

Conservation Connection

Spring 2024

The "New" Us

Kelly Crout, District Director

It's our birthday on May 25, and as we turn 82, we now have a new look (see new logo below). It's been a long process this past year, and if truthful, it's actually been about eight years in the making. So, to finally have an official logo, style guide, and future templates is exciting. While this may not seem too important, it is when you are trying to stand out amongst other organizations, all the while trying to have a cohesive look so everyone can identify your programs and events. It was a challenge, and ultimately, not everyone will like our "new look." But that's okay; we knew going into this process that not everyone would agree. However, in the end, we have a product that is professional and unique to us.

While the colors of our new logo are not typical colors one may think of for an agency that works with soil and water (that was probably our biggest challenge), we wanted to stand out, to not be just another agency with the green, blue, and brown color scheme. We did an initial assessment, asking all staff and board members to select adjectives that describe how we view or want Butler SWCD to be viewed. In those ten responses, almost everyone selected the same adjectives: Collaborative, Friendly, Trustworthy, Knowledgeable, and Professional. KR Creative, the marketing and branding company hired, then incorporated colors and fonts that convey those adjectives. Hence, how we ended up with yellow and purple in our brand.

As for the logo itself, well that was a process. We realized that trying to come up with a single icon that represents all of Butler County is hard—different parts of the county are associated with different landmarks and buildings. So, we kept the one thing that plays a major role in everything, the Great Miami River. We purposely left out the specific agriculture and urban distinctions that were in our old logo, deciding instead to incorporate the general topography of Butler County.

Ultimately, when we look at our logo, we interpret it how we want. But we also know that others may see something else or feel something else, and that's okay. Because we serve all of Butler County. Not one group, not one township, not one demographic—everyone. So, in the end we feel this is our logo, which represents us, and most importantly you.

Over the next months, we will be incorporating our new logo, colors, and templates. We are excited to showcase the "new" us and hope you will join in our excitement, after all, it's been 82 years!





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www.ButlerSWCD.org

ButlerSWCD@ButlerCountyOhio.org

#ButlerSWCD

Bat Conservation

Brady Smith, Rural Specialist Bat Workshop

Recently, Butler SWCD and Warren SWCD partnered together to host a bat conservation workshop. Bat populations have been an area of concern lately due to their declining population as a result of various pests, diseases, and other environmental factors. A major area of concern in Butler County is habitat loss as urban expansion rapidly continues. The goal of the workshop was to educate landowners and build bat boxes.

The workshop was a huge success, with nearly 50 people in attendance and a willing volunteer force that helped assemble 12 bat nursery boxes. Bat nurseries are important because they are different than traditional bat boxes in the sense that they give mother bats a place to safely raise their young. Butler SWCD used bat box plans approved by Bat Conservation International (BCI). Their box plans are based on years of research and provide clear instructions on everything down to what exterior paint color you should use based on your local climate.



Left: Jon Costanzo owner of Quail Ridge Conservation Area in Camden with donated bat box. Right: Bat box donated to Bull's Run Nature Sanctuary and Arboretum in Middletown.

Bat Conservation

Growing concern for bats comes from widespread habitat loss, climate change, wind energy, and a disease known as White Nose Syndrome. Each community could be in danger from one or more of these threats. In rural areas the loss of historic barns and increasing wind farms could be to blame, or in urbanizing areas habitat loss could be the culprit. Climate change is causing extreme weather events where bats could perish from heat waves or severe storms. White Nose Syndrome, first discovered in New York state in 2007, is estimated to have killed 90% of all tricolored, little brown, and northern long eared bats.

At a global level it is important to embrace conservation practices and protect critical habitats. It is also important to fund bat research to determine causes and treatment of diseases like White Nose Syndrome.

What Can I Do?

All of this may be concerning, but it is important to realize you can help! One person can make a difference in bat populations by doing easy, cost-effective things on their property like:

- 1. Become a bat friendly gardener by planting native species, trimming trees during non-critical seasons, and eliminating pesticide usage.
- 2. Install bat boxes & bat nurseries.
- 3. Safely exclude bats from residences after maternity season has ended.
- 4. Do not disturb critical bat habitats and nesting areas.
- 5. Report injured bats or bats who may be exhibiting unusual behavior.
- 6. Attend a bat workshop put on by your local SWCD!

