Dear Readers:

Change; in some cases it means to cause or become different. Use the word and some people become uneasy since they like the status quo while others look forward to a freshness or new challenge that change might bring. This issue of Headwaters reflects change; those that may be brought on by forces beyond our control or because of the way things were done in the past. For instance, this is a time is a time of year when there is a dramatic change in temperature. To help prepare, we share how to prevent damage to BMPs brought on by the change of seasons. On the other hand, we are nearing the half-way point where we find out how the changes in the way we treat the land have impacted water quality in the Chesapeake Bay. Will the changes we have made help? You will also learn about how the CBLP is working to affect change in partnership with an industry that installs best management practices, that we bid a fond farewell to a co-worker who changed career paths, and learn about a partnership on the Eastern Shore that is working to understand how changes in attitudes can affect water quality.

Sincerely,
The Maryland Sea Grant Extension Watershed Educators Team
**GREENING WITH CONSISTENCY**

+ **AMANDA ROCKLER**


In mid-September, our friend and co-worker Krisztian Varsa packed up his family and headed south to start a new chapter in their lives. After four years with Sea Grant Extension’s Watershed Protection and Restoration Program, Krisztian accepted a position with the Athens Land Trust in Georgia. During his time here we all benefited from his insight, ideas, convictions, and most of all, his wonderful sense of humor. Krisztian served Carroll, Harford, and Baltimore Counties and Baltimore City, and had recently been promoted to Senior Agent Associate for his hard work and dedicated service to the University, Extension, and Marylanders. We wish Krisztian and his family the best in their new endeavors.

The Chesapeake Bay Landscape Professional (CBLP) certification is a new voluntary credential system for professionals who design, install, and maintain sustainable landscapes. The credential training and examination emphasizes stormwater retrofit best practices and conservation landscaping with native plants to benefit the environment. With two levels of training and certification, the initial pilot of the training and exam for this new credential has started at locations in Maryland, Virginia, and Washington, D.C.

**Level 1** is the baseline credential and focuses on design, installation, and maintenance of sustainable landscapes, with emphasis on how to properly maintain stormwater best management practices. **Level 2** is an advanced credential for professionals with experience in design or installation of conservation landscapes, with emphasis on small, residential-scale stormwater retrofit best practices. Candidates for Level 2 must hold a Level 1 CBLP certification and be able to demonstrate prior experience in design and/or installation of sustainable landscapes.
HALFWAY THERE…
MIDPOINT ASSESSMENT DRAWS NEAR

+ERIC BUEHL

In 2010, a timeline was set for cleaning up the Chesapeake Bay and to meet certain pollution reduction goals by 2025. To accomplish this, Watershed Implementation Plans (WIP) were established to reduce pollution entering the Bay based on various sources (sectors) of pollution, including forests, agriculture, wastewater, septic, and stormwater. To make sure that the ultimate goal could be achieved by 2025, a midpoint assessment was set for 2017. The idea behind this “halfway there” evaluation was to ensure that programs and policies were working effectively and pollution reduction efforts had reached 60% of the 2025 goals. With only a few months to go before we reach the midpoint, one might wonder how things are going.

To address this question, the Harry R. Hughes...
Center for Agro-Ecology recently held workshops around the state to share information from various agencies and to get feedback on what was working and where changes might be needed. Due in large part to wastewater treatment plant upgrades and the implementation of best management practices (BMPs) and nutrient management plans on farms, nitrogen and phosphorus loads from all sectors have decreased from 2009 to 2015*, with one noticeable exception. That exception is nitrogen and it is attributed to the stormwater sector, which saw an increase of more than 290,000 pounds during that same period.

Some of this increase is being attributed to an under-reporting of BMPs, but some is related to growth around the state. This increase in nitrogen from the stormwater sector underscores the need for homeowners to install small-scale BMPs to decrease runoff and help reverse this trend. BMPs like rain gardens, rain barrels, and permeable hardscapes can decrease stormwater runoff and reduce the amount of nutrients reaching the Chesapeake Bay. For more information about the WIPs, activities related to the midpoint assessment, or the next phase of WIPs, many of the presentations from the workshops are available on the Hughes Center website.

