# BOOTS ON THE GROUND

## Improving Technical Assistance for Farmers

A REPORT OF THE
CHESAPEAKE BAY COMMISSION
NOVEMBER 2017

USDA NRCS (PA)

**Chesapeake Bay Commission**
*Policy for the Bay*

## INTRODUCTION

# A Red Flag for the Chesapeake Bay Clean-Up

Farmers have been — and will continue to be — critical to the restoration of the Chesapeake Bay and the thousands of miles of local streams and rivers that provide the Bay's life-blood of clean water. Since the beginning of the restoration effort, farmers working with agricultural conservation professionals have planted cover crops, practiced no-till crop management, established and maintained streamside buffers, and performed a litany of other conservation measures at an unprecedented scale. Their work is now paying the dividend of cleaner water.

But in spite of its considerable efforts to date, the agricultural community needs to do more if we are to restore local and Bay water quality. And we must assist farmers by making tools available to them to help them do the job.

For years, conversations among the Chesapeake Bay Commission members, state and federal agricultural agency staff, and — most importantly — farmers have included a steady drumbeat about the importance, yet insufficient availability, of agricultural technical assistance.

Farmers rely on providers of technical assistance to help assure both positive water

quality and positive economic outcomes. From considering on-the-farm pollution control tools to navigating the requirements of governmental funding programs, farmers rely on a range of public and private technical experts to connect the dots between policy, financial assistance, program compliance, practice verification and much more. Reliance on accessible, high-quality technical assistance professionals is an essential component of successful modern-day, environmentally-sound farming.

But there is a problem. And it is poised to grow.

A new assessment by the Chesapeake Bay Funders Network has confirmed what many have long suspected: There is not currently enough technical assistance available in Maryland, Pennsylvania or Virginia to meet farmers' needs. In fact, this shortage exists in all six Chesapeake Bay watershed states. The shortage, along with funding for implementation of pollution-reduction measures, will grow still larger as the region works to meet its 2025 clean-up goals for the Chesapeake Bay.

What does this tell us?

That farmers may not receive the assistance they need to reach the pollution reduction goals for which the agricultural sector is responsible under the Bay clean-up. The result is that the states of Maryland, Pennsylvania and Virginia

## Clean Water Relies On Clean Agriculture

**The citizens, industries, governments, farmers, and businesses of the Chesapeake Bay watershed are currently engaged in a massive Bay clean-up effort, driven by a state-federal partnership working to achieve federal clean water standards under the Clean Water Act. This effort, guided by the Chesapeake Bay Total Maximum Daily Load (TMDL) — the Bay's "pollution diet" — is engaging stakeholders in all sectors in a myriad of programs, policies and practices, all designed to reduce pollution and improve water quality. Improvements in managing stormwater and treating sewage play a large role in the clean-up strategy, but agriculture is responsible for almost three-quarters of the remaining reductions needed baywide. Without the widespread adoption of measures that reduce farm pollution we will fail to achieve a clean Bay.**


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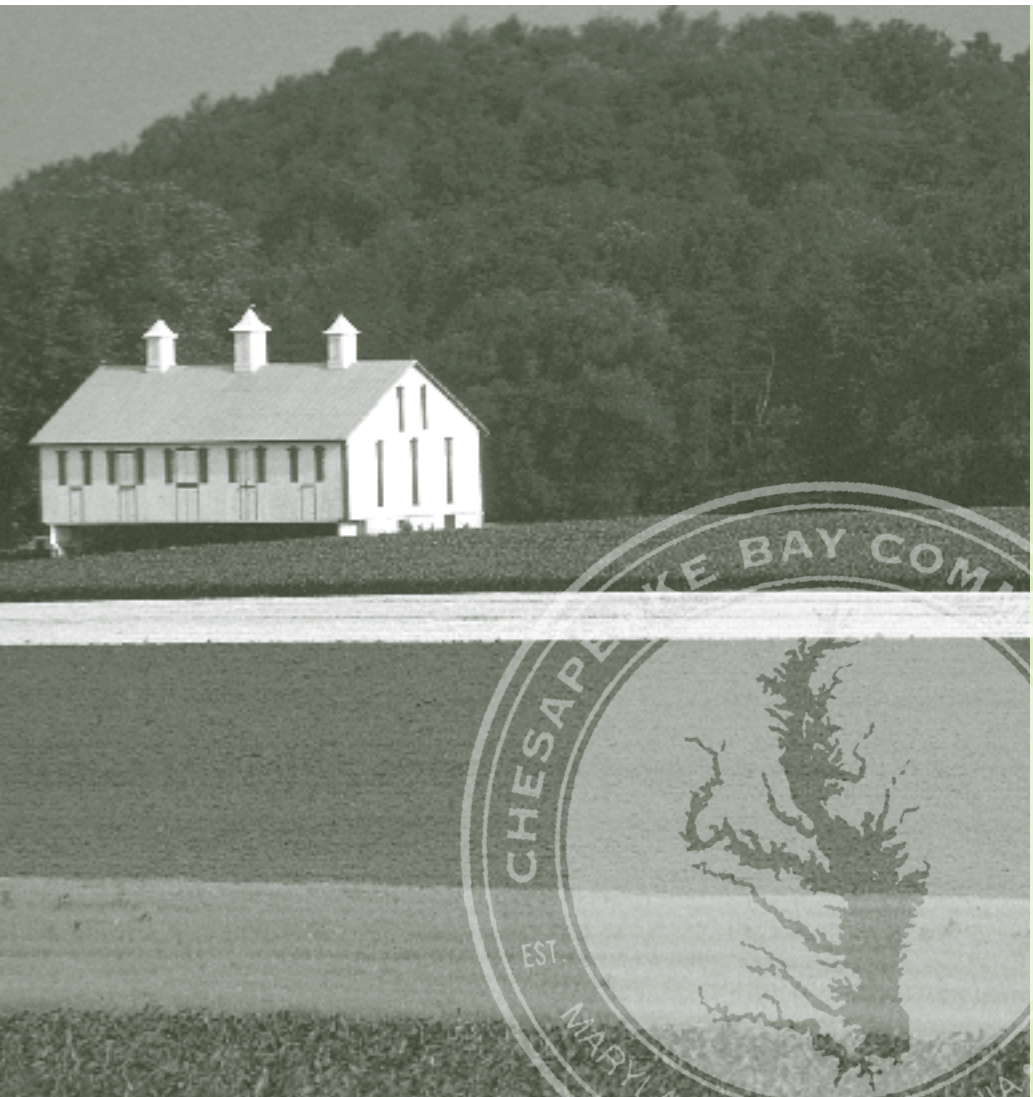
may fall short of their statewide 2025 nutrient and sediment reduction goals.

