



Annual Report

Fiscal 2022

July 1, 2021 — June 30, 2022

Board of Directors

Charles Carter, Chair	Charles City
Robert Lund, Jr., Vice Chair	James City
Robert Jeremiah, Treasurer	New Kent
Pam Mason, Secretary	York
Fred Browning	Charles City
George Clark	York
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Philip Thomson	New Kent
Megan Tierney	VCE Appointment
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Staff

Tom Dunlap	Conservation Specialist II
Sheila Jaruseski	Office Coordinator
Jim Wallace	District Manager
Bob Winters	Turf Love Program Tech
Robyn Woolsey	Urban Conservationist
Tabea Zimmermann	Conservation Specialist II

Colonial

Soil & Water Conservation District

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Message from the Chair

State funding for agricultural conservation is once again at an all-time high in the march toward the 2025 water quality targets, established by EPA, to clean up the Chesapeake Bay.

The General Assembly's greater support of conservation efforts has not been exclusively dedicated to the agricultural sector. The state legislature increased support for non-agricultural stormwater conservation by much greater funding for the Virginia Conservation Assistance Program (VCAP) while demand for VCAP has been steadily rising.

Stakeholder, partner, and community involvement; local funding; and creativity from all elements are critical to achieving the EPA's 2025 water quality goals. All elements, every sector, has a role here, and everyone has a role to play. I'm confident the directors and staff of the Colonial SWCD will continue to be creative in bringing new conservation initiatives to our constituents while providing increased levels of service under expanded conservation programs.

We are pleased to provide this annual report of our accomplishments in FY 2022. We are grateful for the support of our local, state, federal, and private partners in conservation.

~ Charles

The Commonwealth of Virginia supports the Colonial SWCD through financial and administrative assistance provided by the Virginia Soil & Water Conservation Board and the Department of Conservation and Recreation.

Agricultural Programs

Decision Agriculture & Precision Agriculture Grant

Colonial SWCD staff concluded the *Decision Agriculture & Precision Agriculture (DAPA) on the Lower James* project in 2022, ending the multi-jurisdictional and multi-SWCD privately funded cost share program. The DAPA project set out to promote novel agricultural best management practice (BMP) programming with the overarching goal of building farmer capacity and improving the efficiency of farm fertilizer use. The end goal of the project was to reduce the amounts of regulated nutrients (nitrogen and phosphorus) entering the James River.

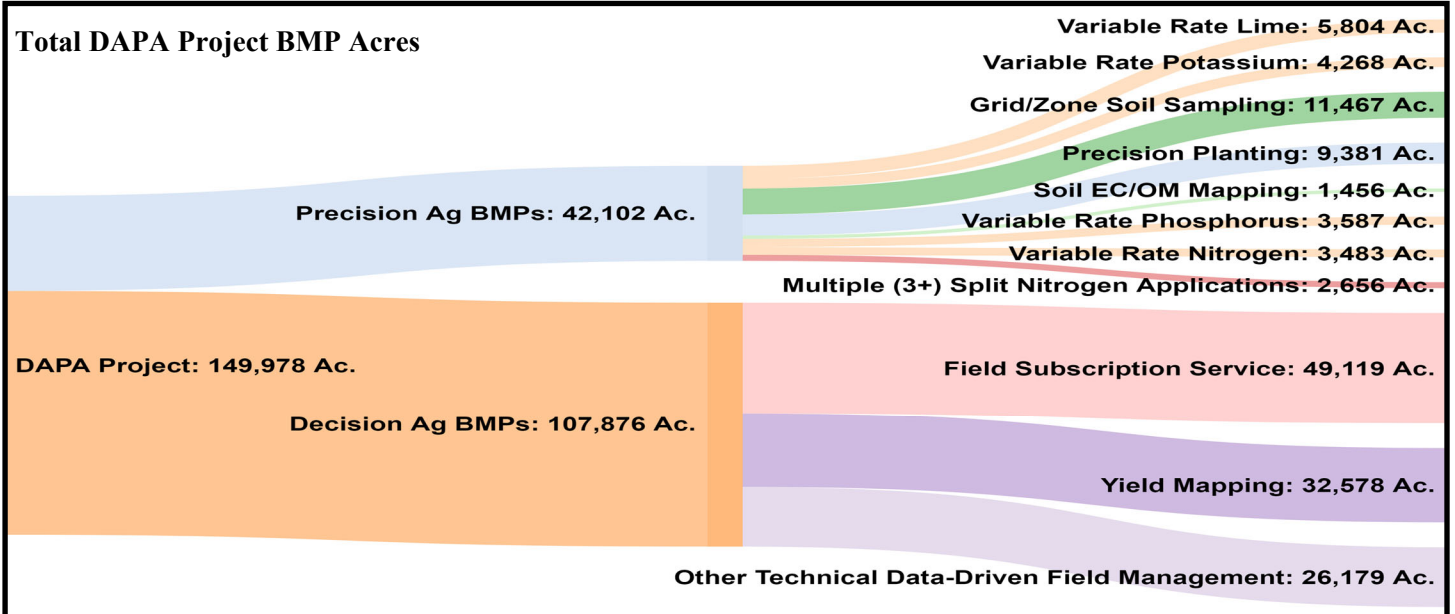
Emphasis was placed on entry-level management practices that producers could easily implement and if appropriate, scale up to higher-intensity management to accommodate a range of farm operations. A total of twelve unique best management practices (BMPs) were offered through DAPA programming, with three management practices described as “decision” based, meaning they would occur before any equipment ran in the field. Nine “precision” based BMPs were implemented on the ground. Over the three-year life of the project, nearly 150,000 acres of these decision and precision agriculture best management practices were implemented by participating farmers. Estimated nutrient load reductions achieved through the DAPA program include 70,600.80 lbs. of nitrogen and 9,181.07 lbs. of phosphorus, which has

