UNIVERSITY OF MARYLAND EXTENSION
Sea Grant Maryland

Issue 2 Volume 5
May 2018

Headwaters

Publication of Maryland Sea Grant Extension Watershed Educators

Inside this Issue

Greetings Loyal Headwaters Readers,

With winter in our rearview mirrors we look forward to all the opportunities to get outdoors that spring and summer throw our way. With months of long dark nights and cold weather behind us, now is the time to tackle projects around the house and put those plans for that new plant bed, landscape project, or rain garden that you've been thinking about into action. This issue of Headwaters has useful information on why Watershed Specialists are better than dating apps, how and where to find native plants, what you can and can't do with water from a rain barrel, a unique partnership working in the Jones Falls watershed, and what one county is doing to reduce stormwater runoff from its roadways. We hope you enjoy reading this edition of Headwaters!

The Maryland Sea Grant Extension Watershed Educators Team

Images sources: Cornerstone Insurance and Mindym306 Deviantart.com.
Collage Credit: Eric Buehl

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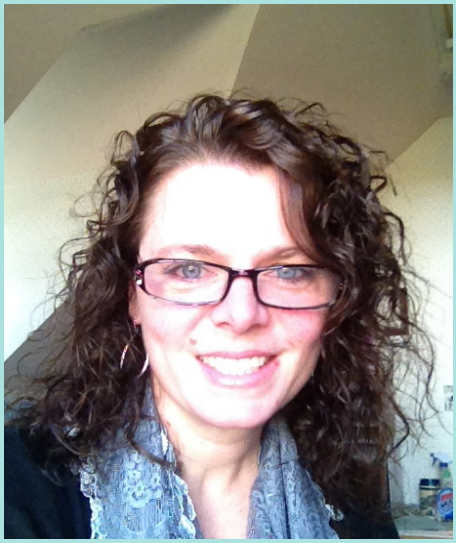
What Can I Do With the Water?

+ Jackie Takacs



It's rain barrel season! How do I know that? Outside of the dozen rain barrel workshops I teach in the spring, I can tell by the number and variety of questions I get about the quality of rain barrel water and how it can be used safely. So let's start with the quality of the water. Rain is as clean as you could want water to be. It's not until it starts falling from the atmosphere and making contact with particles in the air that it starts to become dirty. Before it even hits the ground, rain can be carrying pollutants like nutrients. In fact, 30% of the nitrogen in the Chesapeake Bay watershed comes from the atmosphere. Other unwelcome contaminants such as leaf litter, heavy metals, organic chemicals, parasites, and bacteria and viruses can be introduced to the mix as the rain moves across your rooftop into your rain barrel.

Rain barrels can be used to capture rainwater for later use around your house. Photo Credit: Eric Buehl

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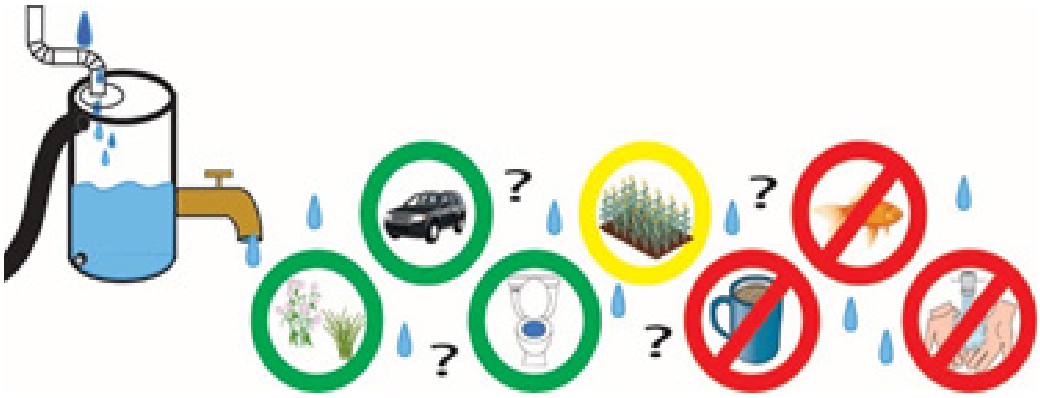
"Residential rain barrels have the potential to harbor organisms responsible for human diseases"

Of specific concern are the disease-causing pathogens that can be introduced from the feces and urine of small mammals and birds that take refuge on our rooftops. Residential rain barrels have the potential to harbor organisms responsible for human diseases including Campylobacteriosis, Listeriosis, Salmonella, Leptospirosis and Hantavirus and for that reason alone, the water from a rain barrel is NOT potable and should not be used in any situation that would normally call for potable water. This means - NO drinking - NO bathing - NO washing your hands or face - and NO washing fruits or vegetables.