Bottom line: We cannot neglect the need for readily available, effective and professional agricultural technical assistance if we expect farmers to be full partners in the successful restoration of the Chesapeake Bay.

The Chesapeake Bay Commission (CBC) has undertaken this analysis to provide policymakers with a better understanding of the sources and uses of agricultural technical assistance and the actions necessary to address this need, both now and in the future. With a focus on the CBC's member states of Maryland, Pennsylvania and Virginia, the report answers the following questions:

- **What is technical assistance, who provides it, and how does it work?**
- **How is it funded?**
- **What do we need to do to ensure availability and effective delivery?**



## What Is the Chesapeake Bay Commission?

**The Chesapeake Bay Commission (CBC) is a tri-state legislative commission created to advise the General Assemblies of Maryland, Pennsylvania and Virginia on matters of Baywide concern. Policy issues addressed by its members are as wide-ranging and complex as the Bay itself: the integrated restoration and management of the Bay's air, land, water and living resources.**

**Twenty-one members from three states coordinate Bay-related policy and develop shared solutions. Since its inception in 1980, the Commission has worked to learn the complexities of an enormous estuary, determine the federal and state actions needed to sustain the Bay's water quality and living resources, and persuade their colleagues in the General Assemblies, the Congress, and executive branches to act.**

BACKGROUND

# What is Technical Assistance, Who Provides It, and How Does It Work?

## What is Technical Assistance?

Farmers produce the food that sustains us. And inherent to growing, producing and harvesting this food is the generation of nutrient and sediment pollution. The discharge of this pollution is a significant contributor to the Bay's problems. Fortunately, there are measures that can minimize the levels of pollution a farm generates and discharges.

With agriculture constituting the largest non-forest land use in the Bay watershed, it is not surprising that farming is also the largest source of nutrient and sediment loading to the Bay. The 2025 clean-up goals, which put the Bay on track to achieve the Clean Water Act's "fishable and swimmable" standard, requires ongoing reductions of pollution from many sources, including agriculture. We will not meet the standard, however, without significant reductions in pollution from our farms.

Many farmers are rising to the challenge to reduce this pollution, implementing on-the-ground practices and constructing structures that minimize environmental impacts, often while helping improve the sustainability and profitability of the farm. Many more want to help. But all farmers' participation and success is dependent upon close partnerships between the farmer and trained conservation personnel who supply a critical component of that success: technical assistance.

Technical assistance is a service provided by an agricultural conservation professional to a farmer. The service provided is education, advice and oversight of the planning, programs and practices available to the farmer to reduce and manage agricultural pollution, while at the same time helping the farmer meet the

management and business objectives that guide his or her operation. The service may include, for example: educating a farmer about available pollution reduction 'cost-share' programs; advising a farmer on 'whole-farm' conservation planning; or sharing engineering expertise on the implementation of farm-specific pollution reduction practices.

Technical assistance often incorporates services related to programs and practices that provide the farmer with benefits beyond those of pollution reduction. These practices and programs may provide other benefits to air quality or wildlife habitat, for example, which are independent of, or in addition to, water pollution reduction outcomes.

Services often also include valuable follow-up. This includes implementation assistance and guidance on maintaining and updating plans and practices.

A cornerstone of technical assistance is the development of a relationship of trust between a conservation professional and a farmer over a period of time — in some cases, years. The conservation professional may be employed by a private business (e.g., an engineering or consulting firm), a non-profit (e.g., an environmental advocacy organization), or a governmental agency (e.g., a state department of agriculture).

The conservation professional works at the individual farm level. Decisions on what conservation practices or structures make sense on a farm are dependent on such things as: the type and complexity of the farm's agricultural operations; the local water quality impact

## Every Farm Is Unique

**Examples of agricultural conservation practices for which technical assistance is provided include the following:**

- **The use of cover crops**
- **Streamside fencing and alternate water sources for livestock**
- **Nutrient management planning**
- **Precision farming**

**Which of these measures a farmer may employ depends upon the type of farming operation and the natural resource management challenges at the farm site.**

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### The Chesapeake is an Agricultural Watershed

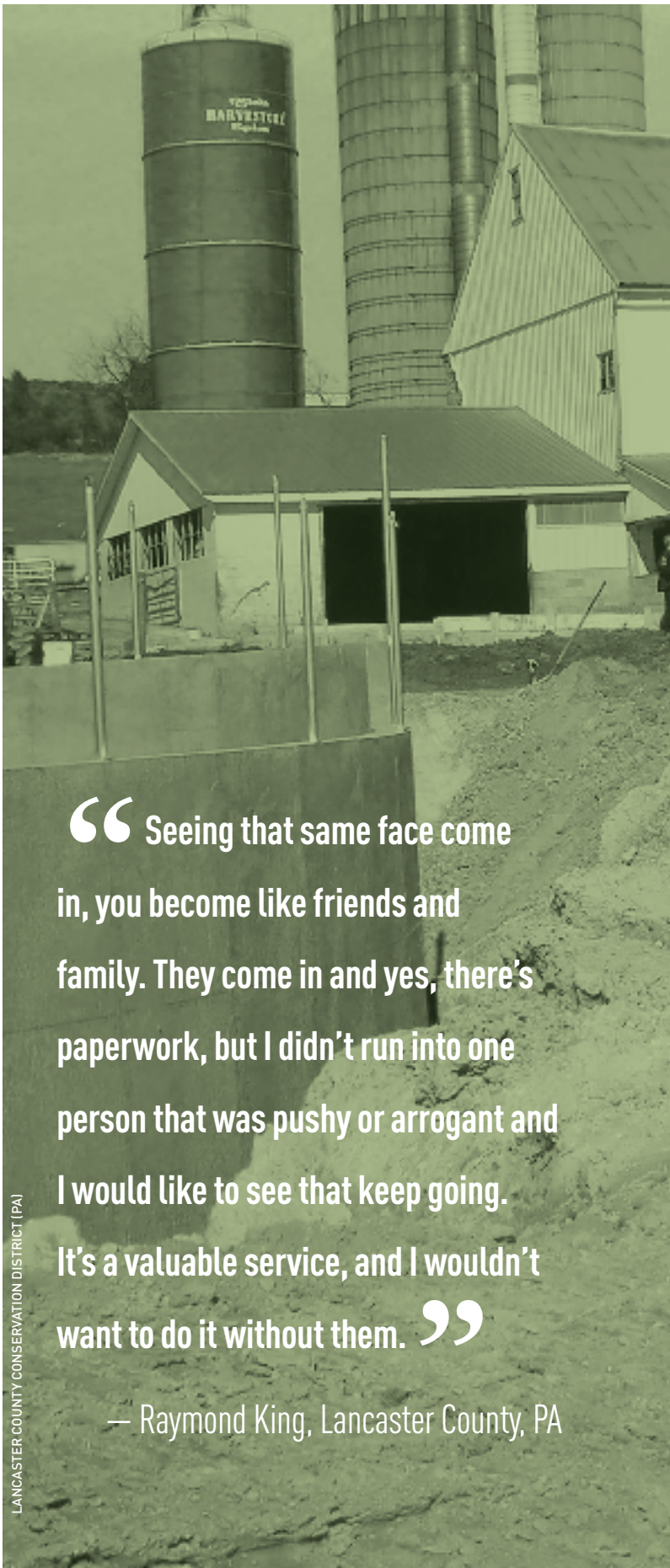
**There are approximately 87,000 farms in the Chesapeake region. Close to one quarter of the land in the 64,000 square-mile watershed is agricultural, making it second to forest/non-tidal wetland as the largest land use in the basin.**

