes: 60,000 square feet if development is clustered and 3 acres if development is not clustered
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Mandatory or voluntary (depends on development density)
Maximum percentage of parcel that can be developed	Approximately 20 percent
Exclusion of undevelopable land from land to be protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Easement
Overall effectiveness of clustering (high*, high, moderate or low)	High
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	147 acres
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	Moderate
Overall effectiveness of TDR program (high*, high, moderate, or low)	High

E. State PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Easement ranking system (yes or no)	
Overall effectiveness of PDR program (high, moderate or low)	
F. County PDR program	
Average number of acres protected per year	821 acres
Funding source	Zero coupon bonds acquired with ag. transfer tax and local real estate transfer tax revenue
	Bond commitment for 30 years
No. of years (other than current year) for which funds are committed	Average of once every 2 years
Frequency for monitoring easements	Yes
Soil and water conservation plan required (yes or no)	No
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	High
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	
No. of employees	1
Employee works with or for economic development office (yes or no)	Yes
Primary activities/services	Create markets for products; explore alternative enterprises; considering building a food processing incubator; developing logo
Program budget	\$50,000
Overall effectiveness of program (high*, high, moderate or low)	High
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time employee devotes to administering farmland protection program)	100%
K. Comprehensive plan includes goals for farmland protection (high, moderate or low)	Moderate

NOTES:

- * No purchases through state PDR program since 1983.
- * County PDR program was an Installment Purchase Agreement Program that paid for easements in annual installments over a 30-year period. Funding for program was depleted by 1997. IPA program helped county receive AAA bond rating.
- * County used point system, not appraisal system, to determine value of easements acquired through county PDR program.
- * TDR program is referred to as "Density Exchange Option." County also has "Cluster Exchange Option."
- * County created ag. economic development plan in 1997.
- * The state PDR program reports that the county has 6,281 acres enrolled in state agricultural districts. However, all but 30 acres of this land is no longer enrolled in an agricultural district because it is protected by county easements.
- * The development value is different than the fair market value. The fair market value is not readily determined due to varied environmental and other conditions, and there are few land sales that can be used to determine a baseline value.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	6,000 acres in easements and 11,000 in ag. districts by 2000
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	76.0%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	6.6%
Agricultural districts	2.4%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	14.7%
Agricultural districts	0%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0%
Agricultural districts	9%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	62.5%
Significant environmental, cultural and/or historic features	22.8%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	75.6%
Significant environmental, cultural and/or historic features	0%
Projected moderate to high increase in residential development	6.4%
H. Acres of land protected by:	
State PDR program	5,977 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	7,552 acres
State agricultural districts	11,529 acres
County agricultural districts	No program
Agricultural conservation zoning	121,128 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	Moderate: 1 d.u. per 30 acres (min. lot size 2 acres, no max. lot size) for scattered development "suitable" for ag.; 1 d.u. per 20 acres (min. lot size 1 acre, max. lot size 5 acres) for suburban development; and 1 d.u. per 10 acres (min. lot size n/a, max. lot size 1 acre) for enclave development
Year zoning ordinance was adopted	1989
Restrictions on maximum lot size permitted	No requirement when permitted density is 1 d.u. per 30 acres; 5 acres when permitted density is 1 d.u. per 20 acres; 1 acre when permitted density is 1 d.u. per 10 acres
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Deed restriction
Overall effectiveness of clustering (high*, high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equal to demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	

E. State PDR program	
Average number of acres protected per year	498 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate
F. County PDR program	
Average number of acres protected per year	No
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts plan is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high, moderate or low)	
G. Property tax credit program (yes or no)	
	No
H. Program to promote ag. industry	
No. of employees	None full-time: Kent and Queen Anne's counties' tourism offices and Cooperative Extension Service offices work together to promote agriculture
Employee works with or for economic development office (yes or no)	Yes
Primary activities/services	Sponsored a workshop on alternative agriculture; developed guide for several farms (i.e., all nurseries, vineyards); administer program that connects local chefs and local growers
Program budget	0
Overall effectiveness of program (high*, high, moderate or low)	Low
I. Targeting public services to existing developed areas (high, moderate or low)	
	Moderate
J. Staffing (percentage of time one full-time person devotes to administering farmland protection program)	
	35%
K. Comprehensive plan includes goals for farmland protection (high, moderate or low)	
	Low

NOTES:

* County is considering starting TDR, PDR and Farm Link programs, all which are recommended in amended county comprehensive plan.

