



Innovating for a Cleaner Chesapeake Bay



Message from the President and Executive Director

Throughout history, agricultural innovation and hard work have been the driving force behind the rise of great civilizations. Today, the Maryland Association of Soil Conservation Districts (MASCD) relies on the innovation and hard work of its dedicated staff to help farmers, developers and local governments protect natural resources and restore clean water in the Chesapeake Bay and its tributaries.

Launched in 2010, the Chesapeake Bay Total Maximum Daily Load (TMDL) spans six states and the District of Columbia. It is the largest, most ambitious cleanup program ever mandated by the Environmental Protection Agency. To ensure that the cleanup is complete by 2025, progress is being measured in two-year increments called “milestones.” By 2017, the program’s critical halfway point, best management practices must be installed to achieve to least 60 percent of the required 2025 pollution reduction targets.

When it comes to meeting new challenges, it is said that people are a company’s best asset, and we could not agree more. Executing pollution prevention measures requires the technical expertise and ingenuity of our talented staff who plan, design and oversee construction and installation of best management practices on farmland to achieve water quality goals. To date, Maryland farmers—with the help of soil conservation districts—have met all of their two-year milestone commitments to achieve interim water quality goals.

Attracting and retaining skilled employees, however, is a critical issue for soil conservation districts. That’s why MASCD is requesting the establishment of a permanent funding source for district staff and operating budgets through the Chesapeake Bay 2010 Trust Fund. This would reduce turnover and promote long-term retention of our

2015 Year in Review

Maryland Farmer Heads National Conservation Group

Lee McDaniel, a Harford County farmer and former MASCD president, was confirmed as president of the National Association of Conservation Districts.



Schmidt Tapped to Lead State Conservation Program

MASCD President Hans Schmidt was tapped to lead the Maryland Department of Agriculture’s Resource Conservation office; Charles Rice takes over as president.



Maryland Teens Impress

The Maryland Envirothon team placed 7th out of 52 teams and first in the wildlife category at the North American Envirothon competition.



Pollinator Habitat Project Takes Off

Through this innovative grant program, pollinator habitat has been established on 56 acres in 15 counties over the last three years.



skilled planners and technicians, many of whom work in contractual positions that offer no benefits or opportunities for advancement. Our request also includes funding for five critically needed agricultural engineers to ensure that animal waste storage systems and other structural practices included in Maryland's restoration program meet engineering and performance standards.

For 75 years, farmers have trusted and depended on soil conservation districts to help them protect natural resources on their land and, more recently, comply with a growing list of environmental regulations and requirements. With Maryland's natural resources and the future of the Chesapeake Bay at stake, we can't afford to drop the ball now. When asked for your support, please say yes to permanent funding for soil conservation districts through the Chesapeake Bay 2010 Trust Fund.



Maryland Association of Soil Conservation Districts

Charles Rice
President

Lynne Hoot
Executive Director

100th Conservation Farm Certified

The Farm Stewardship Certification and Assessment Program certified its 100th conservation farm.



Record Cover Crop Planting

Maryland farmers planted 475,560 acres of protective cover crops on their fields. It was the largest cover crop planting in Maryland history.



75 Years of Service to Farmers

The Washington County Soil Conservation District celebrated its 75th anniversary, joining the Kent Soil and Water Conservation District and Caloactin Soil Conservation District in reaching this milestone.



A New Home for the Charles SCD

Jerry Spence and Tim Wells inspect a sorghum crop at the Charles Soil Conservation District's new farm and Agricultural and Environmental Service Center near Waldorf. The district and other agricultural agencies plan to move to the new facility in 2016.



Innovating to Meet Chesapeake Bay Milestones

Soil conservation districts provide innovative technical support and guidance to help farmers install best management practices (BMPs) on their farms that meet the Chesapeake Bay's short-term water quality commitments called "milestones" and long-term restoration goals outlined in its federally approved Watershed Implementation Plan (WIP) to protect and restore the Chesapeake Bay.

In 2010, the U.S. Environmental Protection Agency (EPA), under the authority of the Clean Water Act,

established nutrient and sediment limits for the Chesapeake Bay known as the Total Maximum Daily Load (TMDL). Maryland and the other Bay jurisdictions are working to meet TMDL thresholds by implementing 60 percent of the pollution reductions included in their Watershed Implementation Plans by 2017 and 100 percent by 2025. This watershed-wide effort aims to restore clean water in the Bay so that it is no longer impaired.

Maryland farmers—with soil conservation district guidance

and technical support—have met or exceeded all three sets of Bay milestone commitments. The latest progress report is shown below.

Milestone practices installed with public funds are reported to EPA using the Maryland Department of Agriculture's Conservation Tracker database management system. Soil conservation districts also work with farmers to verify practices installed with private funds so that they can be accounted for in the Bay Model that guides the cleanup.