been reported to the FieldDoc team, but not yet validated.

A significant takeaway from this project was having the data to identify the relatively low level of financial assistance required to start building farmer capacity through decision agriculture management practices. These management practices have been historically unsupported by conservation financial assistance programming in Virginia, yet it is clear to those in industry and conservation organizations that they help serve as steppingstones for farmers to adopt more advanced techniques by providing a framework with which to make management decisions. Conservation partners with more established state and/or federal cost share programs may benefit from considering efficiencies to cost-share assistance that mutually address the goals of preparing farm operations for the future while improving water quality.

The DAPA project was made possible through a generous grant from the Virginia Environmental Endowment through their James River Water Quality Improvement Program. Additional support was provided by the Henricopolis, James River, and Peanut Soil & Water Conservation Districts, technical service providers throughout Virginia and North Carolina, and participating farmers.

Total DAPA Project BMP Acres

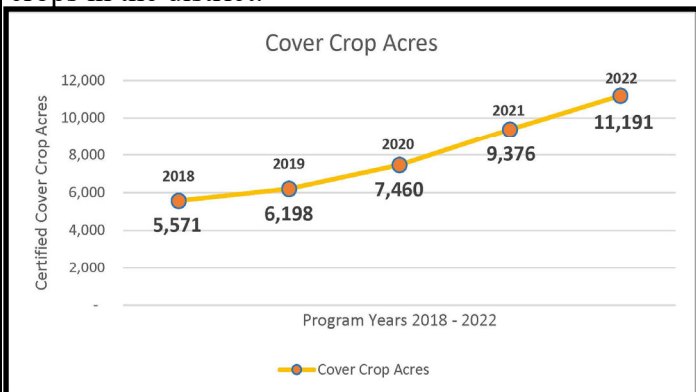


Agricultural Programs

Virginia Agricultural Cost Share Program (VACS)

The Virginia Agricultural Cost Share program (VACS) is a state-funded conservation initiative that provides financial assistance to agricultural producers for installing and implementing Best Management Practices (BMPs). Virginia's 47 Soil and Water Conservation Districts administer the program and provide technical assistance to farmers and landowners. In fiscal year 2021 the Colonial SWCD allocated **\$1,075,904** to **42** participants. This year marks the first time the Colonial SWCD received over \$1,000,000 in VACS funding. District staff have worked diligently to take advantage of the record funding and have successfully marketed the program to regular, as well as new program participants.