* Agricultural Advisory Board delineates areas that should be preserved for agricultural uses.

* County hopes to generate funds for PDR program through a new voluntary check-off box that will be located on a brochure that will be distributed through the local tax mailings and elsewhere.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	70,000 acres by 2005
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	71.0%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	26.0%
Agricultural districts	1.0%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	21.6%
Agricultural districts	0.8%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	5.9%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	73.9%
Significant environmental, cultural and/or historic features	22.4%
Projected moderate to high increase in residential development	6.0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	89.3%
Significant environmental, cultural and/or historic features	27.9%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	1,805 acres
County PDR program	5,398 acres
TDR program	39,180 acres
MET/private land trusts	1,959 acres
State agricultural districts	2,911 acres
County agricultural districts	0 acres
Agricultural conservation zoning	131,166 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate or low)	High: 1 d.u. per 25 acres
Year zoning ordinance was adopted	1981
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	High
B. Cluster zoning	
Mandatory or voluntary	Voluntary in Rural Density Transfer Zone (1 d.u. per 25 acres) and mandatory in Rural Cluster Zone (1 d.u. per 5 acres)
Maximum percentage of parcel that can be developed	No percentage in Rural Density Transfer Zone but average size of the lots cannot exceed 5 acres; 40 percent in Cluster Zone
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Deed restriction, in Rural Cluster Zone
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	2,304 acres
Mandatory or voluntary	Mandatory
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev. rights (yes, mod., no)	Yes, but supply is decreasing as some landowners withhold development rights until they receive a high offer
Overall effectiveness of TDR program (high*, high, moderate, or low)	High*
E. State PDR program	
Average number of acres protected per year	112 acres
Funding source	Ag. transfer tax revenue and bonds
No. of years (other than current year) for which funds are committed	1
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	
Average number of acres protected per year	674 acres
Funding source	Ag. transfer tax revenue and bonds
No. of years (other than current year) for which funds are committed	1
Frequency for monitoring easements	Once every two years
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	No (unless outside Rural Density Transfer Zone)
Overall effectiveness of PDR program (high*, high, moderate or low)	High
G. Property tax credit program (yes or no)	
Yes	
H. Program to promote ag. industry	
No. of employees	Three employees work on farmland preservation and ag. economic development
Program budget	\$607,420/year
Primary activities/services	Organize annual farm tour and farmer's markets; provide technical assistance on best management practices and marketing opportunities; in 1997, had an emergency loan program for farmers whose operations were affected by the year's drought
Overall effectiveness of program (high*, high, moderate or low)	High*
I. Targeting public services to existing developed areas (high, moderate or low)	
Moderate	
J. Staffing (percentage of time one full-time person devotes to administering farmland protection program)	
75% for one full-time employee and approximately 50% for another full-time employee	
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	
High	

NOTES:

* County requires ag. districts only if land to be protected through the county ag. district program is not within main ag. zones: Rural Density Transfer Zone, Rural Cluster Zone and Rural Zone.

* County uses point system to determine easement values for county PDR program and to rank easement applications for state and county PDR programs. Highest priority is given to large, high-quality commercial farms along southern edge of the primary agricultural area, called the Rural Density Transfer Zone.

* County has its own ag. transfer tax that can be levied if the state ag. transfer tax is not levied. Revenues from county ag. transfer tax would be used to fund PDR.