Along with not drinking or washing with water from rain barrels, raising fish in them is not recommended. Image Credit: Jackie Takacs

So now that I scared the heebie-jeebies out of you, what can you use the water for? Water from your rain barrel can safely be used for all non-potable activities such as watering your yard and flower beds, flushing toilets, even washing your car. What about using it to water plants in vegetable gardens? The results of a 2011 Rutgers University study showed heavy metal contamination in rain barrels were well below the EPA irrigation standards and posed minimal risk for use in vegetable gardens. They also noted that a majority, but

not all, of the samples collected were below recommended irrigation standards for E. coli, a commonly used indicator for the presence of biological contaminants.

Since it is not feasible to test your rain barrel water every time you plan on using it and you should assume that you have some level of biological contamination, we recommend you follow the points listed below if you plan on using it to water vegetables. Here are some recommended practices for designing, managing and using rain barrel water more safely for your edible plants:

- Do not apply the water directly on the plants. Apply it to the soil at the base of the plants in the morning using drip irrigation or a watering can.
- Do not use rain barrel water a day or two before harvest.
- After harvest, wash all produce with potable water before consuming it.
- Use a first-flush diverter on your downspout to direct the initial runoff to your lawn for infiltration into the ground. This is often the most contaminated water.
- Don't hoard the water! Use the water as soon as you can to prevent stagnation and water quality issues.
- Use screens to keep your barrel free from debris.
- Consider cleaning the inside of your barrel on a regular basis with a mild bleach solution.
- When purchasing or building your own barrel, be sure to use a food grade quality barrel.

For more information about rain barrels, go to www.extension.umd.edu/watershed/rain-barrels-and-cisterns.

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Why the Watershed Team is a Better Fit than Dating Apps

+ Jennifer Dindinger

Have you ever tried dating apps? You answer a lot of questions about your likes and dislikes, and then a mysterious algorithm matches you up with a selection of potential mates. Some matches end in marriage; some just end. Hmm. I have so many questions. How does the algorithm know what the best match is for me? Can it tell that I batch my dishwashing instead of loading the dishwasher every night? Does it know that I have to be the one to get the mail OR ELSE?

If you're looking for a more personal connection when it comes to addressing your watershed protection and restoration issues, then the Sea Grant Extension watershed team beats an algorithm any day. We have several ways to help and they are all based on understanding your needs and finding the right resources to meet them.

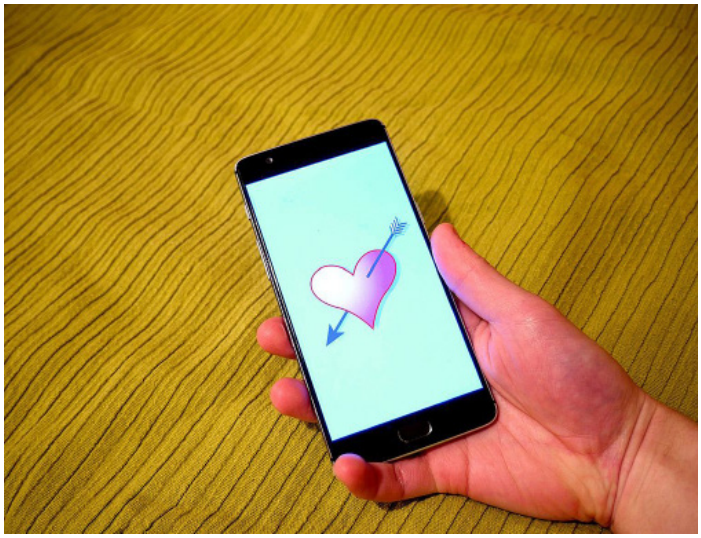


Photo Credit: Santeri Viinamäki [CC BY-SA 4.0 (https://creativecommons.org/licenses/by-sa/4.0)], from Wikimedia Commons

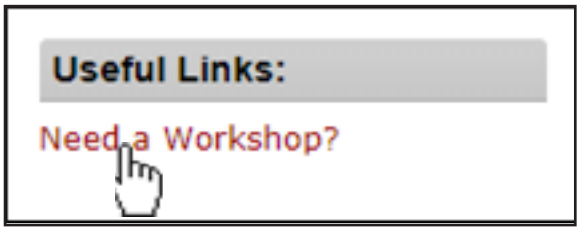
"We have several ways to help and they are all based on understanding your needs and finding the right resources to meet them."