of those operations; the natural resource conditions of the site (e.g., the slope of the farm fields); and the farm's bottom-line.

One size does not fit all.

The provider of the technical assistance helps the farmer decide the type and scale of practices or structures that best fit his or her long-range plans for the farm. Often, the conservation professional providing the technical assistance is a catalyst for a farmer's decision to implement pollution reduction plans and practices. Farmers rely on these professionals to assist in determining what plans, practices and structures make sense for them, to assist with the design and implementation of these conservation measures, and to locate and navigate governmental funding programs that may help defray the costs of the measures. Site analysis, project design, engineering expertise, permitting and installation assistance, and operational support are all among the services provided.

A 2017 assessment by the Chesapeake Bay Funders Network (CBFN) involving multiple round-table discussions and over two hundred surveys of technical experts confirmed what many agricultural and conservation leaders have said for years: there is an insufficient level of available technical assistance and this deficiency is hampering agricultural pollution reduction and conservation efforts. And the shortfall will grow larger in the coming years.

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Specifically, the participants in the CBFN assessment estimated that the number of on-the-ground technical service professionals needs to increase by 30 percent to meet current demand. To meet the additional challenge of achieving the pollution load reductions set for 2025, there needs to be a further 30 percent increase. A very heavy lift.

While these numbers are estimates, parallel studies in Virginia, including the Virginia Conservation and Natural Resources Department's *Annual Funding Needs for Effective Implementation of Agricultural Best Management Practices*, support the same conclusion: Absent an increase in the levels of available technical assistance, more farmers will find themselves unable to access the necessary help to implement pollution reduction measures, thereby threatening the Bay states' ability to meet their targets for reducing farm-generated pollution. This translates not only into lost opportunities for cleaner water but also into lost opportunities for farmer profits.

## Who Provides Technical Assistance?

The most prominent providers of technical assistance are conservation professionals working with either the Conservation Districts or the United States Department of Agriculture's (USDA) Natural Resources Conservation

## Technical Assistance . . .

- **Is often the first step in a farmer's efforts to plan for pollution reduction. And it is integral to the follow-up steps needed to implement and maintain any reduction practice or structure.**
- **Is often essential to the development of a plan that serves as the foundation for a whole-farm management strategy, including pollution reduction (often called a "conservation plan").**
- **Helps farmers update and modify the plan or management practices to adjust to shifting environmental conditions, changes in farm operations, or incorporation of new farming technologies.**
- **Is often funded by the government and provided at low-cost or no-cost to the farmer.**
- **Provides support and information to farmers for access to government funding programs that help pay for the adoption and implementation of pollution reduction measures.**
- **Provides a one-on-one platform for exchanging information and building trust with farmers.**

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# Conservation Districts: Gateways for Technical Assistance (TA)

| | Maryland | Pennsylvania | Virginia |
|---|---|---|---|
| **Number of Conservation District Offices** | • 24 total<br>• 24 all or partially in the Bay watershed | • 66 total<br>• 43 all or partially in the Bay watershed | • 47 total<br>• 32 all or partially in the Bay watershed |
| **Number of TA Staff** | • 114 total<br>• 5 staff/district | • 344 total<br>• 5 staff/district | • 125 total<br>• 3 staff/district |
| **Average Number of Acres Managed by Each TA Staff** | • 22,000 acres | • 24,000 acres | • 78,000 acres |
| **Other Professionals Housed** | • State agencies<br>• Federal agencies<br>• Local agricultural agencies | • State agencies<br>• Federal agencies | • Roughly half are co-located with NRCS |
| **Independent Political Subdivisions** | • District is self-governing<br>• Administered by an elected board | • Established under state law as an agency of Commonwealth<br>• Separate governmental entity within counties | • District is self-governing<br>• Administered by an elected board<br>• State board has some oversight |
| **Programs & Services Include** | • Developing conservation plans<br>• Preparing and approving all design, construction and maintenance plans for agricultural conservation practices<br>• Providing construction supervision for practices funded by state and federal programs<br>• Local assistance in Administration of the Maryland Agricultural Water Quality Cost-Share Program, which provides up to 87.5% of the cost for installing over 30 eligible water quality agricultural conservation practices<br>• Implementing the Maryland Cover Crop Program including planning, contracting and inspection<br>• Supporting and often delivering services for as many as five other federal and state conservation programs including MDE's compliance program | • Providing technical and financial assistance to farmers to implement low-cost conservation practices; manure management; and agricultural erosion and sediment control plans<br>• Delivering the state Resource Enhancement and Protection Program offering tax credits for streambank fencing, forested riparian buffers, nutrient management practices and conservation projects<br>• Assisting farmer compliance with regulation<br>• Providing oversight and professional certification for nutrient management specialists, odor management specialists, and manure haulers and brokers | • Managing conservation programs<br>• Delivering state nonpoint source pollution prevention programs<br>• Implementing conservation practices and tax credit programs<br>• Administering state livestock stream exclusion initiative<br>• Administering state "Resource Management Plan" program for agricultural operations that protect water quality in exchange for "agricultural certainty"<br>• Assisting in poultry litter transport program<br>• Assisting in floodplain management and urban nutrient management programs<br>• Assisting in CREP and certain TMDL projects |

Service (NRCS). State agricultural and natural resource agencies, academia, private sector consultants, and non-profits also employ these conservation professionals to provide technical assistance.