*Maryland Department of the Environment 2015 Annual Progress Summary (6/03/2016)

Well, if that city is Cambridge, Maryland. The National Fish and Wildlife Foundation recently awarded a grant to several partner organizations to pilot the Cambridge Residential Stewardship Initiative (CRSI). The initiative, led by the Nanticoke Watershed Alliance and Midshore Riverkeeper Conservancy with support from the Chesapeake Bay Foundation and UMD Sea Grant Extension, seeks to reduce stormwater runoff in the city by increasing the number of pollution prevention projects installed in residential areas.

This program, unique to the Eastern Shore, has 3 components. The first is a survey of Cambridge residents that will help project partners understand what the residents think about water pollution in the region and what sources of information are most trusted. The second component is a series of educational workshops designed to provide information about pollution prevention projects, such as rain gardens and rain barrels, in ways that are tailored to meet the needs of the community. And the third part consists of technical and financial assistance (cost share) to help up to 10 residents, both owners and renters, assess their sites for stormwater runoff and then install and maintain pollution prevention projects. Program participants will also receive yard signs to highlight their involvement, a packet of
“CRSI is the first of these projects and will result in measurable reductions in nitrogen, phosphorus, and sediment loads to local waters.”

The project partners, along with the City of Cambridge and Dorchester Citizens for Planned Growth, began working together in 2014 when they formed the Cambridge Clean Water Advisory Committee. Led by the Nanticoke Watershed Alliance, the committee developed a Clean Water Action Plan that spans the next 10 years and recommends policies and projects to achieve water quality improvements in the city. CRSI is the first of these projects and will result in measurable reductions in nitrogen, phosphorus, and sediment loads to local waters.

PREPARING FOR WINTER

+ Jackie Takacs

Water is one of the few substances on earth that expands when it freezes, increasing its volume by more than 9%. Freezing water causes pipes to burst, mountainsides to fracture, and yes, even rain barrels to crack. Don’t let this happen to you! Following a few simple steps will ensure best management practices like your rain barrel makes it through the winter.

Rain barrels - For those of you with rain barrels, here are few winterizing tips:

- Decision: Decide if you want to physically remove the barrel from your house. Some people cannot bear the idea of removing their barrel once it is in place, others simply do not have room for storing it when not in use.
• **Disconnecting:**
  Disconnect the barrel from the downspout, clean it out and store upside down inside a shed or garage. Reconnect your old downspout or simply extend the flexible downspout connector down to where your original downspout drained (away from the house).

• **Not Disconnecting:**
  Make sure the inflow to your barrel is free from leaves and other debris. Remove all hoses and open or remove all drains – this will allow any winter rain or snow melt to move through the barrel and prevent damage from freezing. If you have concerns that your barrel could shift or move during storms, place a few large bricks or other weight in the bottom of it.

• **Rain Gardens** - For those of you that have a rain garden, here are some things to consider:
  
  • **Plants:** This is the time of year that many plants lose their leaves and go dormant. If you consider this look unappealing, you can cut back perennials to their base. If you want to increase your environmental impact, leave seed heads and grasses intact over the winter as they provide food and nesting materials for overwintering birds. Prune trees or shrubs if needed.

  • **Weeds:** This is a good time to remove any weeds that you may have missed over the summer.

• **Erosion and Blockages:**
  Check and repair any erosion issues. Inspect inlets and outlets and remove any blockages caused by soil, sand, gravel, leaves, or plants.

• **Mulch and Ponding:**
  Make sure your garden still has a good 2-3 inches of mulch and the ponding depth is at least 6 inches deep. Remove any fallen leaves as they will affect the ponding depth.

For more information about the care and maintenance of your best management practices, visit [http://extension.umd.edu/watershed/stormwater-practices](http://extension.umd.edu/watershed/stormwater-practices).
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