Cover crops continued to be a hit with district farmers in the 2022 program year. Combining all of the cover crop BMP practices, a total of 11,191 acres were planted. Implementation at this level represents a historic high water mark for cover crop plantings in the Colonial District. Staff hope to continue the upward trend of cover crop acres in future years, as cover crops are one of the keys to attainment of the Watershed Implementation Plan (WIP, version 3) goals, established by the commonwealth. The chart below illustrates the growing popularity of cover crops in the district.



In addition to the 5 different types of cover crop practices, VACS participants also installed a long list of agronomic and engineered BMPs. One of the benefits of large cost share allocations is the ability for staff to target and address high cost structural practices, which can cost well into the six figures. In many cases staff has identified these types of

conservation needs over the course of many years and once the money becomes available, the project can move forward. Such was the case this year for two grade stabilization structures.

Left: Raleigh Coleman, DCR Engineering Team member, examines the bottom of a head cut that has worked its way into

a pasture. DCR engineering staff provide practice designs and technical support to district staff at no charge.



Below: The finished product of a different head cut that had impacted a crop field. This rock lined chute reduces stormwater energy and releases the flow into the natural channel down slope.



District directors approved their first ever application for a shoreline stabilization practice, practice code SE-2) in FY 2022. The SE-2 practice is a recent addition to the VACS suite of practices eligible for cost share reimbursement. The project site, along the James River will combine funds from VACS as well as grant monies from conservation partner, the James River Association to construct a living shoreline approximately 1,200 feet long and will include off-shore rock sills, beach nourishment, and vegetative plantings to establish an intertidal marsh.



Photo credit VIMS

Above: Similar to the photo above, the living shoreline installed along the James River using VACS funds will include rock sills, sand fill, and marsh grass plantings.

Outreach & Education Programs

Director & Partner Engagement

For our Board of Directors to effectively represent the constituencies they serve, putting boots on the ground and spending time with conservation partners is essential. In FY 2022, staff organized two opportunities for elected directors to visit with farmers and partner organizations, who are key to implementing conservation work.

In April, directors and staff visited partner organization Williamsburg Community Growers (WCG) to see new infrastructure projects including a fence around the garden, raised beds, and rain garden. A USDA Farm to School grant that Colonial SWCD received in partnership with WCG helped fund a solar system that provides electricity for a walk-in cooler for storing garden raised produce before it gets distributed to local schools and community organizations.



Top Left: Charlie Morse, WCG Executive Director, shows off the repurposed storage shed which was converted to a solar powered walk-in cooler.



Bottom Left: WCG has partnered with local scout troops to identify multiple service projects. Pictured is a completed Eagle Scout project, which included the construction of several raised beds, which were placed in high traffic, high visibility areas of the garden and will be used for education and demonstrations.

The field day also included visiting the site of an upcoming structural Best Management Practices and provided an opportunity to hear from a farmer about his land management techniques.



Left: A cover crop of turnips and rape protected this field during the fallow season. In the background is a riparian buffer and the James River.



Above: Dave Black is a long-time participant in the VACS program and a strong adapter of cover crops, including experimenting with innovative cover crop rotations and incorporating them into his nutrient management.

In May, Colonial SWCD toured Virginia State University's Randolph Farm in Petersburg, VA. We learned about the extensive research conducted on the farm, fish ponds, livestock, experimental crops, and green houses. Our partners in agriculture and conservation at VSU are pioneering amazing work providing information and assistance to producers in Virginia. We are thankful to our tour guide Mr. Jimmy Mullins, and look forward to returning in the future.

Right: CSWCD Director Bob Lund and Urban Conservationist Robyn Woolsey check out strawberry plants in a greenhouse at VSU Randolph Farm.



To protect against soil borne anthracnose, these strawberries are being grown in bags of potting soil.

The role of a district director is not easily defined and often requires the volunteers to take action on topics that are outside of their comfort zone. Field visits like the ones described here help district directors relate the terms, the people, and the funding streams that propel our programs. We're grateful to the farmers and partners who helped educate our Board of Directors and staff this year. Days like these showcase the hard work being done and inspire renewed commitment to the work we carry out.