■ **Natural Resources Conservation Service (NRCS).** NRCS is the primary federal agency that provides both technical and financial assistance to the farm community to implement conservation practices. As such, it develops the eligibility requirements governing the programs, the technical standards governing their implementation, and provides training and certification for conservation professionals. NRCS offices are located throughout Maryland, Pennsylvania and Virginia.

■ **Conservation Districts (Districts).** Known as Soil and Water Conservation Districts, Soil Conservation Districts, or just Conservation Districts, Districts are politically independent subdivisions of the state — like a county — governed by a locally elected or appointed board. They receive funding from both the state and local governments, which is further supplemented by grants and fees. Districts typically fill the role of a service hub for the agricultural community, working in tandem with other local, state and federal providers of technical assistance. As a result, co-location of District and NRCS offices is common.

Both NRCS and District staff provide the full suite of services that constitute technical assistance. The level of cooperation between


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## How Does Technical Assistance Work?

**With the exception of for-profit companies within the private sector, technical assistance is almost always available to the farmer for free or at very low cost with federal, state and local governments bearing most or all the cost. The availability of the technical assistance is often linked to a specific federal or state program in which the farmer and the government share the cost of implementing the pollution reduction measure (e.g., they share the costs of planting and establishing a forested streamside buffer or for implementing the use of cover crops).**

**This linkage to these cost-share programs can limit the availability of technical assistance to specific program practices and applications, some of which may not be of interest to the farmer. Costs, installation requirements, disinterest in government subsidies, or even the farmer's religious beliefs and customs may impede a farmer's participation in a cost-share program, thereby reducing access to the technical service professional. For example, many Plain Sect farmers in Pennsylvania and Virginia will rarely, if ever, accept cost-share funding from government, but will accept technical assistance.**

NRCS and District offices varies among the Commission's three Bay states. Both also work with the conservation professionals of private organizations (for profit and non-profit) that also provide technical assistance (see below).

■ **State agencies.** In addition to the professionals working out of the Conservation District offices described above, some state agricultural and natural resource agencies also employ staff who provide technical assistance to the farming community, often for a specific purpose (e.g., nutrient or wildlife management advice). State agencies also oversee certification and/or licensing programs for certain services provided by technical assistance providers.

■ **Cooperative Extension or Extension.** Federal land grant colleges and universities employ staff known as Cooperative Extension or simply Extension agents. These conservation professionals apply research-based knowledge in advising farm operations, often identifying necessary research questions. Funded by USDA and state and local governments, universities currently employing these conservation professionals include Virginia Tech, Virginia State University, Pennsylvania State University and the University of Maryland.

■ **The Private Sector.** The private sector provides many services within the technical assistance arena, including design and engineering, permit preparation, and nutrient management planning and implementation. Some conservation professionals in the private sector seek and receive from NRCS a certification as a Technical Service Provider (TSP), which allows them to provide services to farmers under governmental funding incentive programs. Consultants not seeking certification may offer other services such as assistance in navigating federal funding eligibility requirements or consultation about conservation measures independent of federal funding.

## Conservation Outreach

**Tools used by conservation professionals providing technical assistance designed to reinforce relationships with farmers while building new ones include:**

- **Field days and farm tours to showcase conservation practices on local farms**
- **Shared meals or other local programs to introduce farmers to the technical assistance providers**
- **Open house events at a Conservation District office**
- **Workshops on a specific practice or production system such as livestock forage and grazing**
- **Newsletters, annual reports, media outreach and social media announcements**
- **Exhibits, presentations and awards programs**
- **One-on-one farm visits**

## Who Does a Farmer Call For Technical Assistance?

**A variety of agencies, organizations and businesses employ conservation professionals who provide technical assistance to farmers. Among them are:**

- **Federal agencies such as the Natural Resources Conservation Service (NRCS)**
- **Conservation Districts**
- **State agricultural and natural resource agencies**
- **University cooperative extension programs**
- **Private consultants**
- **Non-profit organizations such as the Chesapeake Bay Foundation**


■ **Non-profit organizations.** Conservation professionals employed by non-profit organizations serve a growing role in providing agricultural technical assistance. Funded through private donations or federal or state grants, some become certified TSPs. Like for-profit consultants, non-profit organizations can also provide new, innovative ideas and practices independent of federal funding to a farmer.

Training conservation professionals to provide technical assistance is a significant undertaking. Training entails degree programs, workshops, on-line courses, field exercises and, most significantly, on-the-job training. It takes a minimum of 18-24 months for a conservation professional to become fully competent to provide technical assistance. Thus, retention of these conservation professionals is critical to accomplishing on-the-ground conservation, reducing pollution and meeting our Chesapeake Bay water quality goals.

By its very nature, the day-to-day demands of farming are highly time consuming. As a result, farmers frequently lack the time to learn about or apply for cost-share programs that provide funding for conservation practices. The technical assistance providers serve a vital role as an informed “middle-man” between the often-complex program requirements and the farmer’s reality. And a conservation professional can greatly influence a farmer’s interest and willingness to invest in pollution reduction measures by educating the farmer on the benefits of such measures and the ability to tap into cost-share programs while at the same time understanding the economic underpinnings of the farm’s operation. In practice, due in part to this multiplicity of factors, a farmer may discuss pollution reduction options many times

with a conservation professional before deciding to adopt and implement a pollution reduction measure and receiving financial assistance.

Effectively communicating the nature, scope, importance and benefits of any pollution reduction measure is essential to farmer participation. Farmers need to understand the impacts of their farm activities on Bay water quality; how changes in farm practices may help improve the quality of their local streams as well as the Bay; the appropriate size and scope of any changes to their operations; and any available sources of funding and cost-share support.

Technical assistance is essential for farmers to be able to understand complex water-quality impacts or management practice options for protecting the Bay's waters.

