

PRINCE GEORGE'S SOIL CONSERVATION DISTRICT 2018 ANNUAL REPORT

FARMERS OF THE YEAR: ANDY & LISA JONES-BUCKLER

BY STEVE DARCEY

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Andy and Lisa Buckler have been involved with agriculture most of their lives. In 1974, Lisa's father, John Ellis, purchased Three Springs Farm in Brandywine and began raising tobacco, hay, straw, grain and hogs. Over time, the operation grew to include multiple leased farms in the community with 1500 acres of land under cultivation. In the early 1980s, the family began working with the District to install best management practices (BMPs). As a result of their hard work and dedication, Three Springs Farm was recognized as Conservation Farm of the Year in 1992.



Andy also grew up farming, and together, he and Lisa operate Three Springs Farm and raise grain, hay and beef cattle. Best management practices they utilize include pasture management, crop rotation, field borders, filter strips, stream exclusion fencing, no till, cover crop, spring fed and frost-proof water troughs, heavy use areas and roof runoff management systems. They have participated in the Maryland Cost Share Program (MACS), USDA-NRCS Environmental Quality Incentive Program (EQIP) and Conservation Reserve Enhancement Program (CREP), and are working on preserving the farm through the Historic Agricultural Resource Preservation Program (HARPP). They maintain current Soil Conservation and Water Quality Plans as well as Nutrient Management Plans on the home farm and nine leased farms.

Andy and Lisa follow the outstanding conservation beliefs instilled in them by their parents to be good stewards of the land. They encourage new landowners and young farmers to work with the local soil conservation district, and take advantage of the programs offered to preserve and protect the soil and water resources on their land. For these reasons, Andy and Lisa Buckler were selected as the:

"Prince George's Soil Conservation District's 2017 Conservation Farmers of the Year."

CHANGING FACES

BY KATIE BLILEY

The end of 2018 brought a lot of changes to the PGSCD office. A few farewells to familiar faces and a few new faces joined the team!



Debbie Sandlin dedicated over 21 years to PGSCD as Administrative Assistant (32 years in County Government) before retiring in December. Her position will be hard to fill, as Debbie possesses vast knowledge about the inner-workings of the District. Best of luck to Debbie as she embarks on new adventures!

After 20+ years of hard work and expertise, lead Urban Engineer Brenda Sanford retired from PGSCD in December. All of us will miss her talent and amazing personality. We wish her all the best in retirement!



Former University of Maryland Extension Ag Marketing Specialist Kim Rush Lynch, is joining our team as an Urban Agricultural Conservation Planner III. She will oversee the District's new Urban Agricultural Conservation program.



After 20 years at PGSCD, Yates Clagett and his family relocated to North Carolina. We wish him the best of luck in his new life endeavors!



Spencer Evans joined the PGSCD family in November as a new Urban Engineer. Spencer joins the team with a background in Environmental Engineering and Soils. He and his family currently reside in Virginia, but hope to make roots in Maryland soon!



Harrison Palmer, a former District summer intern, joined us in June as a Soil Conservation Technician under the Chesapeake Bay Trust Fund Grant. He will become a fulltime MDA Soil Conservation Associate III in February 2019.

New Associate Supervisor—Amy Posey



Amy Posey

On July 2, 2018, the District Board of Supervisors appointed Amy Posey as a new Associate Supervisor. Amy resides in Bowie, Maryland and is a small business owner managing a licensed equine facility in Anne Arundel County. Amy has been working cooperatively with the District on many conservation best management practices over the past 15 years. She is a Maryland Certified Nutrient Management Consultant and works under the company name of Maryland Soil Services. Amy is highly motivated and passionate about soil and water conservation.

40 Years of Service

Chairman R. Calvert Steuart, received a 40-year supervisor's pin at the MASCD annual summer meeting that was held at the Cambridge Hyatt in Cambridge, Maryland. The pin is in recognition of 40 years of continuous service to the Prince George's Soil Conservation District.

Mr. Steuart also received the Ruby Trowel Award from the Prince George's County Beautification Committee for 40 years of contribution and dedication to the Beautification Committee.



Chairman R. Calvert Steuart

Beautification Awards

On behalf of the supervisors and staff, District Manager Steve Darcey, Administrative Aides Katie Bliley and Samantha Meinhardt, accepted the Golden Trowel Award from the Prince George's County Beautification Committee for 5-years of sustained maintenance of the landscaping at the District's headquarters building in Upper Marlboro. The award was presented by Associate Director of the Department of Public Works and Transportation Vernon Stinnett.