Bat Facts

A favorite part of the workshop were the many interesting bits of information people learned about bats, for instance:

- Bats are the only flying mammals. Not to be confused with gliding mammals, like the 'flying' squirrel.
- Bats are beneficial animals, eating up to 1,000 insects in one hour. Whereas some bats eat nectar. No need to worry about bats being predatory towards humans. In fact only one species of bats drink blood, typically from livestock (only found in South America).
- Bats plant trees! That's right, bats can distribute seeds through their feces, known as guano.
- Bats are partially responsible for tequila. The Mexican long tongue bat pollinates the Agave plant.
- Natural pest control. It is estimated that bats provide 3.7 billion dollars in pest control savings to American Farmers annually.
- Ohio is home to 11 species of bat.
- Streams and rivers serve as bat highways.
- Baby bats are called pups. A mother bat can only have one at a time!

What about the bat nurseries?

Thanks to a Wildlife Education Grant provided by the Ohio Department of Natural Resources Division of Wildlife, Butler SWCD was able to receive \$500 towards the purchase of supplies for bat house construction. The original plan was to build 8 bat boxes, however, we ended having enough funds to purchase supplies to build 12 bat boxes! Overall, this project exceeded our goal in many ways; we doubled the number of attendees, built 30% more boxes, and were able to do more for bats in Southwest Ohio than we imagined. Currently, we are planning to install boxes at Hueston Woods State Park, Izaak Walton League of Hamilton, Liberty Township Parks, Bull's Run Nature Sanctuary and Arboretum, Ruder Preserve, and Quail Ridge Conservation Area.

Spring Wildflowers in Ohio

Dakotah Zimmer, Natural Resource Tech

The birds are singing, the bugs are buzzing, and the plants are growing; it's finally time to welcome spring back! Here at Butler SWCD, we are celebrating the return of spring by highlighting some of Ohio's most common spring wildflowers. Spring ephemeral wildflowers take advantage of the full sunlight available on the forest floor before trees and other plants leaf out for the season. This allows wildflowers to grow and develop with less risk of competition, and they provide an important food source for many early spring pollinators.

The three species described here may be found on the forest floor of local natural areas, from mid-March to May. iNaturalist is a great resource to locate these species in a natural area near you. Always remember to stay on marked trails (even if you really want that photo op) and practice Leave No Trace to keep our local natural areas beautiful for everyone!



Spring Beauty (Claytonia virginica).

The spring beauty (*Claytonia virginica*) is one of the most common and identifiable spring wildflowers in Ohio. Spring beauties present a simple, delicate flower with 5 white/pink striped petals. Different mutations of spring beauties can have a white or pink base color, but they will always have pink stripes. These wildflowers grow from underground corms (root-like structures) and can form a large mat of flowers on rich forest floors. Be on the lookout for these small beauties poking through leaf litter on a sunny forest floor or even in sunny pastures and lawns.

In early March, it is likely to see the fern-like foliage of Dutchman's breeches (*Dicentra cucullaria*) among the forest leaf litter. When Dutchman's breeches bloom, they present a row of white pantaloon-shaped flowers with yellow tips along the flower stalk (similar to seeing breeches hanging on a clothesline). These unique wildflowers are an important source of nectar for early spring bumblebees. Dutchman's breeches can be found in shady, rich woods; however, by early summer, the blooms will fade and release their seeds for next season.



Dutchman's Breeches (Dicentra cucullaria).

A longer-lived spring wildflower, Toadshade (*Trillium sessile*), can be spotted through the end of May in rich, upland woods. Toadshade can easily spread through rhizomes (underground plant stems); however, each individual Trillium can take up to 5-years to develop underground and bloom. Toadshade presents 3 green leaves (bracts) with dark mottling, and a maroon flower with 3 erect petals. *Trillium sessile* is pollinated by flies and beetles, but provides no nectar reward for these visiting pollinators.