As previously noted, technical assistance providers bridge this gap by first building a rapport with a farmer or, sometimes, members of a farming community beforehand. History has shown that word-of-mouth communication among farmers within a community is often the most effective "advertising" a provider can generate. Thus, these conservation professionals work with varied local audiences, such as

## The Work of Creating a Conservation Plan

**A provider of technical assistance develops a conservation plan by conducting an extensive site analysis that includes:**

- **Examination of aerial photographs, topographical information and layout of the farm**
- **Discussion of farmer's goals and operational capabilities**
- **On-site exploration of the farm and its operations**
- **Evaluation of animal types and management systems**
- **Calculation of animal units**
- **Identification of farm acreage and geographic location**
- **Assessment of maps documenting the types and locations of soils**
- **Inventory of the environmental features of the farm and identification of any natural resources or water quality issues**

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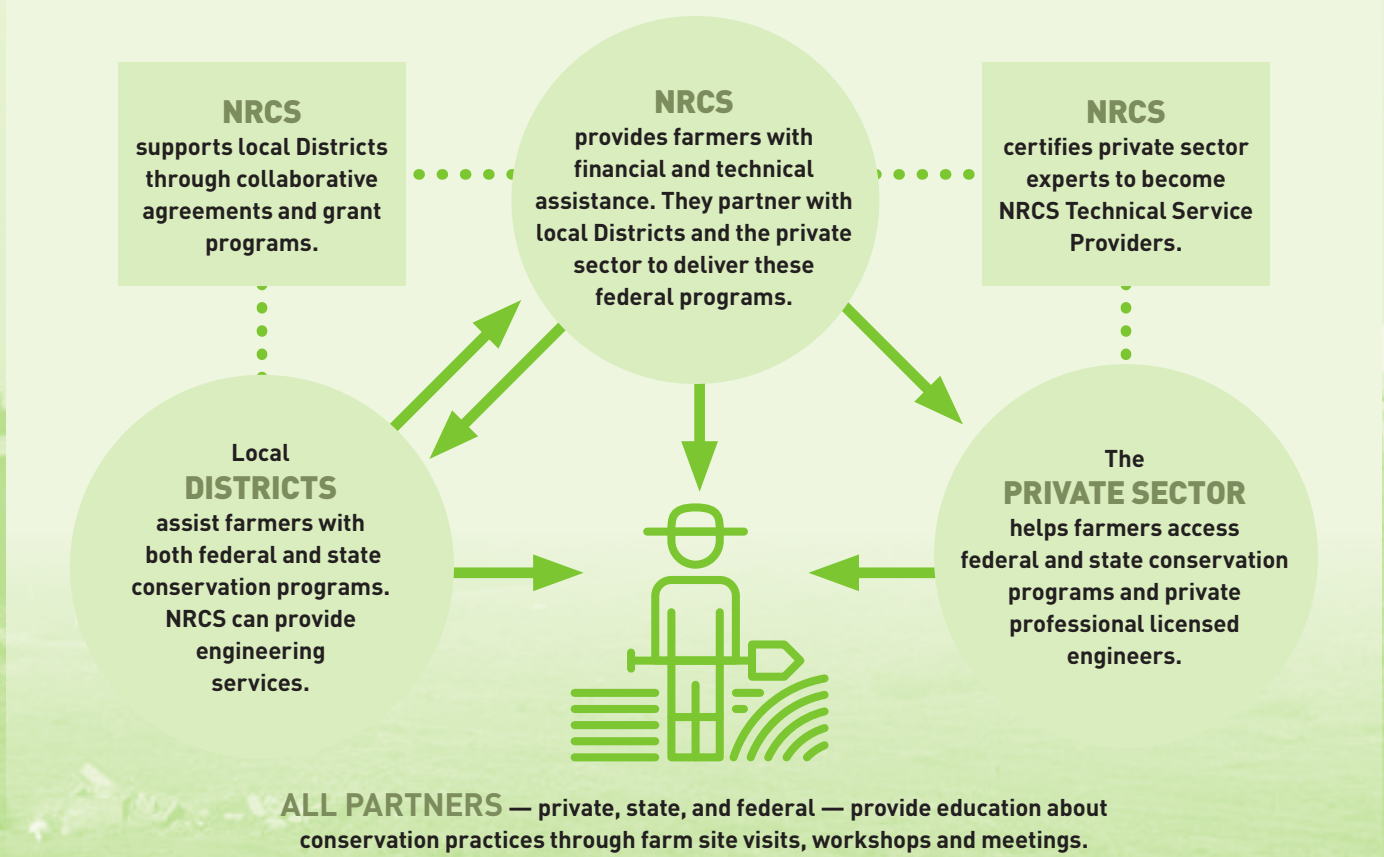
community organizations, local governments, schools, agricultural associations and 4-H clubs, to help "spread the word." They coordinate and lead field days and farm tours, create specific messages for specific types of farms and geographies, and staff informational booths at farming events.

Over time, the provider works with a farmer to produce a comprehensive conservation plan[1] for the farm. In developing this plan, the conservation professional utilizes his or her expertise to evaluate and quantify the physical characteristics of a farm, as well as the type of agricultural operations on it.

To create a conservation plan, the technical assistance provider visits the farm where he discusses the farmer's business and management goals, assesses the farm's physical characteristics, identifies any natural resource and water quality concerns, verifies data, and proposes those actions which will help improve farm operations and reduce the nutrient and sediment pollution generated by the farm. Once the farmer embraces the plan, the technical assistance provider works with the farmer on

1. A conservation plan is a comprehensive document that incorporates management and natural resource protection measures, including pollution reduction measures such as annual practices (like planting cover crops) and permanent structural changes (like constructing a manure storage structure). There are many individualized differences in the processes of selecting, designing and implementing these practices, and the provision of technical services from a conservation professional is often very much the same. We have used the conservation plan in this paper as the model for explaining how technical assistance works.

## A Network of Public and Private "Boots on the Ground" Assists Farmers



implementation, often over time, always evaluating the effectiveness of the plan, any changes in the farm operations, and the ongoing needs of the farmer. A conservation plan is not a static document.

In no small way, the farmer places great trust in the conservation professional's expertise and his or her relationship with the farmer.

The conservation plan is the road map for the implementation of practices and projects that provide multiple benefits to the farmer: increased efficiency and yields, soil conservation, pest management, improved wildlife habitat and pollution reduction. These measures vary significantly in their costs and complexity; the amount of technical assistance provided by the conservation professional for planning, designing, engineering and implementing them varies, too. For example, contour farming, planting cover crops or implementing nutrient management plans can take a relatively small amount of time to design and implement. In contrast, design and implementation of livestock stream fencing, manure storage structures and livestock watering systems require substantially more time.