Chesapeake Bay Milestone Progress 2-Year Milestone Progress—July 2013 through June 2015

MILESTONE	GOAL	STATUS AS OF JUNE 30, 2015	PERCENTAGE OF MILESTONE ACHIEVED
Cover Crops	Plant 386,007 acres annually	475,560 acres planted during 2014-2015 planting season	123%
Manure Transport	Annually transport 44,000 tons of excess poultry litter or livestock manure to farms or alternative use facilities that can use the manure safely and in accordance with nutrient management plans	167,237 tons of manure transported in Fiscal Year 2015	380%
Off-Stream Watering Without Fencing	Protect 1,832 acres with off-stream watering sources for livestock	3,948 acres protected	216%
Retirement of Highly Erodible Land	Retire 973 acres of highly erodible land by 2015	1,651 acres retired and planted with protective vegetation	170%
Soil Conservation and Water Quality Plans	Develop plans for 926,207 acres by 2015	934,356 acres planned	101%
Streamside Forest Buffers	Plant 353 acres of forest buffers next to streams by 2015	332 acres planted	94%
Streamside Grass Buffers	Plant 866 acres of grass buffers next to streams by 2015	779 acres planted	90%
Waste Storage Structures/Livestock	Construct 55 livestock waste storage structures by 2015	104 structures installed	189%
Waste Storage Structures/Poultry	Construct 12 poultry waste storage structures by 2015	36 structures installed	300%

Innovative Conservation Planning

Soil Conservation and Water Quality Plans, or farm plans, are a key milestone indicator. Developed by soil conservation planners working in the local district office, these comprehensive farm management plans serve as a blueprint for farmers to follow in protecting and enhancing natural resources on their farms.

Because each farm is unique with its own set of environmental challenges, no two farm plans are alike. A beef operation may benefit from a stream crossing or livestock fencing to keep animals away from streams. Manure storage structures and heavy use areas provide water quality benefits for dairy and poultry operations, while cover crops and grassed waterways are often prescribed to protect local streams from sediment and nutrient runoff from grain operations.

Each practice must be custom tailored to the farm in order to be effective at protecting water quality. The entire process often involves a team of conservation professionals including site planners, soil scientists and

engineers. Practices recommended in the farm plan are usually implemented by the farmer in stages, as time, environmental need, and money allow.

Because of their importance in protecting natural resources, farm plans are required by the Federal Food Security Act on all highly erodible lands. At the state level, active plans must be implemented on all farmland enrolled in the Maryland Agricultural Land Preservation Program and on farms located in the Chesapeake and Atlantic Coastal Bays Critical Area. Additionally, the Maryland Department of the Environment requires certain livestock and poultry farmers to implement farm plans as part of the Confined Animal Feeding Operation (CAFO) permitting process.

In 2015, soil conservation planners developed 1,402 Soil Conservation and Water Quality Plans for 66,224 acres of Maryland farmland. Another 653 plans affecting 41,106 acres of farmland were updated. Together, these plans included more than 2,789 BMPs.



Helping Farmers Comply with Their Nutrient Management Plans—*This poultry waste storage structure protects water resources on the Eastern Shore.*



Practicing What We Preach—*John Swaine, III, chairman of the Talbot Soil Conservation District, installs an innovative two-stage ditch on his property to reduce runoff entering a creek near his home. The pilot practice is the first of its kind in Maryland. If successful, it could be duplicated throughout the Eastern Shore.*

Innovative Financing for Environmental Enhancements

Farmers rely on conservation grants and loans to help them install best management practices on their farms to protect natural resources and comply with federal, state and local environmental regulations. District staff help farmers calculate costs to install best management practices, apply for state and federal financial assistance, and leverage funding for maximum support. In 2015, soil conservation districts helped Maryland farmers obtain approximately \$40 million in grants through the following programs:

Maryland Agricultural Water Quality Cost-Share Program (MACS)—Helped farmers secure \$31.2 million in grants to install 2,440 conservation projects on their farms to control soil erosion, reduce nutrient runoff and protect water quality. These projects are preventing an estimated 2.9 million pounds of nitrogen and 113,500 pounds of phosphorus from entering Maryland waterways. A record-setting cover crop planting of 475,560 acres is responsible for the bulk of the nitrogen and phosphorus savings.

USDA-NRCS Environmental Quality Incentives Program (EQIP)—Helped farmers obtain \$7.3 million in federal cost-share grants to protect natural resources on 7,200 acres.

USDA-NRCS Conservation Stewardship Program (CSP)—Helped farmers obtain \$797,500 in financial assistance to maintain and improve existing conservation systems and adopt additional conservation activities to address priority resource concerns on 16,700 acres.