Outreach & Education Programs

Youth Conservation Camp

This year marks the 43rd Anniversary of Youth Conservation Camp (YCC). YCC is a week-long conservation camp providing a hands-on outdoor learning experience for high school aged students, conducted on and around the Virginia Tech campus. The summer camp is sponsored by the VASWCD Education Foundation with support from Soil and Water Conservation Districts throughout the state.



Pictured above: (L to R) Diego Cordero Muniz, Beckham Dollyhigh, and Dylan Rooks.

Campers are exposed to a variety of conservation and natural resource opportunities, which included electro-fishing with the Department of Wildlife Resources and a visit to the Virginia-Maryland College of Veterinary Medicine, pictured below.



District funds were used to provide scholarships to the three applicants who attended this years camp. The campers represented 3 localities within the District, which included James City, New Kent, and York Counties.

Dominion Envirothon

The Colonial district was proud to support the Jamestown High School team as its representative to the 2022 Dominion Energy Envirothon.

The Dominion Energy Envirothon is a team-based natural resources competition in which high school students around the Commonwealth compete by demonstrating their knowledge of environmental science and natural resource management. Students apply their knowledge and problem solving skills by addressing real-life environmental problems.



Pictured above: members and coaches of the Jamestown High School Envirothon Team

The Jamestown team participated in a regional competition, hosted by the Northern Neck SWCD at the Baliles Environmental Center at Hull Springs Farm in Westmoreland County, and earned the right to advance to the state level Dominion Energy Envirothon contest held at Eastern Mennonite University in Harrisonburg.

The competition requires each 5 member team to test their knowledge on soils, wildlife, aquatics, forestry, and a special issue environmental topic, as well as prepare and deliver an oral presentation related to the special issue topic.

At the state level, the Jamestown HS team placed 1st in the aquatics topic and 2nd in the special issue environmental topic and oral presentations.

Pictured below: members of the Jamestown HS Envirothon Team receive awards from Dominion Energy and VASWCD staff.



Urban Programs

Virginia Conservation Assistance Program

Although the total number of Virginia Conservation Assistance Program (VCAP) site visits completed this year was less than previous years, interest in the program remains strong. Staff completed a total of 34 initial site visits, most of which were in James City County, to help homeowners identify and begin to correct stormwater issues on their properties. Similar to previous years, rain gardens, permeable pavement, conservation landscaping, and living shorelines continue to be the most popular practices.

VCAP Site Visits by Locality				
Locality	2022 Visits	2021 Visits	2020 Visits	2019 Visits
James City	22	32	26	20
York	5	17	8	15
Williamsburg	4	2	1	4
New Kent	1	1	1	2
Charles City	2	0	1	1
Total	34	52	37	42

Out of the 34 site visits completed this year, three landowners proceeded with VCAP applications. These applications included a residential rain garden in James City County, a conservation landscaping project in James City County, and a living shoreline in York County. Across these three practices, a total of \$18,146 in cost-share funds were provided, matched by a total of \$37,720 provided by the applicants. Since FY2017, a total of \$199,450 has been provided in VCAP cost-share funds, which has been matched by \$139,511 from participants.

Aside from continuing to offer VCAP site visits and application assistance, district staff further invested in the program by joining the statewide steering committee that oversees program implementation. Led by Urban Conservationist Robyn Woolsey, the district's involvement with the steering committee has offered great insight into how other districts implement the program and how the Colonial district

can continue to improve its own implementation strategies. Participating in the steering committee has also allowed staff to be able to influence important program policy changes that are intended to improve participation from districts and landowners. During FY22, those changes included significantly increasing practice cost-share rates and caps, and more than doubling the technical assistance payments districts receive per completed practice. While continued growth and improvement are still crucial to overall success, staff are hopeful that these changes will result in more interest in the program locally.

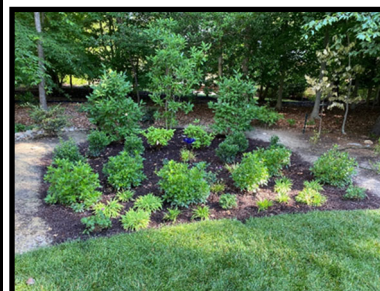
Over the past year, district staff have also taken on a new effort to expand VCAP access to localities that are not included in a soil and water conservation district service area, and thus do not have access to the program. Connections were made with several staff members in the City of Hampton to begin discussing an agreement that would allow Hampton residents to access VCAP funding specifically for living shorelines. With a significant number of shorefront parcels within the city, this practice was of particular interest to city staff and residents. Although a formal agreement is not anticipated to be in place until early FY23, staff are excited about this new possibility to expand VCAP and continue efforts to focus on shoreline management and stabilization programming.