Before a farmer signs a cost-share contract, the technical assistance provider works to ensure that the project meets all the specifications and standards required for government-funded programs and that it complies with local, state and federal laws, including any necessary permits. At some point, the conservation professional submits the final plan or project to a government agency for approval. The approval provides the authorization for distribution of funds to the farmer for any costs shared by the government.

During implementation of the plan, the conservation professional provides assistance to ensure compliance with design requirements. This is a very important step, one that requires adequate technical assistance staffing to avoid bottlenecks and delays. Field visits occur throughout the lifespan of the implementation of the plan to confirm design and functional compliance.

The farmer, however, retains the long-term obligation — both practical and financial — for the successful implementation of the plan and maintenance of any practice or structure.

## Why Does Technical Assistance Matter to the Chesapeake Bay?

**Reducing nutrient and sediment runoff from farmland is critical to the Chesapeake Bay clean-up. Many farmers cannot get the job done without one-on-one help from conservation professionals who provide technical assistance. But the level of technical assistance available to farmers does not meet current needs — or the projected need for future Bay clean-up action.**

## FUNDING

# How is Technical Assistance Funded in Maryland, Pennsylvania and Virginia?

The funds needed to put well-trained conservation professionals in the field comes from a diverse mixture of federal, state and non-governmental sources. Congress appropriates federal monies to the USDA for both technical and financial assistance through the authority of the Farm Bill. Each state legislature adopts annual budgets, using both general tax revenue and dedicated special funds to provide funding for technical assistance. Foundations and private donors provide grants to fund technical assistance initiatives. And farmers, in some cases, pay directly for technical assistance.

The information that follows focuses on the historic funding of NRCS and the Conservation Districts as they are by far the largest employers of technical assistance professionals in Maryland, Pennsylvania and Virginia.

### NRCS Funding

Funding for NRCS's technical service programs is provided by Congressional appropriations. The federal Farm Bill provides the authorization for many of the appropriations, including those technical assistance dollars linked to cost-share programs. One NRCS funding program not linked to cost-share programs and of particular importance is "Conservation Technical Assistance" (CTA). CTA focuses on reducing pollution from sediment and nutrients and improving water quality through "conservation planning." CTA funding is provided at the discretion of Congress each year and NRCS distributes these Farm Bill monies to the NRCS offices located in each state via an established formula.

## Conservation Districts Funding: Pennsylvania

The state support for Pennsylvania's Conservation Districts is legislatively controlled, through statutory directive and state budget allocations. State programs that provide technical assistance dollars include:

- The Conservation District Fund Allocation Program
- Delegation agreements under the state's Nutrient Management Program
- The Technical Assistance Funding Program
- Oil and gas drilling fees
- Annual review and permit processing fees for erosion control
- The Growing Greener Fund
- Pollution fines and penalties (5% of the amount collected)

Recent levels of state support for Conservation Districts have included technical assistance funding increases from $5.7 million to $6.9 million from 2009 to 2017. However, federal funding for technical assistance from 2005 to 2015, the years for which data is available, declined by $7.1 million. At the same time, federal cost-share funding to implement conservation practices increased by over $8.3 million.

## Conservation Districts Funding: Maryland

Maryland also provides state support to Conservation Districts through its annual budget and the provisions of the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund and the 1998 Water Quality Improvement

## Steps to On-Farm Conservation

### 1 EDUCATION

**Initial education can come from NRCS, a District, or the private or non-profit sector, in the form of meetings, field days, workshops or site visits.**

### 2 PLANNING

**There are many types of plans and planners to assist farmers. Certified conservation and nutrient management plans can be written by the NRCS, a District, or private or non-profit sector experts.**

### 3 DESIGN

**Conservation projects can be designed by the NRCS, a District or the private or non-profit sector. Engineering designs for structures generally require NRCS review and approval.**

### 4 IMPLEMENTATION

**The farmer takes the lead with BMP implementation and maintenance, with guidance and assistance from a technical assistance provider. Financial assistance can offset the cost.**

Act. The latter includes language mandating annual funding sufficient to employ 110 technical assistance positions in the Conservation Districts. Districts in Maryland also receive some funding from local governments, fees and contracts with state and federal agencies.

Over the last eight years, Maryland's overall annual state funding for Conservation District technical assistance increased only slightly (from $8 million to $9.7 million). On a year-to-year basis, this funding fluctuated widely, as much as 15% (decline) to 13% (increase). Some of these funds (approximately $3.2 million) are appropriated annually from the Chesapeake and Atlantic Coastal Bays Trust Fund. Federal funding for technical assistance in the ten-year period of 2005 through 2015 declined by over $2.1 million while federal cost-share funding also declined by $12.5 million.

## Conservation Districts Funding: Virginia

Like Maryland and Pennsylvania, Virginia provides state support to Conservation Districts through its state budget. Sources of these dollars include the Water Quality Improvement Fund (which dedicates 10% of any annual budget surplus to water quality improvement measures, including agricultural pollution reduction practices) and a real estate deed recordation fee. While the language and appropriations of the state budget control any actual dollars provided to the Districts, state statute specifies that 8% of the total amount of funding distributed to the Districts for Virginia's cost-share programs must go to technical assistance.

Over the last nine years Virginia's annual state appropriations for Conservation Districts — including funds for technical assistance staff — has fluctuated dramatically. Technical assistance dollars fluctuated by as much as 70% (decline) to 164% (increase). Overall, during that period, state dollars for technical assistance did increase by $1.2 million. Federal funding for technical assistance, however, declined by $1.4 million over the 2005 through 2015 period. Federal cost-share funding increased significantly over the same period by $22.2 million.

### Federal Support Crucial To Conservation Districts

**The Conservation Districts in all three states receive additional federal support through partnering agreements and various federal grants. The Districts in all three states also receive grant funding from the U.S. Environmental Protection Agency and other federal partners. Finally, the Districts also receive some funding from local government partners.**

## RECOMMENDATIONS

# What Do We Need To Do To Ensure Availability and Effective Delivery?

The significance of technical assistance to improving both local and Bay water quality is clear. So too are the current inadequacies in our collective capacity to deliver it, to literally put the boots-on-the-ground. That is the one consistent message the Chesapeake Bay Commission has heard and the CBFN analysis evidences.

**So how do we solve this problem?** How do we increase the capacity necessary to provide more technical assistance within this complexity of services, delivery systems and needs?