Steve Darcey, Vernon Stinnett, Samantha Meinhardt and Katie Bliley

URBAN AGRICULTURAL CONSERVATION

BY STEVE DARCEY

In January 2018, the District embarked on a new and exciting program: Urban Agricultural Conservation. Prince George's County is roughly 317,000 acres in size and home to over 900,000 residents. Due to a variety of factors, many residents are not located near readily available sources of fresh fruits, vegetables and other healthy food options. More information on this topic may be found in the M-NCPPC September 2012 publication, "Urban Agriculture: a Tool for Creating Economic Development and Healthy Communities in Prince George's County, Maryland". A significant piece of local legislation was introduced in 2015 that gave residential land owners, located within the "priority funding area," the opportunity for a partial



USDA-NRCS Resource Conservationist Valerie Cohen & District Manager Steve Darcey read X-Ray Fluorescent (XRF) soil analyzer output screen for levels of heavy metals in the soil.

property tax credit if they raise fruits and vegetables on their residential property and either sell the produce or donate to a worthy cause.

The District was named in that legislation as the lead agency for technical assistance and production verification. Follow-up legislation in 2016 defined urban agriculture in the county and opened the door for most residentially owned properties to participate in urban agriculture food production.

Recognizing the tremendous opportunity to expand our customer base and address new soil and water resource concerns, the District applied for and received a \$50,000 capacity building grant from the National Association of Conservation Districts (NACD). In January 2018, Mr. Larry Holmes, retired USDA-NRCS District Conservationist, was hired to kick off the program.



NACD-UAC Grant Planner Larry Holmes, provides information for Green Fest participants at Mt. Enoch Baptist Church in Clinton, Maryland.



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URBAN-AG CONSERVATION (CONTINUED)

BY STEVE DARCEY



Kim Rush Lynch & Meredith Shepard
of Love & Carrots Urban Farm in Oxon Hill

Along with Larry, the urban ag conservation team included Ms. Kim Rush Lynch, Prince George's County Ag Marketing Specialist from the University of Maryland Extension and Mr. Joseph Haamid, MDA Chesapeake Bay Trust Fund Grant Planner. These three professionals conducted 95 field visits, developed 12 soil and water conservation plans, signed on 12 new District cooperators and assisted with soil test interpretations and numerous USDA Environmental Quality Incentive Program contracts for seasonal high tunnels. Kim was instrumental in assisting with the new program through her contacts, farm and business management training sessions, and social media marketing efforts.

The success of the grant was made possible by the support of many people, including the County Executive's Office, County Council, Maryland Department of Agriculture, University of Maryland Extension, USDA-Natural Resource Conservation Service, the Prince George's Food Equity Council, ECO-City Farms, and Maryland National Capital Parks and Planning Commission (M-NCPPC).

The grant activities and accomplishments ended with positive momentum and was extremely successful. The County's Executive and Legislative branches recognized this tremendous opportunity and approved a full time Urban Agriculture Conservation Planner position within the District.

If you are interested in a similar opportunity, contact Ms. Deb Bogar at deb-bogar@nacdnet.org.



USDA-NRCS Resource Conservationist Valerie Cohen & MDA Grant Planner Joseph Haamid, performing soils investigations and identifying water sources for irrigation at the M-NCPPC's Cherry Hill Community Gardens in College Park.

AGRICULTURAL CONSERVATION ACCOMPLISHMENTS

BY DIANA LAGUNES

PLANNING ACTIVITIES	CONSERVATION APPLICATION
New Cooperators (7) 400 ac.	Farmers Applying BMPs 52 ea.
New Farm Plans (21) 2,040 ac.	BMPs Installed on Farms 234 ea.
Revised Farm Plans (28) 3,260 ac.	Acres Receiving Treatment 6,300 ac.
Total Plans (49) 5,300 ac.	Estimated Tons of Soil Saved 2900 tons

BMP Funding Sources

FUNDING SOURCE	BMPS
MACS Capital Projects 3 (Agreements)	3
MACS Cover Crop 14 (Farmers) 51 (Tracts)	2,154 ac.
MACS Healthy Soil Cover Crop 5 (Farmers)	95 ac.
USDA-EQIP 13 (Contracts)	77
Farmer/Landowner Funded	103
TOTAL BMPs Applied	234