* All farmland preservation and ag. economic development activities are part of the Division of Agriculture Services. Three county employees work for the Division and the county allocates funding for the Cooperative Extension Service and Soil and Water Conservation Service to work with the Division.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much ag. land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	None
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	1.3%
Agricultural districts	0%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	0%
Agricultural districts	0%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	1.3%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	9.6%
Significant environmental, cultural and/or historic features	0%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	0%
Significant environmental, cultural and/or historic features	0%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	0 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	157 acres
State agricultural districts	0 acres
County agricultural districts	No program
Agricultural conservation zoning	28,325 acres (see note below)

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, low)	Low: 1 d.u. per 2 acres
Year zoning ordinance was adopted	Late 1970s
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	No
Type of restrictions (mandatory or voluntary)	
Maximum percentage of parcel that can be developed	
Exclusion of undevelopable land from land to be protected (yes or no)	
Method for recording open space (easement, covenant or deed restriction, or written on plat)	
Overall effectiveness of clustering (high*, high, moderate or low)	
C. Right-to-farm protection (yes or no)	No
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	0 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Low

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency of monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	Less than 10%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

NOTES:

* For this project, all land in Residential-Agriculture Zone is considered to be land zoned for ag. conservation.

* Although the county does not have an exclusive agriculture zone, it does have two large lot zones where most of the agricultural land is located. The Open Space Zone is the most protective zone for agriculture. The permitted density is 1 dwelling unit per 5 acres. In the recently-created Reserved Open Space Zone, the permitted density is 1 dwelling unit per 20 acres, but this is mainly for large public properties, not private land.

* Few easement applications are submitted to state PDR program because farms are small, making it difficult to meet program's 100-acre requirement.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	90.3%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	5.7%
Agricultural districts	5.9%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	7.6%
Agricultural districts	5.1%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	15.6%
Agricultural districts	0.1%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	58.8%
Significant environmental, cultural and/or historic features	13.9%
Projected moderate to high increase in residential development	9.2%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	70.3%
Significant environmental, cultural and/or historic features	13.6%
Projected moderate to high increase in residential development	0.1%
H. Acres of land protected by:	
State PDR program	12,034 acres
County PDR program	No program
TDR program	2,407 acres
MET/private land trusts	3,752 acres
State agricultural districts	24,897 acres
County agricultural districts	No program
Agricultural conservation zoning	193,900 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, low)	Moderate: 1 d.u. per 20 acres
Year zoning ordinance was adopted	1994
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	15 percent
Exclusion of undevelopable land from land to be protected (yes or no)	No
Method for recording open space (easement, covenant deed restriction, or written on plat)	Easement
Overall effectiveness of clustering (high*, high, moderate or low)	High
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	240 acres
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	No: supply is greater than demand
Overall effectiveness of TDR program (high*, high, moderate or low)	
E. State PDR program	
Average number of acres protected per year	859 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	
No. of employees	None full-time; Queen Anne's and Kent counties' tourism offices and Cooperative Extension Service offices work together to promote agriculture
Employee works with or for economic development office (yes or no)	Yes
Primary activities/services	Sponsored a workshop on alternative agriculture; developed guide for several farms (e.g., all nurseries, vineyards); administer program that connects local chefs to local growers
Program budget	0
Overall effectiveness of program (high*, high, moderate or low)	Low
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	30%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

NOTES:

* County allows for the development—as if they were one property—of non-contiguous land in the Agricultural Zone and portions of the Countryside Zone that are not designated by the state as being in the Critical Area program. No density bonus. Also, a minimum of 50% of the parcel must remain undeveloped.

* Through TDR program, a minimum of 20 acres must be deed restricted.

