



Friends of Deckers Creek

State of the Creek Report

2022

Maya Mier-Thomas



Brian Hurley



Grace Townsend



Our Mission: To improve the natural qualities of, increase the public concern for, and promote the enjoyment of the Deckers Creek Watershed.



Infrastructure Bill

by Brian Hurley



I don't mean to be overly optimistic, but I am going to dip my toe in extra optimism. You know...to see how it feels. It feels pretty darn good...no, it's better. But first, let's take a few steps back.

Last November I received an email from an esteemed WV Delegate inviting me to a Monongalia County Coal Communities Workgroup Listening Session. I had no idea what it was about, but I decided to go anyway. At the listening session, the group spoke about using grant funding to improve our community with its long history of mining--wait, don't skip ahead just yet. Lately, I've seen a lot of road flaggers controlling traffic for road crews and internet service providers in the neighborhood. I am no expert on such matters, but this road construction timing feels peculiar to me. Morgantown (with WVU and all) seems to have reasonable high-speed internet, so I couldn't help but wonder what was going on. Earlier this year President Biden went on tour to tout the Bipartisan Infrastructure Law (BIL). When looking back at the listening session, I suspect a connection.



photo by the Washington Post

A rare perspective of the New River Gorge bridge.

That is the source of my optimism (more on over-optimism later). FODC's budget could increase exponentially as soon as 2023. I'll start by giving you a meter stick; in any given year, the FODC operating budget ranges from two to four hundred thousand dollars. Should the BIL funding make its way to the organization, the annual budget could go to millions of dollars over the next fourteen or so years. Yes, that is millions per year, each year. But, and it is a big "but", it's time for over-optimism.

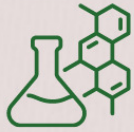
It is potentially too much money to spend. That matters because the number one rule for any grant is to spend the entire grant. This increased revenue would be like putting the entire Monongahela River in the Deckers Creek stream bed. Considering the number one rule for grants, this is cause for concern. Take a pause and reflect on the uniqueness of a non-profit organization such as FODC; the management gets nervous about massively increased income. Fear not, there is plenty to do and a quick look at my personal checking account gives even the most skeptical manager confidence in my ability to spend. When leaning in, over-optimism swiftly becomes optimism.

No fancy scientific equipment is required to see the progress FODC has made with its few-hundred-thousand-dollar a year budget, merely a glimpse at the creek suffices. Not long ago, Deckers Creek was devoid of life, now fish are in nearly every reach. Considering this was all done with the current budget, imagine what could be done with a multi-million-dollar budget. As far as I am concerned, that is just cause for plenty of optimism.



photo by WV LSC

Clarifiers are part of modern acid mine drainage treatment.



Deckers Creek Sonde

by Grace Townsend

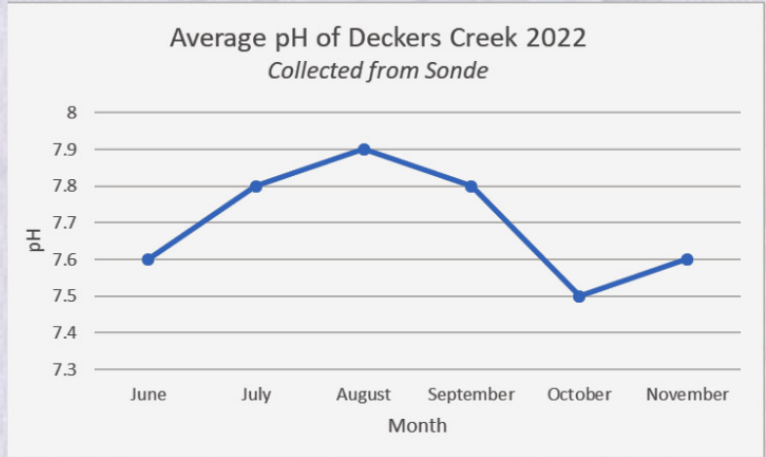


Unless you are associated with the environmental field or data collection you might be wondering, what the heck is a Sonde?

A Sonde is a long-term data logger that tracks the water's pH, temperature, turbidity (cloudiness or haziness of a liquid), conductivity (how easily electricity flows through water), and metals in the water.



Brian Hurley
2022 Sonde Retrieval



The pH results of Deckers Creek graphed above show that the average pH from June-November of 2022 ranges from 7.5-7.9, this is slightly above the neutral range. These averages are less acidic than our past averages of 6.60 recorded in 2008!

I'm a Friend of Deckers Creek!

- ___ \$10 Student
- ___ \$25 Individual
- ___ \$50 Family
- ___ \$75 Establishing
- ___ \$100 Benefactor
- ___ \$300 Clean Creek Program (CCP) Sponsor
- ___ \$500 Major Donor
- ___ \$Other A Friend is a Friend



NAME _____

ADDRESS _____

PHONE _____

E-MAIL _____

Renew membership online. Visit www.deckerscreek.org and click on "Donate"

Friends of Deckers Creek
PO Box 877
Dellslow, WV 26531

What do you love about Deckers Creek?

Other Ways to Support Us

Volunteering, in-kind donations, and being an advocate are all ways you can help build a healthier watershed and community.

Support while you shop! By using Amazon Smile and/or Kroger Community Rewards, and selecting Friends of Deckers Creek as your charity of choice - you can help clean up the creek in your day-to-day activities.