How does our "algorithm" work? We get to know you and your community by listening and building relationships so that we understand your unique conditions. We attend meetings and conferences to learn about the latest tools, science, grant programs, and technical assistance available and bring those resources directly to you. Here's how:

Wondering what grant program is right for you? Try our Watershed Restoration Assistance Directory. We compiled a list of the major funding programs in the Bay watershed and organized them by topic. The Directory includes labels indicating whether the program provides funds or technical assistance or both. Can't find what you need? Please let us know and we'll add it!

Interested in hosting a workshop but aren't sure where to start? In the bottom right corner of our website there is a section called Useful Links. Click on "Need a Workshop?" and send us an email with your request. The best part? The email goes to actual human beings! You will not have to wait for a computer to figure out what you need . . . LIVE human beings receive your message and we work together to determine the best solution for you.

"...there really is no substitute for the time and energy we invest in building relationships with you and your community."



"Need a Workshop?" link at extension.umd.edu/watershed. Credit: Jennifer Dindinger

In summary, while an algorithm can give you a quick set of options and maybe a little excitement, there really is no substitute for the time and energy we invest in building relationships with you and your community. We find the most success with this method and hope to work with you soon.

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Native Plants, Get Your Native Plants!

+ Amanda Rockler

Ahhh, after a very long winter, it seems like spring is finally here! And with spring comes spring planting projects! If you have been dreaming about planting a rain garden or a conservation landscape all winter long, it is finally time. Native plants provide so many invaluable benefits to our local ecosystem. They provide habitat for birds and pollinators, they help make water and air cleaner, and they are beautiful.

Our team loves native plants and we promote them everywhere we go, but the one question we always get asked is, where can I buy native plants? Here a few tricks to finding natives and a few resources for where to purchase them.

Choose your native plants like you choose your home team, with great care and consideration!
Photo Credit: Amanda Rockler

"Consumers drive the market. The more you ask for natives, the more places will start to grow them. "

How do I find native plants?

Shop at trusted nurseries and ask questions! The Maryland Native Plant Society recommends you ask these two questions:

1. Is this species native?
2. What is the original source?

Dr. Sara Tangren, native plant specialist at University of Maryland Extension also suggests looking for labeling that indicates region of origin, ways that the grower has preserved genetic diversity, and generations of cultivation. Lastly, remember that consumers drive the market. The more you ask for natives, the more places will start to grow them.

Where can I buy native plants?

Native plant/seed growers are local businesses, so shop local! The Maryland Native Plant Society has a list of native plant nurseries on their website at https://go.umd.edu/3R7 and the U. S. Fish & Wildlife Service has a regional list at https://www.go.umd.edu/3Rh.

Pollinators on Joe Pye Weed Photo Credit: Gail Eichelberger

If you would like detailed information about the growing conditions for native plants for your area, be sure to visit the Chesapeake Bay Native Plant Center at http://www.nativeplantcenter.net/.

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A Change in Plans

+ ERIC BUEHL

My phone chirped at me a few minutes after 7 a.m. with the message, "You on road yet?" My reply was just as short and grammarless: "Just walking out door." What followed then was a brief exchange of texts letting me know where to go to watch the construction process of a roadside ditch being retrofitted into a bioswale in southern Cecil County. I grumbled as I climbed into my car because the day had been planned out for some time with the goal of visiting a project site for the current Watershed Stewards Academy, but after thinking about it for a minute, this might be a great chance to watch them start the installation, so I was okay with this change in plans.