* Easements created through clustering, TDR or non-contiguous development options are in perpetuity, but if maximum development potential on the property has not been realized, the easement can be amended to reflect changes in the area that is deed restricted as a result of subsequent development.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	87.9%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	0.3%
Agricultural districts	1.2%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	1.1%
Agricultural districts	0.7%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime and productive soils	6.5%
Significant environmental, cultural and/or historic features	15.8%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime and productive soils	31.1%
Significant environmental, cultural and/or historic features	19.5%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	2,364 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	2,141 acres
State agricultural districts	4,492 acres
County agricultural districts	No program
Agricultural conservation zoning	141,313 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Low: 1 d.u. per acre
Year zoning ordinance was adopted	1976
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Deed restriction
Overall effectiveness of clustering (high*, high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	No
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	214 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Program budget	
Primary activities/services	
Overall effectiveness of program (high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one person spends administering farmland protection program)	10%
K. Comprehensive plan includes goals to protect farmland (high, moderate or low)	Low

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much ag. land to protect	17,000 acres
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	88.0%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	1.7%
Agricultural districts	0.9%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	1.1%
Agricultural districts	1.6%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	1.6%
Agricultural districts	0.5%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	55.9%
Significant environmental, cultural and/or historic features	19.9%
Projected moderate to high increase in residential development	51%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	46.0%
Significant environmental, cultural and/or historic features	43.8%
Projected moderate to high increase in residential development	22.2%
H. Acres of land protected by:	
State PDR program	2,177 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	1,831 acres
State agricultural districts	4,229 acres
County agricultural districts	No program
Agricultural conservation zoning	185,096 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Low: 1 d.u. per 3 acres
Year zoning ordinance was adopted	1990
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	40%
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Written on plat
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	No
D. TDR program	
Average number of acres protected per year	0 acres
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev rights (no, mod., yes)	Not applicable (program is new and there are no transfers yet)
Overall effectiveness of TDR program (high*, high, moderate, low)	Program too new to evaluate
E. State PDR program	
Average number of acres protected per year	155 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program

Average number of acres protected per year	Not applicable
Funding source	No funding yet (program is new)
No. of years (other than current year) for which funds are committed	0
Frequency for monitoring easements	Once every 10 years
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Program too new to evaluate

G. Property tax credit program (yes or no)

Yes

H. Program to promote ag. industry

No. of employees	1
Employee works with or for economic development office (yes or no)	Yes
Primary activities/services	Marketing
Program budget	\$70,000/year
Overall effectiveness of program (high*, high, moderate or low)	High

I. Targeting public services to existing developed areas (high, moderate or low)

Low

J. Staffing (percentage of time one person spends administering farmland protection program)

100%: responsibilities include farmland protection, ag. marketing and ag. economic development; employee works within the Department of Economic and Community Development; some support for farmland protection also comes from Planning Office

K. Comprehensive plan includes goals to protect farmland (high, moderate or low)

Low

NOTES:

* County is using GIS to identify where its strategic farms (farms smaller than 100 acres with Class I, II or III soils) are located.

* County is considering changing zoning regulations to allow for the development of up to 5 lots anywhere in the county. Additional lots could be built at a density of 1 d.u. per 3 acres but only if the parcel is rezoned to Rural Residential. County also is considering creating an Agriculture Zone, where development would be allowed at a density of 1 d.u. per 15 acres.

* Some farmland is in the Agriculture District, a voluntary zoning district that is available to landowners who want additional protection (i.e., right-to-farm protection) for their use of their farm property. No landowners have opted for this zoning. Density in the Agriculture District is 1 d.u. per 20 acres.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	54.4%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	3.5%
Agricultural districts	6.7%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	7.0%
Agricultural districts	2.5%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	7.9%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	30.0%
Significant environmental, cultural and/or historic features	18.3%
Projected moderate to high increase in residential development	13.7%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	72.3%
Significant environmental, cultural and/or historic features	8.2%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	3,363 acres
County PDR program	No program
TDR program	580 acres
MET/private land trusts	7,721 acres
State agricultural districts	11,027 acres
County agricultural districts	No program
Agricultural conservation zoning	88,077 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Moderate: For parcels larger than 6 acres, development is allowed at a density of 3 d.u. per parcel, then 1 d.u. per 20 acres; for parcels smaller than 6 acres, development is allowed at a density of 1 d.u. per 2 acres.
Year zoning ordinance was adopted	1991
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Moderate
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	25 to 75%; percentage depends on size of the parcel to be developed
Exclusion of undevelopable land from total land protected (yes or no)	No
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Reservation of development rights agreement
Overall effectiveness of clustering (high*, high, moderate or low)	Moderate
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	
Average number of acres protected per year	96 acres
Mandatory or voluntary	Voluntary
Designated receiving area (yes or no)	Yes
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	No
Overall effectiveness of TDR program (high*, high, moderate, or low)	Low