Toadshade (Trillium sessile).

Ohio has a great diversity of plants and wildlife alike. We've only touched on just a few of the thousands of native plants Ohio has to offer. Perhaps we are biased in saying Ohio has one of the greatest spring wildflower displays, so we encourage you to enjoy this early spring weather and get outside to find out for yourself!

Water Quality in Butler County

Ashlee Widener, Water Resource Specialist

Have you ever wondered what the water quality of our streams and rivers are like in Butler County? During the months of March to November, Butler County Stream Team has volunteers collect water quality samples from 75 sites along streams and rivers around the county. Those samples are then taken to an Ohio EPA level 2 Credible Data certified lab and analyzed for several different water quality parameters, including pH, conductivity, total dissolved solids, turbidity, phosphorus, nitrates, total coliform and *E. Coli*.

That data is then used to determine the water quality of our local streams and rivers and is made available by visiting the Butler County Stream Team website and clicking on the Credible Data tab. This will then take you to a page where you can access StreamBank, a regional water quality database to view our collected data points. This water quality database also has water quality data from sites collected by other water quality groups in the region, such as the Mill Creek Alliance. Data is available up to 2021.

The data that is collected can provide insight into the water quality of local waterways in Butler County and can help support efforts to restore impaired streams and rivers. But what do the water quality parameters mean and what can they inform us of? Many of these parameters can inform us of possible pollution sources impacting the streams. Below we will go into detail about what these parameters mean.



Lab station from Butler County Stream Team .

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pH is a measure of how acidic or how alkaline a substance is. For freshwater streams and rivers, a pH from 6.5 to 8.5 is an acceptable range. If the pH is below or above this range, it could be detrimental to aquatic biological communities. Low pH can be an indication of industrial pollution, acid mine runoff, or other anthropogenic activities. High pH is not as common as low pH, but can be an indication of pollution caused by alkaline sources like soap manufacturing. The pH of a water body can also be influenced by local geology. In 2022, Butler County streams ranged from 7.35 to 8.68.

Conductivity

Conductivity is the measure of the water's capability to carry an electrical current. This is all dependent on the concentration of ions in the water that come from salts and inorganic compounds. High conductivity can result from natural geology, industrial and wastewater discharges, or from urban stormwater runoff. Conductivity for freshwater streams ranges between 50-1500 μ S/cm, with ranges between 50-500 μ S/cm being best for wildlife. In 2022, streams in Butler County ranged from 387-2790 μ S/cm. The streams in the Dicks Creek watershed are typically high for conductivity due to industrial pollution.

Total Dissolved Solids

Total dissolved solids (TDS) are the measure of the concentration of suspended particles in the water column. These particles can include calcium, nitrate, iron, and others that are dissolved in the water and can result from high minerals, metals, and salts. High levels of TDS can negatively impact aquatic communities and raise water temperatures. TDS values can be influenced from wastewater, industrial discharges, stormwater runoff, erosion, and natural geology. Values below 500 mg/L are ideal from streams. In 2022, streams in Butler County ranged from 184 to 1390 mg/L. The highest levels were found in the Dicks Creek watershed.

Turbidity

Turbidity is the measure of suspended particles in the water, such as soil particles, microbial life, and algae. High turbidity typically results in cloudy and murky water, which can increase water temperature, reduce dissolved oxygen, and reduce light penetration. This can negatively impact aquatic health and the wellbeing of aquatic organisms. Turbidity can result from stormwater runoff due to high rain events, erosion, untreated wastewater, and algal blooms. Drinking water is expected to have very little to no turbidity, while normal levels in streams range from 0.5 to 20 nephelometric turbidity units (NTU). In 2022, streams in Butler County ranged from 0.16 to 203 NTU. The highest levels were found in the Miami-Erie Canal.