Left and below: Before and after photos of a rain garden installed with VCAP funding in James City County.

Rain gardens are typically located in landscape depressions which allows pollutant laden stormwater to run into the garden. Stormwater is held in the garden until it can be absorbed by garden's plants or percolate into the ground.

Rain gardens can come in all different shapes and sizes but are best when planted with native plants in permeable soil.



Urban Programs

Turf Love

District staff and Virginia Cooperative Extension Master Gardener volunteers, known as Lawn Rangers, completed another successful year of Turf Love visits and outreach events. Throughout the year, 90 Certified Nutrient Management Plans were completed along with four outreach events. The Lawn Ranger team also welcomed a new Ranger, Jim Akridge, who has begun taking the lead role on working with new clients.

Right: Bob Winters, CSWCD Turf Love Program Technician, speaks to Turf University attendees about turf management in the transition zone.

Turf University is one of 4 turf management educational events conducted annually by the district



With pandemic restrictions decreasing this spring, district staff and Lawn Ranger partners were able to bring back Turf University, a public educational event historically hosted annually in March. The event is designed to educate homeowners about the importance of responsible lawn care, growing the healthiest lawn with the least impact on the surrounding environment, and how proper nutrient applications can protect the Chesapeake Bay. For this year's event, the district's own Turf Love Program Technician, Bob Winters, provided a seminar on how to choose the appropriate turf species best suited for various growing conditions, and how to identify and treat several common lawn weeds. Registration for this event hit capacity at 60 attendees, and a waitlist for another 11 individuals interested in attending the event was created. Approximately 40 people attended and provided positive feedback for the presentation and the discussions held during the event. Several attendees continued their efforts in improving their lawn management by participating in Turf Love in the weeks following the seminar.

District staff also participated in several outreach events held throughout James City County to promote Turf Love and encourage more residents to participate in the program. These events included a conservation outreach expo hosted by a local Girl Scout, James City County's annual FidoFest, and the Toano Open Air Market.

Shoreline Evaluation Program

Throughout this fiscal year, district staff and Virginia Cooperative Extension Master Gardener Water Stewards continued to focus on training in preparation to formally launch the Shoreline Evaluation Program (SEP) at the start of fiscal year 2023. The goal of the SEP is to provide educational and technical assistance by meeting with shoreline property owners to assess current or potential threats to the property and identify opportunities to help improve water quality through improved property management.

Staff at the Virginia Institute of Marine Science (VIMS) have continued to play an integral role in the development of the SEP and in providing trainings for staff and volunteers. Along with the virtual trainings listed in the table below, several in-person trainings and practice site visits were also held this year. The first in-person trainings were held at shorefront properties in the Northern Neck in partnership with the Northern Neck Master Gardener SEP team. These trainings focused on practicing working through the steps of a real evaluation, which includes assessing upland stormwater management, the riparian buffer zone, and the shoreline itself. More in-person trainings were held at one of the James City County Master Gardener's family properties in Mathews, Virginia, and at a shorefront property in Williamsburg, Virginia along College Creek.

After completing SEP evaluations, staff and volunteers will work together to prepare a final report that will detail observations made during the site visit as well as recommendations for improved management. If applicable, the final report will also direct landowners to avenues for further assistance, including cost-share opportunities for stormwater management projects and living shorelines.