E. State PDR program	
Average number of acres protected per year	258 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Low
F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plans required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	25%
K. Comprehensive plan includes goals for protecting farmland (high, moderate or low)	Low

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	50,000 acres
B. Percentage of ag. land categorized as ag land use/land cover that is zoned for agricultural conservation	73.7%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	2.6%
Agricultural districts	11.0%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	2.7%
Agricultural districts	10.7%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	1.8%
Agricultural districts	9.3%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	49.8%
Significant environmental, cultural and/or historic features	48.8%
Projected moderate to high increase in residential development	18.0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	55.4%
Significant environmental, cultural and/or historic features	51.8%
Projected moderate to high increase in residential development	25.2%
H. Acres of land protected by:	
State PDR program	5,012 acres
County PDR program	124 acres
TDR program	No program
MET/private land trusts	2,757 acres
State agricultural districts	23,570 acres
County agricultural districts	0 acres (not required)
Agricultural conservation zoning	138,734 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Low: 1 d.u. per acre
Year zoning ordinance was adopted	1973
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high, moderate or low)	Low
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Voluntary
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	No recording
Overall effectiveness of clustering (high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	No
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	334 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	Yes
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	
Average number of acres protected per year	20 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Frequency for monitoring easements	Once every 5 years
Soil and water conservation plan required (yes or no)	Yes
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Low
G. Property tax credit program (yes or no)	Yes
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Moderate
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	75%
K. Comprehensive plan includes goals to protect farmland (high, moderate or low)	Low

NOTES:

* County is considering adopting right-to-farm ordinance.

* No program to promote ag. industry but county's farmland protection program administrator is a member of the Cooperative Extension Service Advisory Council.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much ag. land to protect	No
B. Percentage of land categorized as ag. land use/land cover that is zoned for agricultural conservation	79.0%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	1.2%
Agricultural districts	0.3%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	0.7%
Agricultural districts	2.4%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0.1%
Agricultural districts	1.4%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	66.4%
Significant environmental, cultural and/or historic features	19.0%
Projected moderate to high increase in residential development	1.9%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	68.3%
Significant environmental, cultural and/or historic features	24.5%
Projected moderate to high increase in residential development	8.4%
H. Acres of land protected by:	
State PDR program	3,667 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	551 acres
State agricultural districts	7,903 acres
County agricultural districts	No program
Agricultural conservation zoning	173,669 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	Low: 1 d.u. per 20,000 square feet, pending approval from the state Health Department
Year zoning ordinance was adopted	1968
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	Low
B. Cluster zoning	No
Type of restrictions (mandatory or voluntary)	
Maximum percentage of parcel that can be developed	
Exclusion of undevelopable land from total land protected (yes or no)	
Method for recording open space (easement, covenant or deed restriction, or written on plat)	
Overall effectiveness of clustering (high*, high, moderate or low)	
C. Right-to-farm protection (yes or no)	Yes
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate, or low)	
E. State PDR program	
Average number of acres protected per year	366 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Moderate

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Program budget	
Primary activities/services	
Overall effectiveness of program (high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	10%
K. Comprehensive plan includes goals to protect farmland (high, moderate or low)	Low

NOTES:

* County task force, Quarter Century Committee, has recommended TDR, cluster zoning, 20-acre zoning and a property tax credit program. County Council has suggested adopting an adequate public facilities ordinance, implementing 5-acre zoning and starting a PDR program that targets areas for protection.