**The Chesapeake Bay Commission makes the following policy recommendations:**

## RECOMMENDATION 1

### Create a Robust Network of Private Sector and Non-Profit Providers of Technical Assistance

As noted above, the current level of technical assistance available to farmers is insufficient to achieve the agricultural pollution reduction goals under the Chesapeake Bay TMDL. As with all the TMDL pollution reduction goals, achievement is not possible without the engagement of the private sector. Currently, there are far too many obstacles to robust engagement of private providers of technical assistance.

This is not only a Chesapeake Bay TMDL matter; it is also a jobs matter. At a time when the region — the country — is looking for ways to stimulate the creation of jobs and strengthen the private sector, the ongoing presence of obstacles to engagement of private providers of technical assistance runs counter to efforts to grow the economy.

Based on its research and outreach, CBC concludes that there is a need to alter a number of existing policies and programs to remove obstacles to, and establish a robust network of, private providers of technical assistance.

Among those actions necessary to accomplish this outcome include:

- Make training and certification more streamlined and accessible
- Allow private providers to have full certification authority (e.g. the ability to certify plans, the implementation and verification of practices, etc.)
- Remove NRCS's inherent internal competition with private providers for the resources available for technical assistance while maintaining or increasing NRCS staffing levels
- Establish quantifiable numeric NRCS goals for out-sourcing technical service to the private sector

Rather than diminish the role of publicly provided technical assistance, the expansion of private technical assistance can help relieve some of the burdens on NRCS that currently strains its ability to achieve the agency's historic and crucial mission of whole-farm conservation planning, development of scientifically-based practice standards, and technical assistance training. Simply stated, an increased availability of private conservation professionals who can deliver on-the-ground technical assistance services for cost-share program delivery will lessen the need for NRCS to provide that assistance.

## RECOMMENDATION 2

### Enhance the Job Climate for Governmental Conservation Professionals Providing Technical Assistance

Like the private for-profit and non-profit sector, there is also a need to create more favorable employment conditions for publicly employed conservation professionals. Given the importance of the one-on-one relationship between farmer and provider, the need for a provider's continuous training and education, and the desire to keep these government professionals in the business of providing technical assistance, CBC recommends the following to enhance the job climate for governmental conservation professionals who provide technical assistance:

**Develop tuition loan assistance programs for conservation professionals who commit to providing governmental technical assistance to farmers for a specified period of time.** There exists in the teaching and legal fields programs that allow for educational loan forgiveness in exchange for a public service commitment of a certain number of years. Federal and state governments could apply a similar model to those conservation professionals who seek to serve as a governmental technical assistance provider, thereby providing a more favorable economic climate for these individuals while also generating increased staff retention for a defined period of time.

**Develop a two-year technical assistance certification program for high school graduates that includes a post-graduate apprenticeship program.** Working with the farm community and providing technical

assistance successfully takes a certain skill set, one many believe is best achieved by growing up and working on a farm. However, new, young conservation professionals are increasingly coming from urban backgrounds with generic environmental science or even liberal arts degrees. The creation of a certification program to allow a high school graduate to enter the field absent a four-year degree but with training specifically tailored to providing technical assistance could enhance applicant pools for governmental providers.

**Provide more and easier access to training centered on innovative technologies.** The Chesapeake Bay water quality goal for pollution reduction by 2025 from the agricultural sector is an ambitious one. It will require more professionals providing more technical assistance. That technical assistance must keep pace with the evolution of new pollution reduction technologies available to farmers, particularly technologies that advance water quality goals while providing visible economic return. Government programs should place a priority on the ongoing education available to governmental providers of technical assistance, ensuring that they have access, receive encouragement, and have sufficient time to pursue continuing education on innovative technologies.

## RECOMMENDATION 3

### Provide More Consistent, Stable, and Predictable Levels of Funding for Technical Assistance, Including Funds Independent of Cost-Share Programs

Funding for technical assistance varies greatly at both the state and federal levels. It is widely recognized that this variation undermines the consistent delivery of tech-

## Technical Assistance By The Acre

**Each Bay state is looking to the agricultural community to implement a myriad of pollution reduction measures in order to help reach the 2025 pollution load established under the TMDL. As previously noted, implementation of these measures is highly dependent on the availability of conservation professionals providing the farmer with technical assistance.**

**With the currently projected need for implementation of these practices and structures on an additional 28% to 135% acres — depending on the state — the parallel need for additional technical assistance is indisputable.**

### Acres Under Pollution Reduction Practices in the Agricultural Sector

| State | 2010 | 2016 | Current 2025 Implementation Goal* | % Increase Needed to Reach Goal |
|---|---|---|---|---|
| Maryland | 2,551,485 | 3,160,715 | 4,045,614 | 28% |
| Pennsylvania | 3,402,463 | 3,381,679 ** | 7,932,273 | 135% |
| Virginia | 2,163,365 | 3,143,294 | 4,991,848 | 59% |
| **TOTAL** | **8,117,313** | **9,685,688** | **16,969,735** | **75%** |

SOURCE: PHASE 5.3.2 CHESAPEAKE BAY PROGRAM PARTNERSHIP MODEL

*The Bay states are currently in the process of revising and updating these goals. These numbers, established by the states in 2012, represent the planned number of on-the-ground acres of pollution reduction practices necessary to meet the 2025 pollution reduction goal for agriculture in each state. Updated data and changes in the projected mix of practices and structures will alter the acreage goals.

**This decrease in acreage reflects an over-estimation in the early years. A significant amount of work went into the cleanup of this data as part of a current baywide assessment of the TMDL. The Chesapeake Bay Program Partnership's 2016 Progress Report reflects this cleanup of the data.


nical assistance, creating farmer insecurity in the predictability of available assistance. Such unpredictability reduces the likelihood of a farm undertaking consideration of implementing new pollution reduction measures.

CBC concludes that there is a need for a larger and sustained baseline level of funding for technical assistance at the federal and state levels that provides predictable and consistent technical assistance. This funding should be independent of, and supplemental to, funding tied to cost-share programs. States are in the best position to target the delivery of technical assistance to those geographies in need of critical conservation action. State administrations are also more likely to understand the receptivity of the farmers and where and how the delivery of additional technical assistance would be met with success.

Federal block grants to the states could improve strategic delivery of technical assistance.

Section 319 of the federal Clean Water Act (CWA) provides us with a model for such block grants. Section 319 is a program for federally provided state-level funding for the reduction of nonpoint source pollution. With federal oversight and state implementation, the dollars of Section 319 provide grants to states for supporting a wide range of activities related to nonpoint source pollution management, including technical assistance, technology transfers and monitoring.