USDA-NRCS Regional Conservation Partnership Program (RCPP)—Helped farmers obtain \$743,200 in financial assistance to increase the restoration and sustainable use of soil, water, wildlife and related natural resources on 1,658 acres.

USDA-NRCS Agricultural Management Assistance Program (AMA)—Helped farmers obtain \$159,500 in AMA assistance to address water management resource concerns on 363 acres.

Conservation Spotlight JOHN AND MARY FENDRICK, WOODBOURNE CREAMERY

When John and Mary Fendrick decided to open Montgomery County's first new dairy farm in more than 60 years, they wanted to make their operation a model of agricultural innovation and environmental stewardship. Their farm features the first all-pasture robotic dairy in North America. This innovative voluntary milking system allows their herd of 50 grass-fed Guernsey cows to be milked when they want, usually between two and three times a day.

The Fendricks raise their cows using sustainable practices that are good for both the animals and the environment. Working with the Montgomery Soil Conservation District, they designed a rotational grazing system that prevents overgrazing, provides healthy forage for the animals, and reduces soil erosion.

The district helped the Fendricks secure federal and state grants to install a range of conservation practices on their dairy farm, including a manure storage structure, watering troughs, and heavy use areas and travel lanes



Mary Fendrick stands beside her farm's busy cattle travel lane.

to reduce erosion and stabilize areas where animals congregate. Cover crops are planted annually on adjoining fields to further protect water quality in the nearby Patuxent River. Other best management practices recommended in the couple's Soil Conservation and Water Quality Plan have been installed at both the dairy operation and the adjacent fruit and vegetable operation, Rock Hill Orchard.

Over the years, the Fendricks have spent a considerable amount of their own money to ensure the health of their Guernseys, protect natural

resources, and improve the land for future generations. Their unique dairy operation has been featured on Maryland Public Television's popular show, *Maryland Farm and Harvest*.

The Maryland Association of Soil Conservation Districts is pleased to honor John and Mary Fendrick as its 2015 Cooperators of the Year. The Fendricks, who relocated to their 40-acre farm in Mt. Airy in 2010, were also honored as Montgomery County's 2014 Cooperators of the Year. MASCD congratulates them on their innovative approach to conservation farming.

Urban Programs

EROSION AND SEDIMENT CONTROL PLAN REVIEWS

Construction and road building activities can contribute to sediment and nutrient pollution in streams, rivers and the Chesapeake Bay. Since 1972, soil conservation districts have been authorized to review and approve erosion and sediment control plans for construction and land development projects in their counties. Reviews are performed by urban planners who work with builders, engineers, and zoning officials to make certain that environmental safeguards are in place to minimize soil erosion and nutrient runoff. In 2015, soil conservation districts reviewed 11,450 erosion and sediment control plans for construction projects on 71,100 acres. Just under half of these plans were approved.



Innovative designs and new technology are the hallmark of the Talbot Soil Conservation District's urban program.

Innovative Conservation Education Programs

FARMER AND CITIZEN OUTREACH

Districts sponsor field days, pasture walks and demonstration projects to educate farmers about new conservation practices and management techniques. These education programs give farmers the opportunity to see how other farmers are managing natural resources and to learn firsthand about new conservation equipment, innovative best management practices, and pasture management techniques.

ENVIRONMENTAL EDUCATION PROGRAMS

Soil conservation districts help local school districts plan and execute conservation and environmental education programs in their counties. In 2015, districts participated in a number of county-wide education programs at nature centers and agricultural education parks located in their counties. In addition, each year, districts respond to hundreds of

requests for classroom visits, career workshops, soil judging competitions, and demonstrations on clean water, productive soil and healthy food.

A highlight of the education program is the Maryland Envirothon, an outdoor natural resources competition that challenges students to identify and categorize living resources, measure tree heights, perform soil surveys and solve other complex environmental issues.

It is designed by soil conservationists, foresters, wildlife experts and other natural resource professionals. Teens compete at the county, state and national levels. A five-member team of high school students from Carroll County won this year's state competition. They later placed 7th overall and first in the wildlife category at the week-long North American competition featuring 52 teams from the United States and Canada.



Students from the Dr. James A. Forrest Career & Technology Center work with the St. Mary's Soil Conservation District to plant a living shoreline at Church Point on the St. Mary's River.

COMPLIANCE ACTIVITIES

In recent years, soil conservation districts in Allegany, Calvert, Caroline, Cecil, Frederick, St. Mary's, and Washington counties have been working with the Maryland Department of the Environment to ensure that erosion and sediment control plans are implemented properly at construction sites. This local oversight provides developers with improved accessibility and turnaround and includes pre-construction meetings, construction site walk-throughs, and final site stabilization field reviews. In 2015, these districts performed 333 pre-construction meetings and 831 inspections to ensure compliance with environmental regulations and requirements.