Phosphorus and Nitrate

Phosphorus and nitrate are a source of nutrients to aquatic plants and play an important role in streams and rivers. However, extremely high levels of both nutrients can lead to algal blooms and depleted dissolved oxygen levels as algae dies off, leading to dead zones which can potentially be detrimental to aquatic life. High levels of nutrients can result from fertilizers used in urban or agricultural applications, wastewater, sewage, industrial discharges, and animal waste. For nitrate, typical ranges we see in Butler County are from 0.05 to 5 mg/L. Several sites in 2022 fell above 5 mg/L, and a few also fell above 10 mg/L, which could indicate excessive nutrient pollution. For phosphorus, a normal range falls between 0.01 and 0.075 mg/L. In 2022, 4 Butler County streams ranged from 0 to 6.82 mg/L, with the highest reading being taken downstream from a wastewater treatment plant on Four Mile Creek.

Total Coliform and E. Coli

Total coliforms are a group of bacteria that are generally harmless and widespread in the environment. Drinking water is typically tested for total coliforms, and if total coliforms are present, samples may be further tested for fecal coliform and *E. Coli*. Fecal coliform is a subgroup of total coliform typically found in the intestines and feces of warm-blooded animals. The presence of fecal coliform in drinking or surface water indicates fecal contamination and pathogens like *E. Coli* could be present.

Not all strains of *E. Coli* are dangerous for consumption, but any *E. Coli* contamination should be taken seriously. It is extremely important to monitor recreational streams, lakes, and rivers for *E. Coli* to take precautions when deciding to come in contact with these waterbodies. Particularly during the summer, many people like to swim, boat, kayak, and more. In Ohio, bathing waterbodies are broken down based on primary contact and secondary contact. Primary contact waters are primarily used for full body contact activities including boating, swimming, paddling, and more. Secondary contact waters are used for minimal exposure like wading.

The Ohio Department of Health and Ohio EPA help monitor *E. Coli* outbreaks and list advisories. You can access those advisories on the Ohio Department of Health via BeachGuard. Values below 401 counts/100 ml are typically recommended for primary contact recreation. You can also access *E. Coli* levels on the Butler County Stream Team website Streambank. *E. Coli* levels vary around the county depending on the season and location.



Great Miami River Watershed Keep It Clean signs can be found throughout the county.

If you're interested in learning more about the Butler County Stream Team or to view the current data collected please visit www.butlercountystreamteam.org.

Butler SWCD AmeriCorps/ ORBCorps Member

Rylee Sanker

Rylee was born in Cincinnati and spent her childhood on the west side in Delhi. She grew up fascinated by the rocks and fossils she found in her neighborhood creek, which eventually led her to pursue her bachelor's degree in Geology at **Bowling Green State** University. While in school, she traveled to Alaska, Montana, New Mexico, and Colorado, learning volcanology,



mineralogy, and structural geology. Rylee graduated from BGSU this past December, and has since found a passion for hiking, camping, and building Legos. She's very grateful for the opportunity to learn new things and serve Butler SWCD.

Butler SWCD Elections

Interested in conservation? Wanting to assist in the protection of Butler County's natural resources? Then maybe a spot on our five member SWCD Supervisors Board would be of interest.

The five member Board of Supervisors is responsible for developing and administering the conservation assistance programs offered and conducted in Butler County through the Butler Soil & Water Conservation District. They are public officials, serving without pay, responsible to the people of the district and state. Each term is a length of three years.

Ohioans entrust soil and water conservation district Supervisors with some of the state's most precious assets, our natural resources. A Supervisor's primary responsibility is to ensure that the community uses its natural resources wisely, with an eye toward the future. In order to be an effective board member, Supervisors must play an important role in how the community deals with a wide variety of resource management issues, including water quality, drainage, and soil erosion.

If you are interested in running in our next Board of Supervisors' elections this year or would like more information in regards to the position, please reach out to our office at (513) 887-3720.



Soil Your Undies Challenge

How Healthy is Your Soil? Take the Challenge to Find Out!

Whether you're a gardener, farmer, or forester, the quick and dirty way to test your soil health is by "planting" a pair of new cotton underwear in the site you're curious about. Wait at least 60 days, then dig them back up. It's a great way to test the microbial activity in your soil. The more the undies deteriorated, the healthier your soil.

What are the steps?