This program, or a parallel program contained within the Farm Bill, could provide similar block grants to states specifically for establishing a sustained baseline level of funds for the delivery of technical assistance by conservation professionals to farmers. The program could be targeted to critical conserva-

tion areas across the country in need of strong agricultural sector participation, as in the Chesapeake Bay region. For the Chesapeake, a condition of these technical assistance block grants would be the states' use of them towards achieving the agricultural sector's 2025 pollution reduction goals.

A 2011 US EPA study (*A National Evaluation of the Clean Water Act Section 319 Program*, November 2011, U.S. Environmental Protection Agency Office of Wetlands, Oceans, & Watersheds Assessment & Watershed Protection Division, Nonpoint Source Control Branch) implicitly anticipated this concept in acknowledging the need for the "development and implementation of statewide nitrogen and phosphorus pollution frameworks" under Section 319; nitrogen and phosphorus, along with sediment, are the pollutants which we seek to reduce. The report recommended the development of programs requiring implementation of practices to reduce this pollution from agricultural sources. Such implementation cannot occur without technical assistance.

Providing a baseline level of funding for technical assistance for the region through block grants to the Bay states, conditioning the distribution of the dollars to the provision of technical services for helping accelerate and achieve the 2025 agriculture pollution reduction goals, and allowing the states to target those funds — one size does not fit all — would be a valuable new tool in our pollution reduction toolbox.

# ACKNOWLEDGMENTS

The Chesapeake Bay Commission thanks those listed here who shared their time, expertise and talents in the preparation of this report. The Commission is also grateful to the Foundation for Pennsylvania Watersheds and the Keith Campbell Foundation for their financial support.

Kristen Saacke Blunk, *Headwaters, LLC*

Russ Brinsfield, *Private Consultant*

Matt Ehrhart, *Stroud Water Research Center*

Fred Fiscus, *Pennsylvania Department of Environmental Protection*

Katie Frazier, *Virginia Agribusiness Council*

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Terron Hillsman, *Natural Resources Conservation Service*

Roy Hoagland, *HOPE Impacts, LLC*

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John Lipman, *Lipman Development Strategies*

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Christopher Thompson, *Lancaster County Conservation District*

Lindsay Thompson, *Delaware-Maryland Agribusiness Association*

Kendall Tyree, *Virginia Association of Soil and Water Conservation Districts*

Bobby Whitescarver, *Whitescarver Natural Resources Management, LLC*

Tim Woodward, *Tellus Agronomics, LLC*

Dana York, *Green Earth Connection*

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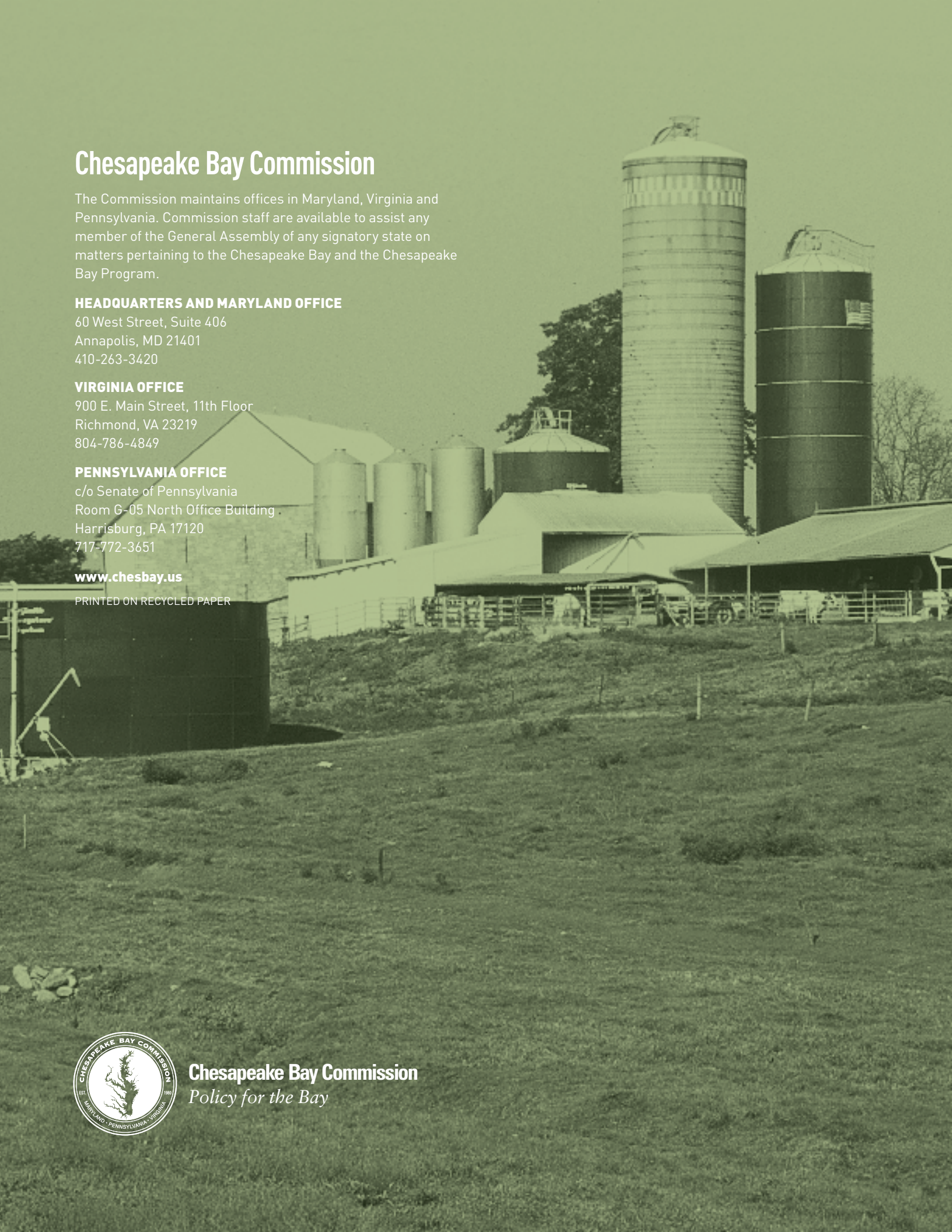
*Policy for the Bay*



# Chesapeake Bay Commission

The Commission maintains offices in Maryland, Virginia and Pennsylvania. Commission staff are available to assist any member of the General Assembly of any signatory state on matters pertaining to the Chesapeake Bay and the Chesapeake Bay Program.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