A stormwater management pond protects water quality in Charles County.



MASCD is a proud sponsor of Maryland Public Television's production of *Maryland Farm & Harvest*. Now in its third season, the show takes viewers around the state to see and experience what it's like to run a 21st century farm—from technological advances and conservation challenges to age-old complications such as weather hardships. Watch Tuesdays at 7 p.m. or online at mpt.org/farm.



About Soil Conservation Districts

Across the United States, nearly 3,000 soil conservation districts—almost one in every county—are helping landowners conserve land, water, forests, wildlife and related natural resources on their properties.

Here in Maryland, more than 120 volunteers serve in appointed positions on the governing boards of soil conservation districts. They work directly with thousands of cooperating land

managers across the state, and their efforts impact almost two million acres of private land.

The staff of a typical soil conservation district office includes a district manager, district conservationist, engineers, agricultural planners, technicians, soil scientist, urban reviewers, and administrative staff. Staff and operating budgets are usually funded through a

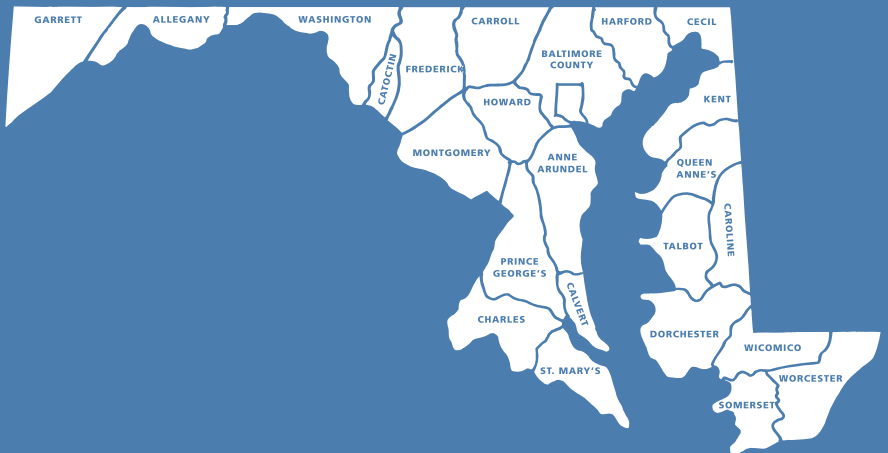
mix of federal, state and county funding sources as well as grants.

Soil conservation districts carry out many federal and state mandates at the local level and serve as the agricultural representative on local, regional and statewide environmental task forces and committees charged with protecting natural resources and the Chesapeake Bay.

PHOTO CREDITS: *Bay Journal*, Edwin Remsberg Photographs, MASCD, National Association of Conservation Districts, Albert Schramm, Shutterstock, and the Calvert, Charles, Montgomery, St. Mary's, and Talbot soil conservation districts.

MARYLAND'S 24 SOIL CONSERVATION DISTRICTS

Allegany	301-777-1747, ext. 3
Anne Arundel	410-571-6757
Baltimore County	410-527-5920, ext. 3
Calvert	410-535-1521, ext. 3
Caroline	410-479-1202, ext. 3
Carroll	410-848-8200, ext. 3
Catoctin	301-695-2803, ext. 3
Cecil	410-398-4411, ext. 3
Charles	301-934-9588, ext. 3
Dorchester	410-228-3733 ext. 3
Frederick	301-695-2803, ext. 3
Garrett	301-334-6950, ext. 3
Harford	410-838-6181, ext. 3
Howard	410-313-0680
Kent	410-778-5150, ext. 3
Montgomery	301-590-2855
Prince George's	301-574-5162, ext. 3
Queen Anne's	410-758-3136, ext. 3
St. Mary's	301-475-8402, ext. 3
Somerset	410-651-1575, ext. 3
Talbot	410-822-1577, ext. 3
Washington County	301-797-6821, ext. 3
Wicomico	410-546-4777, ext. 3
Worcester	410-632-5439, ext. 3



MARYLAND'S CONSERVATION PARTNERSHIP

Soil conservation districts are members of Maryland's Conservation Partnership, a coalition of federal, state and local agriculture agencies dedicated to protecting and conserving natural resources and promoting Maryland agriculture.

- Maryland Association of Soil Conservation Districts
- Maryland Department of Agriculture
- State Soil Conservation Committee
- USDA Natural Resources Conservation Service
- USDA Farm Service Agency
- University of Maryland Extension



MARYLAND ASSOCIATION OF SOIL CONSERVATION DISTRICTS

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