1. COVERAGE (QUALITY AND QUANTITY OF LAND PROTECTED)

A. Goal for how much agricultural land to protect	No
B. Percentage of land categorized as land use/land cover that is zoned for agricultural conservation	86.1%
C. Percentage of ag. land with prime or productive soils that is protected by:	
Easements	0.4%
Agricultural districts	0.5%
D. Percentage of ag. land with significant environmental, cultural and/or historic features that is protected by:	
Easements	0.8%
Agricultural districts	0.7%
E. Percentage of ag. land with a projected moderate to high increase in residential development that is protected by:	
Easements	0%
Agricultural districts	0%
F. Percentage of ag. land protected by easements that has:	
Prime or productive soils	24.6%
Significant environmental, cultural and/or historic features	25.3%
Projected moderate to high increase in residential development	0%
G. Percentage of ag. land protected by ag. districts that has:	
Prime or productive soils	89.8%
Significant environmental, cultural and/or historic features	75.5%
Projected moderate to high increase in residential development	0%
H. Acres of land protected by:	
State PDR program	1,344 acres
County PDR program	No program
TDR program	No program
MET/private land trusts	56 acres
State agricultural districts	3,687 acres
County agricultural districts	No program
Agricultural conservation zoning	208,315 acres

2. COMPREHENSIVENESS OF PROGRAMS

A. Agricultural zoning	
Level of protection (high, moderate, or low)	High: maximum of 5 divisions on each parcel created prior to 1967
Year zoning ordinance was adopted	1967
Restrictions on maximum lot size permitted (yes or no)	No
Overall effectiveness of zoning (high*, high, moderate or low)	High
B. Cluster zoning	
Type of restrictions (mandatory or voluntary)	Mandatory in Estate District, voluntary in Village District and Residential District, and not permitted in Agricultural District; clustering is subject to approval from the Planning Commission
Maximum percentage of parcel that can be developed	No requirement
Exclusion of undevelopable land from total land protected (yes or no)	Not applicable
Method for recording open space (easement, covenant or deed restriction, or written on plat)	Varies; responsibility of developer
Overall effectiveness of clustering (high*, high, moderate or low)	Low
C. Right-to-farm protection (yes or no)	No
D. TDR program	No
Average number of acres protected per year	
Mandatory or voluntary	
Designated receiving area (yes or no)	
Supply of dev. rights equals demand to buy dev. rights (no, mod., yes)	
Overall effectiveness of TDR program (high*, high, moderate or low)	
E. State PDR program	
Average number of acres protected per year	192 acres
Funding source	Ag. transfer tax revenue
No. of years (other than current year) for which funds are committed	0
Easement ranking system (yes or no)	No
Overall effectiveness of PDR program (high*, high, moderate or low)	Low

F. County PDR program	No
Average number of acres protected per year	
Funding source	
No. of years (other than current year) for which funds are committed	
Frequency for monitoring easements	
Soil and water conservation plan required (yes or no)	
Enrollment in county ag. districts program is prerequisite to selling easement (yes or no)	
Overall effectiveness of PDR program (high*, high, moderate or low)	
G. Property tax credit program (yes or no)	No
H. Program to promote ag. industry	No
No. of employees	
Employee works with or for economic development office (yes or no)	
Primary activities/services	
Program budget	
Overall effectiveness of program (high*, high, moderate or low)	
I. Targeting public services to existing developed areas (high, moderate or low)	Low
J. Staffing (percentage of time one full-time person spends administering farmland protection program)	30%
K. Comprehensive plan includes goals to protect farmland (high, moderate or low)	Moderate

Future Harvest Project Steering Committee

Mark Davis	Delaware State University Cooperative Extension
William Doeckens	Farmer
Michael Robin Haggie	Chesapeake Wildlife Heritage
Jim Hanson	University of Maryland Cooperative Extension
Michael Heller	Chesapeake Wildlife Heritage
Skip Kauffman	The Accokeek Foundation
Jill Schwartz	American Farmland Trust
Tom Simpson	Maryland Department of Agriculture
Steve Weber	Maryland Farm Bureau

**FUTURE HARVEST
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