Equipment Rental Program

EQUIPMENT TYPE	FARMERS	ACRES
No-till Drill (10') OLD	4	150
No-till Drill (10') NEW	7	109
No-till Drill (6')	11	81
Pasture Aerator	2	6
5 ton Lime Spreader	3	250
Post Pounder (# of posts)	9	386
Manure Spreader	2	5
Sub-soiler	1	5
Vicon Fertilizer Spreader	7	5

Best Management Practices Applied

PRACTICE	AMT APPLIED	PRACTICE	AMT APPLIED
Winter Cover Crop	2,251 ac.	Residue & Tillage Management	1,870 ac.
Filter Strip	5 ac.	Stream Crossing	1 ea.
Nutrient Management	187 ac.	Stripcropping	10 ac.
Nutrient Mgmt. Plans Written	3 ea.	Conservation Crop Rotation	1,000 ac.
Forage & Biomass Planting	130 ac.	Field Border	16,783 ft.
Forage Harvest Management	180 ac.	Roof Runoff Structures	2 ea.
Critical Area Planting	5 ac.	Underground Outlet	970 ft.
Conservation Cover	44 ac.	Heavy Use Area Protection	0.2 ac.
Tree/Shrub Establishment	1 ac.	Stream Crossing	1 ea.
Contour Farming	14.3 ac.	Seasonal High Tunnel	1 ea.
Access Road	2,500 ft.	Habitat Development and Mgt.	44 ac.

POLLINATOR PACKETS

BY TERRY HAMPTON, OFFICER MANAGER

Every year District staff distribute seed packets at various community events and to local businesses. This year was no exception! Our seed packets contain a variety of flowering seeds that can be used in gardens and yards.

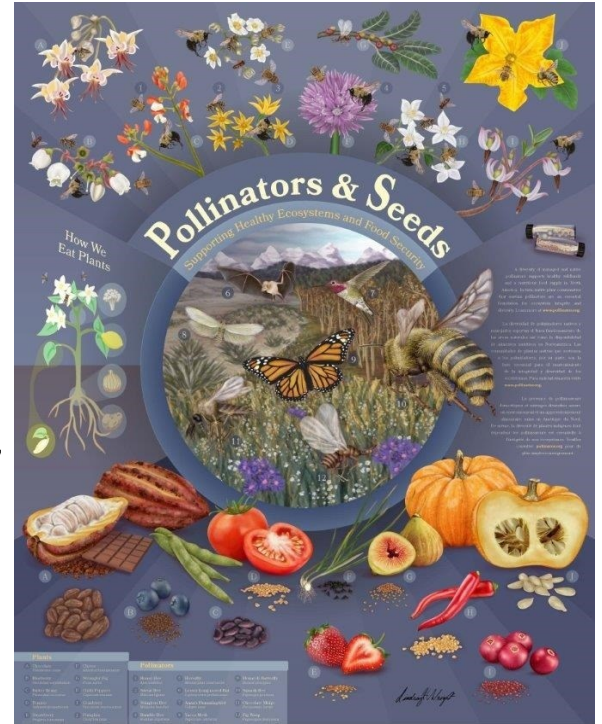
It is estimated that three-fourths of the world's flowering plants depend on pollinators to reproduce. In the online brochure, "Be a Friend to Pollinators," USDA informs readers with facts on pollinators. Scientists estimate that one out of every three bites of food we eat exists because of animal pollinators like bees, butterflies, moths, birds, bats, beetles and other insects.

Pollinators visit flowers in their search for food (nectar and pollen). During a flower visit, a pollinator brushes against the flower's reproductive parts, depositing pollen from other flowers. The plant then uses the pollen to produce a fruit or seed. Many plants cannot reproduce without pollen carried to them by foraging pollinators.

For Earth Day events in 2018, we provided seed packets to: Prince George's County Employees Childcare Center, Upper Marlboro Community Center (UMCC), Margaret Cooper (pre-school class at UMCC), One World Center for Autism (OWCA) and Kettering Middle School.

Additional seed packets were distributed for an Urban Tree workshop and Annie's Project workshops, as well as a large community gathering at Mt. Enon Church and to County Council staff.

In total, we distributed approximately 425 seed packets!



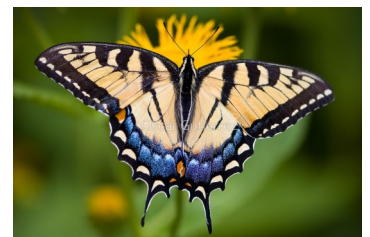


Prince George's Soil Conservation District



Northeast Wildflower Seed Mix
 Help our native pollinators by planting native wildflowers!