Retrofitting roadside ditches to decrease stormwater runoff and improve water quality sounds simple when you think about it: just dig a trench and then fill it with bioretention soil mix and stone . . . sounds pretty easy to me. But after talking to Marshall McSorley with the Cecil County Department of Public Works Stormwater Management Division about the process, "easy" was not a word that came up at all during the day. With just over 600 miles of county-owned roads in Cecil County, where do you start? To make it easier on selecting possible sites to install practices such as these, locations were identified as part of a watershed assessment. They had to consider factors such as the size of the watershed draining into each roadside ditch, slope steepness, soil type, underground utility location, and width of existing right-of-ways prior to construction. Okay, so maybe easy wasn't the best choice of words to use.

"As runoff leaves the road in a rainstorm, it enters the ditch and begins to soak into the ground."

Marshall McSorley signals the backhoe operator on how much stone to place in the newly-excavated roadside bioswale. Photo Credit: Eric Buehl

At least how these roadside ditch retrofits works is easy. After excavation, part of the trench is backfilled with stone and a perforated pipe to ensure that it drains properly. Once this step is completed, the remainder is filled with a special soil mixture that helps to filter stormwater runoff. So as runoff leaves the road in a rainstorm, it enters the ditch and begins to soak into the ground. In this way, the ditch now aids with groundwater recharge which can help maintain streamflow in drier months and also decrease streambank erosion. With funding provided by the Chesapeake and Atlantic Coastal Bays Trust Fund for construction, the County's Roads Division is installing these in roadside ditches in several locations in the County as a pilot program.

So despite this change in plans, Marshall and I were still able to make it to our previously-scheduled project site and I consider myself lucky to have had the chance to be onsite to watch them start the installation.

The roadside ditch before installation. Photo Credit: Eric Buehl

The roadside ditch after installation. Photo Credit: Marshall McSorley

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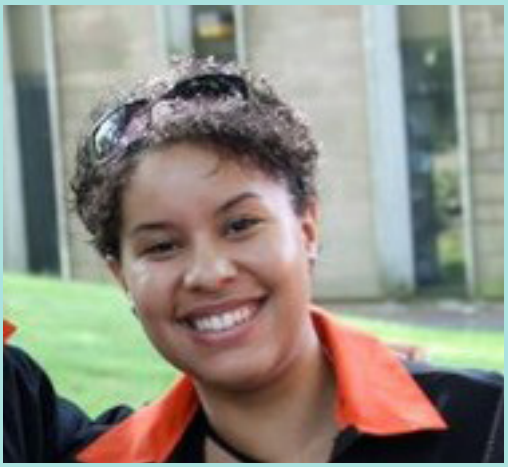
Touring Baltimore's Jones Falls Watershed with the One Water Partnership

+ Kelsey Brooks



As Watershed Restoration Specialists we are called upon to provide assistance to a wide variety of agencies and organizations, and in April, I had the opportunity to ride along on two "Inspirational Bus Tours" for congregations participating in the One Water Partnership. The One Water Partnership is an effort led by Interfaith Partners for the Chesapeake (IPC) with programmatic assistance from Blue Water Baltimore, Interfaith Power & Light, and University of Maryland Sea Grant Extension to provide resources for congregations that have agreed to one or more actions to support improved water quality and environmental sustainability efforts in the Jones Falls Watershed. These actions include events, such as film screenings and nature walks, stream/trash clean-ups, tree plantings, energy audits and the implementation of stormwater practices such as rain barrels, cisterns and rain gardens.

Avery Davis from Interfaith Power & Light discusses Homewood Friends' solar panels. Photo Credit: Kelsey Brooks.

"While still in process, the One Water Partnership has seen substantial success with the participating congregations."

Both tours took us to multiple sites along the length of the Jones Falls. Each tour started at a participating congregation: Mt Lebanon Baptist Church in Baltimore City's Liberty Square neighborhood across from Druid Hill Park on April 8; and Cathedral of the Incarnation, an Episcopal Cathedral in Baltimore's Guilford neighborhood on April 29. The first stop was Chizuk Amuno, a Jewish Synagogue in Baltimore County, which sits at the top of the watershed and is the site of a beautiful rain garden that collects roof runoff and two large bioretention facilities that treat runoff from parking lots, which were installed with the assistance of Blue Water Baltimore. The next stop was Homewood Friends, a Quaker Meeting in Charles Village, located near the Johns Hopkins campus that has installed solar panels that fully power the building during the summer months and help reduce their reliance on fossil fuel based energy throughout the year.

