

## Butler County Stream Team

### Nov News - 2017

Next Sampling Day - Nov 11



If you cannot sample, contact Teresa at [513-706-8991](tel:513-706-8991) or Lynn at [513-615-2538](tel:513-615-2538)

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### Our Last Sampling Date of 2017

Please note that this is the last month for 2017; therefore, there will be no bottles at the cooler; bottles will be passed out for the 2018 season at the breakfast. The breakfast / training will be held on Saturday, Feb 10 at 9 am at the Stormwater District, within the Butler County Engineers Office.

### 2018 Sampling....?

We hope that you will still be a part of Stream Team in 2018. Please let me know if you are planning to sample in 2018. Also, let me know if there are any concerns about safety or other issues with any of your sampling sites. The best way to reach me is [by email](mailto:by_email) as I'm never in one place for long.

Thanks, Lynn

### Do you know anyone in Wayne Township?

We are looking for a a sampler for the headwaters of Elk Creek. St Rt 503 and Mill Road is the nearest intersection. If you know of anyone, [please contact Lynn](#).

### Well owners -- Is your water safe to drink?

By Mike Ekberg, Manager for Water Resources Monitoring and Analysis

<http://mailchi.mp/176dcff507b6/well-owners-is-your-water-safe-to-drink?e=6c4b7ca587>

### How much rainfall can MCD dams and levees handle?

Greatest reasonably expected storm vs. largest scientifically possible storm

By Kurt Rinehart, MCD Chief Engineer

With the heavy rains of recent hurricanes, especially Hurricane Harvey's 50 inches, people are wondering how much precipitation can the MCD flood protection system handle? The system is designed for the greatest reasonably expected storm but not the largest scientifically possible storm. In other words, the system is designed to handle more rain than the region has ever seen but not as much as meteorologists and scientists predict could occur in a worst-case scenario.

### What the flood protection system is designed to handle

MCD's integrated system of five dry dams, 55 miles of levee and acres of preserved floodplain is designed to withstand a storm the size of the 1913 flood plus another 40 percent. Eight to 11 inches of rain fell over the 4,000-square-mile watershed in three days in March of 1913. So the flood protection system is designed to handle about 14 inches of rainfall across the watershed over a three-day period.



The two largest high-water events since the 1913 flood were in 1959 and 2005. In 1959, 4 to 6 inches of rain fell between January 19 and 21. In January 2005, we saw 7 to 10 inches of rain in 14 days, plus another 1.5 inches of precipitation in snowmelt from a 15-inch snowstorm in December.

In both of those events, there was still plenty of capacity in the retarding basins behind the dams. In the 1959 event, floodwaters filled 32 percent of Germantown Dam's retarding basin. That's the most any dam has ever held.

### Stream Team Sampling Dates

Nov 11

### Stream Team Training Breakfast

Sat, Feb 10

At the BCEO

### Native Plant Symposium

Saturday, November 11, 2017, 9:00 am-5:00 pm

Cincinnati Zoo & Botanical Garden, 3400 Vine St. Cincinnati, Ohio 45220.

With the renewed focus on providing better habitat for pollinators, this is just the workshop to help choose the correct plants. Learn more about using sustainable native plants instead of non-native plantings. Tickets: \$65.00. CEUs pending. Follow this link to

register: [http://cincinnati.zoo.org/horticulture/horticulture\\_events/](http://cincinnati.zoo.org/horticulture/horticulture_events/)

Topics include:

- Attracting Birds, Butterflies and Other Backyard Wildlife, 9AM-950A
- Native Plants for the Changing Landscape, John Magee, 950A-1050A
- Sprucing up some native plants: Thoughts and Possibilities, Bill Barnes, 1115A-1210P. A look at a selection of native plants that could be improved with breeding and development techniques.
- The Role of Botanical Gardens in Conservation, Brian Jorg, 110P-2P
- Establishing Pollinator Habitat in an Era of HOAs, John Magee, 2P-250P
- Making Our Landscape Great Again, Nan and Mark Plunkett, 320P-350P
- A Force for Nature: Lucy Braun, Meg Hanrahan, 350P-440P

### Webinar: Stream Restoration: Where Are We Now?

Wednesday, November 15, 2017, 1:00pm - 2:30 pm

Butler County Engineer's Office, 1921 Fairgrove Ave, Hamilton, OH 45011. The Butler County Storm Water District is hosting the 2017 webcast series produced by the Center for Watershed Protection. Stream restoration has been used for many years for various objectives, including pollutant reduction requirements for TMDL compliance. But the use of stream restoration practices to effectively achieve required nutrient and sediment reductions has been a topic of debate in the scientific community. Recent efforts by an advisory panel to the Chesapeake Bay Program reviewed the latest available science to quantify the various benefits of stream restoration and develop a methodology to document that stream restoration projects are helping them to meet their TMDL targets. In this webcast we will examine the expert panel recommendations and discuss the role of stream restoration in meeting water quality goals and also discuss the results of WERF's National Stream Restoration as a BMP Guidance. This training session is being provided **FREE** of charge. Don't miss out! Bring your lunch and take advantage of a great training opportunity and 1.5 PDH credits.