DISTRICT SUPPORTS THE UNIVERSITY OF MARYLAND SOIL JUDGING TEAM

BY STEVE DARCEY

EDITED FROM ORIGINAL ARTICLE BY DR. MARTIN RABENHORST, PROFESSOR OF PEDOLOGY

It was a raw and grueling day in southwest Ohio, with rain and temperatures in the 40s, but the UMD Soil Judging Team showed real grit as they persevered under such adverse conditions, and at the end of the day Terp Soil Judgers walked away with 1st Place awards for both the group judging and the overall Team winner. The field of competitors was comprised of 14 teams representing 9 Universities in the NE Region. The other universities were: Delaware Valley University, Pennsylvania State University, the University of Rhode Island, Ohio State University, Wilmington College of Ohio, Bloomsburg University, Brooklyn College and Richard Stockton College.

Practice and contest sites were located in Southwestern Ohio on landscapes mantled with Wisconsinan (younger) and Illinoian (older) glacial tills, much of which was covered by loess, and where the underlying geology was mostly Paleozoic sedimentary rock including calcareous shales and limestones. The soils themselves included Alfisols and Mollisols derived from residual, alluvial and glacially-derived parent materials, with such interesting and challenging features as glosic horizons, fragic properties and paralithic contacts.

Behind Maryland were the University of Rhode Island (A Team in 2nd, B Team in 4th), Delaware Valley University in 3rd, and Penn State in 5th. Maryland's B team finished 6th (just 4 points behind Penn State). These four schools will represent the NE region at the National Collegiate Soil Judging contest in April 2019 that will be hosted by California Polytechnic State University in San Luis Obispo, California.

Maryland had three students in the top 10 in the individual competitions including Dyani Frye (3rd), Anna Lowein (4th) and Cathy Wang (6th). Maryland's Rachel Heisey and Aubrey Wiechecki also finished strong in 11th and 12th places, respectively, (tiebreaker for 11th and 1 point back for 12th). Everyone will enjoy a break over the holidays, but are looking forward to gearing up for California.



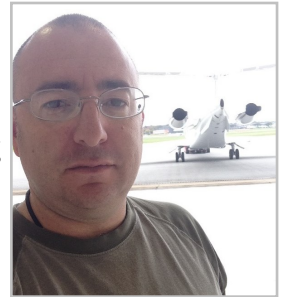
UMD Soil Judging Team—Regional Champions at the 2018 NE Competition held Oct. 27 in Hillsboro, Ohio. Front row: Dyani Frye (3rd Individual), Cathy Wang (7th Individual), Isabella Bruno; Middle row: Jonathan Moy, Anna Lowien (4th Individual), Yunxuan Pei, Antonio Vega, Rachael Heisey; Back row: Barret Wessel (Asst. Coach), Jacob Mast, Aubrey Wiechecki, Dr. Martin Rabenhorst (Coach).

NRCS—OPERATION WARFIGHTER PROGRAM

BY AARON MCCANN, SOIL CONSERVATIONIST

With approval from the Board of Supervisors, the Prince George's Soil Conservation District became the first District in Maryland to participate in the NRCS Operation Warfighter program. This program utilizes available interns to assist with technical work load. The program also assists service members transitioning out of the military to gain valuable work experience and gain skills in a civilian work setting.

On November 6, 2018, we accepted our first intern to work in Upper Marlboro, Maryland. Christopher M. Schlette, Senior Master Sergeant in the U.S. Air Force, is interning with us for approximately six months. Chris has spent 26 years of his military career in aircraft maintenance and the last five years assisting as a Resource Advisor supporting the maintenance effort of the Air National Guard's Very Important Person Special Air Mission.



Chris Schlette

So far, he has assisted staff with compliance determinations and has gained field experience by working with various conservation planners, technicians and specialists with NRCS and partner staff. He has also attended trainings to familiarize himself with our work as a conservation organization. We are happy to have utilized the Operation Warfighter program and are hopeful to continue to take advantage of this program for future interns.



COVER CROPS: WHAT ARE THEY AND WHY ARE THEY IMPORTANT?

BY DIANA LAGUNES

A cover crop is generally an annual cereal grain that is planted following the harvest of a commodity crop for the protection and enrichment of the soil. As it grows, the excess nutrients remaining in the soil are absorbed by the roots and held in the plant's leaves, preventing the nutrients from leaching down through the soil profile and reaching the groundwater. The crop also keeps the soil in place, reducing the sediment runoff into local surface waters.