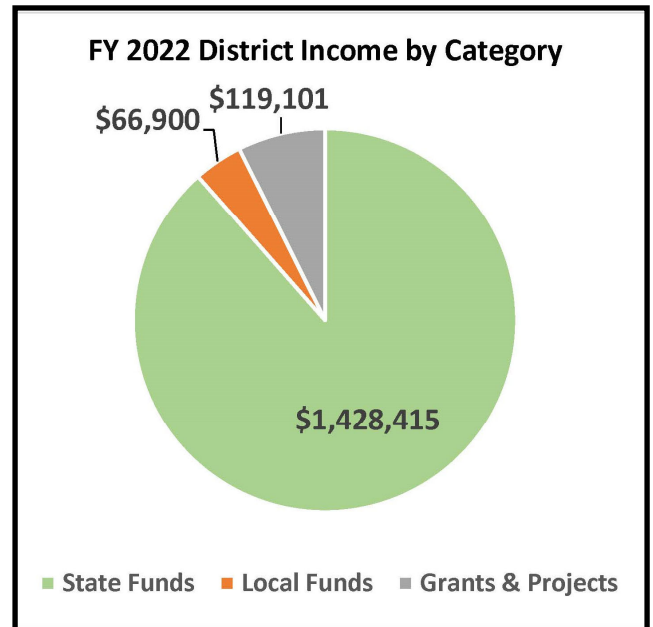


Left: The Colonial district SEP team, which includes district staff and Master Gardener volunteers at the Shoreline Demonstration Garden in Reedville, VA.

Colonial SWCD Finance

Income

Virginia's Soil and Water Conservation Districts rely on grants and contracts, contributions from local governments, and fund raisers to support local conservation efforts. The Colonial SWCD receives multiple grants from the commonwealth annually to support operations and to implement the Virginia Agricultural Cost Share (VACS) Program. VACS is the primary method by which agricultural conservation practices are credited in the Chesapeake Bay Watershed Model and represents the majority of income and expenses on the district income statement. Funds received from localities and competitive grant awards provide financial support for programs and initiatives targeting the district's constituents including technical assistance provided to residents, Turf Love, supporting the Williamsburg Community Garden, and compliance with the Chesapeake Bay Preservation Act.

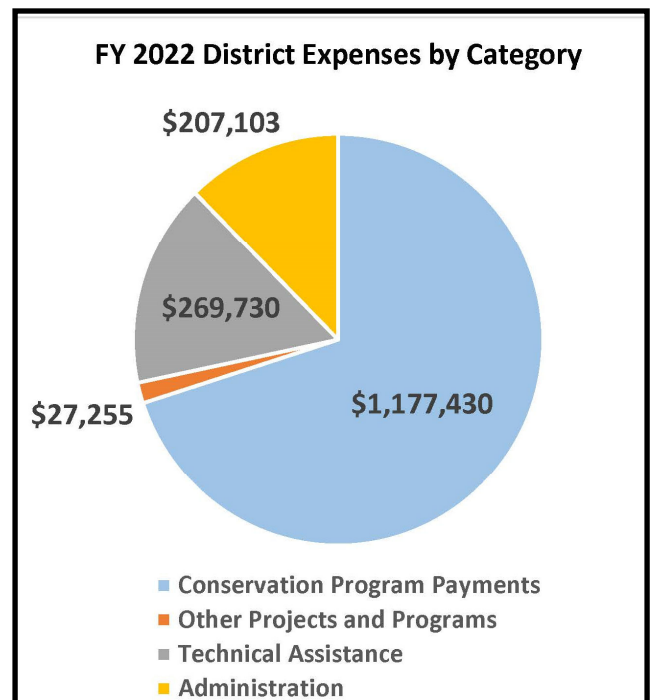


Expenses

Record amounts of conservation program funding flowed through the district in FY 2022. Landowners and farmers took advantage of three individual programs which offered financial assistance for implementing agricultural and non-agricultural conservation measures. Never before has the Colonial SWCD spent over \$1 million on conservation programs in a single year. Year over year spending in this category increased nearly 28%.

Retaining a well-trained and effective staff to provide technical assistance and administer district initiatives continued to be a top priority for the district Board of Directors. The staff, comprised of 5 full time and 2 part time employees consistently fulfill their duties in a professional manner and position the district to take advantage of grant opportunities, furthering the district's strategic plan. District directors are taking steps to hire new staff in the coming fiscal year to expand the reach of district programs and services.

Other project and program expenses, which includes materials and supplies to execute grant projects and outreach efforts, along with general administrative and overhead expenses round out



the expense list. The district is grateful for all of those who provide financial assistance to promote conservation in our service area.