Blue Water Baltimore's Ashley Traut and Jessie Hillman discuss the rain garden they guided to implementation at Chizuk Amuno. Photo Credit: Kelsey Brooks.

The final tour stop took us to Mr. Trash Wheel, which sits near Pier 6 of Baltimore City's Inner Harbor at the bottom of the Jones Falls Watershed. Mr. Trash Wheel is an "end-of-pipe" effort to collect trash such as polystyrene containers, cigarette butts, bottles, and plastic bags that have washed down the watershed before they enter the Chesapeake Bay. According to the Waterfront Partnership of Baltimore, which owns and operates Mr. Trash Wheel, 721.75 tons of garbage have been collected since 2014. While Mr. Trash Wheel is not associated with any of the One Water Partnership congregations, it strongly illustrates the need for the upstream work these congregations are doing.

While still in process, the One Water Partnership has seen substantial success with the participating congregations. Bonnie Sorak, IPC's Outreach Coordinator says, "The goal is for people of faith within a watershed to embrace the idea put forth by Wendell Berry of 'Do unto those downstream as you would have those upstream do unto you.' These congregations are taking real actions to improve their communities now and for generations to come." IPC is working towards replicating this model and creating similar One Water Partnerships throughout the state starting in Frederick County, Harford County, and the City of Gaithersburg. They are currently looking for interested congregations, funding opportunities, and technical partners in those regions and beyond. More information about the One Water Partnership can be found at http://www.interfaithchesapeake.org/one_water_partnership.

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Headwaters is a publication providing information and resources for Extension and watershed protection professionals. It is a joint production of the University of Maryland Extension and Maryland Sea Grant Program. If you have any comments, questions, or ideas for Headwaters, please contact the Editor: Eric Buehl
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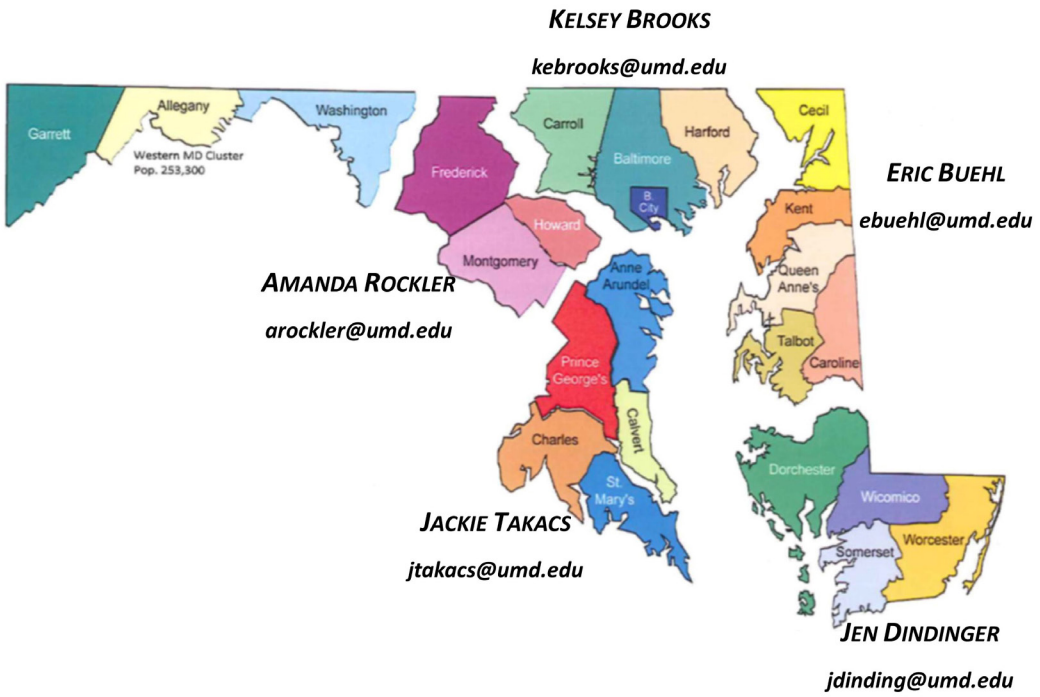
Who's *Your* Watershed Specialist?



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