The Maryland Department of Agriculture funds the Winter Cover Crop Program allowing farmers to be reimbursed for planting cereal grains or legume mixes after the harvest of their summer crop. Farmers participating in this program sign an agreement stating that they will not add fertilizer or manure to the cover crop and they will not harvest the cover crop. It is important that the cover crop is killed down before planting the next commodity crop to return nutrients back into the soil and allow the decomposing roots and plant material to add organic matter to the soil. This improves soil health, making the fields more productive for future crops. Due to the record amount of rain in 2018, only 15 farmers could get their winter cover crops planted. Those farmers planted 2,254 acres of winter cover crop after the harvest of their summer crop of corn, soybeans, sorghum or vegetables, providing substantial benefit to improving water quality in the Chesapeake Bay tributaries.

MDE ANNUAL DAM OWNER'S WORKSHOP

BY JULIE MILLER, URBAN ENGINEER

District staff attended the Third Annual Dam Owner's Workshop hosted by the Maryland Department of the Environment (MDE) Dam Safety Division and the Association of State Dam Safety Officials (ASDSO). The title for this year's topic was "Lessons for All Dam Managers from the Oroville Dam Incident in California." The main speaker of the workshop was the leader of the team of forensic investigators, John France, D.GE, D.WRE. Along with a team of experts, France was commissioned by the State Department of Water Resources to study the cause of the 2017 Oroville spillway incident.

Oroville Dam is an earthen dam located in Northern California and is the tallest dam in the United States at 770 feet tall. In February 2017, Oroville Dam experienced significant structural damage to the dam's main spillway and emergency spillway, triggering the evacuation of nearly 200,000 people from the downstream area. According to the California Department of Water Resources, the latest estimated cost for the emergency response and reconstruction of both spillways was over \$1 billion.

Mr. France provided a thorough presentation including impressive statistics about the facility, a detailed timeline of the event, and key players involved in making decisions throughout the incident. He emphasized several areas that led the forensic team's investigation, such as comparing best management practices in place during the design of the Oroville Dam versus current best management practices, and comparing the Oroville design to other facilities designed during the same period. The team also focused heavily on the documentation of discrepancies observed during the initial dam construction and examined methods chosen to repair the facility as documented throughout routine inspection reports generated throughout the life of the structure.

Ultimately, it was determined that there was no single issue which led to the damage at the Oroville Dam. Rather, many factors combined to contribute to the incident. In terms of dam safety, no issue is too small. This thought-provoking message was emphasized to all dam owners and managers attending the workshop.

The full Oroville Dam forensic report can be found at the following link:

<https://damsafety.org/sites/default/files/files/Independent%20Forensic%20Team%20Report%20Final%2001-05-18.pdf>



Photo: infrastructureusa.org



Photo: climatereadiness.info

ROOF RUNOFF SYSTEMS PROVIDE ON-FARM STORMWATER MANAGEMENT BY WADE HAMPTON

With rainfall totals nearing 70", stormwater management was an important and necessary conservation practice in 2018. Roof runoff is one of many conservation practices that the Prince George's Soil Conservation District often recommends to landowners to control erosion on farms caused by stormwater. Three roof runoff projects were designed by the District and installed by cooperators just in time for the record-breaking rainfall of 2018. Two of these projects were made possible from the Maryland Agricultural Water Quality Cost-Share (MACS) funding and participation in the District's Revolving Loan Program. Encompassing over 108,000 Sq. ft of non-permeable roof area, these projects were able to collect and control over 4.5 million gallons of stormwater runoff in their first year of operation, potentially preventing thousands of pounds of sediment and nutrients from animal waste and fertilizer from polluting the waters of the state. These benefits will be compounded as the structures continue to function for many years to come.



Roof runoff installed on a large horse stable with stormwater outletting into an underground cistern



Roof runoff installed on a winery and tasting room with the water outletting into a stormwater management pond

DISTRICT STAFF

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Brenda Sanford, Urban Engineer
Julie Miller, Urban Engineer
Kebede Shihamit, Urban Engineer
Eugene Whitehead, Urban Engineer
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Eileen Beard, MDA Planner/Regional Equine
Outreach Specialist
Joseph Haamid, MDA Grant Planner
Harrison Palmer, MDA Grant Technician

"Out of the long list of nature's gifts to man, none is perhaps so utterly essential to human life as soil."

Hugh Hammond Bennett

NACD/UAC GRANT

Larry Holmes, Urban Ag Conservation Planner

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