### 2017 Watershed Workshop

Thursday, November 16, 2017

The Fawcett Center at The Ohio State University

[http://www.ohiowea.org/docs/2017\\_Watershed\\_Flyer.pdf](http://www.ohiowea.org/docs/2017_Watershed_Flyer.pdf)

Based on those numbers, there nothing to worry about, you might think. Which is true. Kind of.

### **Biggest storm possible**

A study commissioned by the Ohio Department of Natural Resources in 2013 predicts in an absolute worst-case scenario storm, this region would receive 16 inches of precipitation over the entire watershed in three days. This is the most extreme scientifically possible event for our region. If that were to happen, the dams could hold the floodwaters but the levees could be overtopped and flood the cities.

### **Maintenance and reinvestment are key**

The cost-benefit ratio doesn't allow for us to build a system large enough to handle a worst-case scenario. It doesn't make financial sense to build for a storm that in all likelihood will never happen. But it is crucial that we continue to maintain our system to handle the smaller storms that could still flood our cities if we didn't have a working flood protection system.

That's why maintenance, reinvestment and preparation are key. Our dams and levees are nearly 100 years old. Fortunately, MCD has worked hard to maintain the structures over the last century.

More recently, MCD's capital improvement project, called the Dam Safety Initiative, addressed potential seepage issues in the foundations and the crests of the dams. We also repaired and replaced concrete floodwalls and revetment. More repairs and investment, however, are needed in the coming years to ensure the dams and levees continue to protect our riverfront communities.

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## **Bugs in the Rain**

It's easy to intuitively think of raindrops hitting small organisms as being equivalent to cinder blocks falling from the sky and hitting us, but that's not how it plays out.

Researchers at Georgia Tech have found that the bugs are so light, speeding water drops simply brush them aside, without imparting much force. The results appear in the Proceedings of the National Academy of Sciences. [Andrew K. Dickerson et al., "Mosquitoes survive raindrop collisions by virtue of their low mass"]



Previous studies have shown that precipitation can be a real pain for lots of winged critters. Bats expend twice as much energy flying through a storm as in clear skies. But what about bugs no bigger than the raindrops themselves?

Researchers used high-speed video to watch mosquitoes wingin' in the rain—well, through a spray of mist in the lab. They saw that when a skeeter and a water droplet meet, the insect basically hitches a ride for a bit before peeling away off unharmed.

So the bugs go with the flow and offer little resistance. And the drop slows only slightly, keeping its kinetic energy rather than blasting the bug. So for storm-trooping skeeters, resistance is not only futile. It's all wet.

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## **Water News**

A new study published in Nature has concluded that the presence of trees upstream from a community reduces the risk of diarrheal disease (a major cause of child deaths worldwide) among children and helps keep the water clean.

<https://saludmovil.com/trees-improve-sanitation-child-death-rates-down/>

### **Climate change could decrease Sun's ability to disinfect lakes**

<https://phys.org/news/2017-11-climate-decrease-sun-ability-disinfect.html>

### **Water Quality Meeting Set for Rumpke Landfill Expansion Project**

<http://www.epa.state.oh.us/News/OnlineNewsRoom/NewsReleases/TabId/6596/ArticleId/1228/language/en-US/water-quality-meeting-set-for-rumpke-landfill-expansion-project.aspx>

### **Pesticides in Stormwater**

[https://www.youtube.com/watch?time\\_continue=18&v=NhcDG8D3C7w](https://www.youtube.com/watch?time_continue=18&v=NhcDG8D3C7w)

### **Artificial sweeteners in groundwater indicate contamination from septic systems**

<https://www.sciencedaily.com/releases/2017/11/171107092825.htm>

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## **Sampling Reminders**

- Remember to sign in your samples in the lock box then place your sample in the cooler.
- Please mark the time and date on your labels of when you collected the sample. None of the sample times should be the same unless you are a time traveler
- Sign your sample into the cooler with the drop off time.
- Don't put the samples in the bag with the clean bottles
- Keep the cooler lid closed as much as possible
- Provide labels that say dry, or too low to sample, if that is the case.
- Remember the cooler locks are different from each other. See info above.
- **Duplicate samples** - when you sign them into the cooler, put the number "2" next to the sample ID.
- **Duplicate samples** - use the month that is on the label. Remember to talk to Teresa if you will be out of town that month and she can switch dates for you.

Butler County Stream Team Monthly Newsletter

[Unsubscribe](#) from this list.

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