- 1. Plant a pair of new, 100% cotton underwear horizontally about 3 inches deep in the site you're curious about. Don't forget to mark the spot you planted!
- 2. Wait at least 60 days. This gives your soil microbes time to do their magic! Then dig the undies back up.
- 3. Share your results by sending us a photo of your "harvest" and a little information about your operation to butlerswcd@butlercountyohio.org or share on social media with @butlerswcd.

How does it work?

Your undies won't break down in just any soil. Healthy soil is full of life. It contains billions of microbes that consume the cotton. In fact, one teaspoon of healthy soil contains more microbes than there are people on the planet! These soil microbes need to eat and breath just as humans do. But what do they eat? Carbon. Carbon is a common element in all organic compounds—including cotton. So when 100% cotton underwear are buried in the soil, the microbes see it as a source of food.

In addition to chowing down on organic matter like cotton, these microbes are your best friends. The hungry microbes in your soil need food and shelter in order to survive and thrive, just like us! You can take care of your microbial friends by following these four steps:

- 1. Avoid soil disturbance wherever and whenever possible.
- 2. Maximize soil cover with living plants and residue.
- 3. Maximize biodiversity by growing a variety of plants and managed integration of livestock.
- 4. Maximize living roots in the soil throughout the year.

You can put your undies on the map, literally! Submissions will be included on our Soil Your Undies Challenge Tracker (can be found at butlerswcd.org) so you can show your neighbors just how healthy your soil is.

2024 Poster Contest Grades K-12 "May The Forest Be With You Always"



Each year, Butler SWCD works

with local artists to create posters focusing on a conservation message. This year's theme is "May The Forest Be With You Always." This theme underscores the critical interplay between soil and water conservation and the resilience of our forests. Forests play multifaceted roles in sustaining our planet, serving as sources of oxygen, carbon storage, and vibrant hubs of biodiversity.

The phrase "May The Forest Be With You Always" signifies our commitment to responsible forest stewardship, emphasizing their enduring strength and adaptability.

Butler SWCD invites all Butler County K - 12 students to participate in our annual poster contest. **Entry Deadline:** Friday, June 21, 2024

Please visit *www.butlerswcd.org/poster* for all contest rules, judging guidelines, and available resources.

Creeking in the Parks

Learn about the animals and fossils found in creeks, ponds, and wetlands around the county. All ages are welcome! Appropriate footwear required, no flip flops please.

When: Every Thursday, June 6 through August 1 10 am - 12 pm

Where: Location changes each week.

Registration is requested: This allows us to contact you if the program is canceled for any reason.

Visit **www.butlerswcd.org/kids** to register and for a complete list of locations visited throughout the summer, along with information on all kids' summertime programs. For the June programs, Butler SWCD partners with MetroParks of Butler County.





Want to Sponsor our Newsletter? Contact our office today (513) 887-3720



Butler SWCD 1802 Princeton Rd Hamilton, OH 45011 513-887-3720 ButlerSWCD@ButlerCountyOhio.org

The Butler SWCD and the NRCS prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. USDA: An Equal Opportunity Provider, Employer, and Lender.

Upcoming Events

- Board Meeting: May 14
- Butler SWCD's 82 Birthday: May 25
- Office Closed, Memorial Day: May 27
- BEST Volunteer, Bioblitz: All of May
- Creeking in the Park: June 6, 13, 20 & 27
- Board Meeting: June 11
- Office Closed, Juneteenth: June 19
- BEST Volunteer, Stream Habitat Training: June 20
- Poster Contest Entries Due: June 21
- BEST Volunteer, Stream Biology Training: June 27
- Office Closed, Independence Day: July 4
- Board Meeting: July 9
- **Creeking in the Park:** July 11, 18, & 25
- BEST Volunteer, Rain Garden Clean-Up: July 17
- Butler County Fair: July 21 27

- Butler SWCD Election: July 25 August 23
- **Creeking in the Park:** August 1
- Annual Meeting: August 13
- Board Meeting: August 13
- BEST Volunteer Rain Garden Clean-Up: August 14

To find out more information on any upcoming events, please visit *www.butlerswcd.org* or call our office at (513) 887-3720.



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