Shop exclusive FODC merchandise! Visit our online shop by going to Redbubble.com and searching "FriendsofDecker." Browse our products featuring three unique designs!

Follow us on social media to stay connected and share with your friends and family!



: Friends of Deckers Creek



: @fodc_wv



THANK YOU for Making Our Mission Possible!

Our board members, WV DEP, EPA, Dr. Thomas & Hope Covey, Joan Gorham, Dr. Darren Tanner, Marc Tanner, George Street, Susan & Don Sauter, Vicky Shears & Dan Doyle, Sarah & Walter Veselka, Rodney Rice, Carol & Ken Means, Francis Mulkeen, Michael Breiding, Stephen Valentine, Jackie Mier, Rick Landenberger and all of our other volunteers, donators, supporters, and friends of the creek!

Letter From Our New Operations Manager:

by Maya Mier-Thomas



To some, I may be a familiar presence within the Deckers Creek watershed, in person or virtually. I signed on as an AmeriCorps VISTA with FODC in early 2020 excited to find an environmental position close to family in my home state after spending time obtaining experiences in environmental and conservation sectors abroad and within the US. I was thrilled to join a team working to restore the same creek that I was strictly told not to play in when I was little.

Even before the pandemic, I've spent the past few years acutely aware of family and the most valuable resource of all (other than this blue planet we live on), time, and its limits. This brought me back from my journeys in gaining knowledge of the world outside our temperate broadleaf deciduous forests observing some differences but more importantly, and more easily looked over, our similarities. Upon returning everything was fresh once again. The sound of the spring peepers' chorus resembled life itself reinvigorated, the scent of Appalachian petrichor smelled of a nutrient-rich meal, observations of wildlife making sure no one is left behind gave smile to the common understanding of survival. And like a mask being lowered, the colors of leaves seemed to give view to the unique qualities that define individuals before energy diminishes and we are left standing raw and depleted of energy. Yet across the world, we all require the same basic needs of life; clean air, clean water, sustainable energy, suitable habitat, and rest. To thrive; kindness, communication, and remediation.

As long as I can remember I have observed our world, how we interact with the environment, and how we can have a healthier, more mutualistic relationship. After all, literally all of life under our atmosphere depends on it. When I was a small child the only way I knew how to describe my answer to the age-old question of what I wanted to do when I grew up was "to help save the world" or "make the world a better place". I was met with a lot of societal shame for not having realistic expectations. I often felt as though it was seen as an idea that was too big for a young Appalachian. After college, I was sent an article questioning why young Appalachians are leaving the state which felt like a slap in the face to many of us who have been pleading (and promised) since we were children for paying jobs that keep our families and the environment we survive within safe and healthy. But here I am, unable to give up on protecting the nature of our world.

Lastly, and arguably the ultimate deciding factor bringing me back to FODC has been the staff and community. Throughout the past few years the understanding, teamwork, and support of FODC and the communicative culture we try to nurture have undeniably been one of the best things in life the past few years (even if cranky computer systems and never having enough hands or hours in the day leaves you overwhelmed). On this note, I can't explain my gratitude and honor at being asked to return in words. But if you have some time, come volunteer with us. We love to hang out with fellow compassionate nature nerds that want to make a difference in our community!

Often, our modern-day privileges coupled with the privileges we lack make it all too easy to be distracted from acknowledging how our everyday choices affect our ecosystem, the interconnecting web of life. So to anyone that needs an action item, next time you are outside of your bubble, what do you appreciate that you can bring back to cultivate at home? (-oof, no, not invasive species please!) What travesties have you witnessed that you can prevent and remediate in your backyard through personal or community engagement?

Thank you to each and every friend of Deckers Creek.

Let's all keep doing our part to keep her *Wild and Wonderful*.

CALL FOR CITIZEN SCIENTISTS!



Looking to do more for your community and environment? FODC is Recruiting volunteers for our Citizen Science Program.

Check out deckerscreek.org/citizen-scientist to learn more and get involved!

CALL FOR GARDENERS!

Looking to do more for your community and environment? FODC is recruiting volunteer gardeners for our Outdoor Learning Park.



Check out deckerscreek.org/outdoor-learning-park or email info@deckerscreek.org to learn more and get involved!





Richard Mine Treatment Plant

by Brian Hurley



In 2020, the planned Richard Mine Treatment site was an empty, overgrown six acre plot of surprisingly flat ground situated between a scrapyards, an unnaturally steep hillside (even for West Virginia) and Deckers Creek.

Now, the land houses two massive concrete tubs, each over 20 feet deep, plumbing to redirect the Richard Mine drainage into the treatment system and a large concrete pad slated for a silo foundation.



A look at the two clarifier tubs under construction.



The Richard Mine construction site.

Once online, there will no longer be a virtually lifeless stretch between the Monongahela River and upper Deckers Creek. The Richard Mine Treatment Site is the big one!

Eventually, fish of all types will call it home and land dwellers will see the change...best described as stunning. Come 2023, readers will likely be reading about fish in lower Deckers Creek for the first time since industry began in Morgantown.



Hellbender eDNA Testing

by Maya Mier-Thomas

Please don't throw rocks on me!



FOCs' eDNA raft and pump to take samples.

For our 2023 Stream Partners grant funded by the DEP, we will be joining an investigative sampling effort of the eastern hellbender (*Cryptobranchus alleganiensis*), the largest salamander in North America, protected by the WV DNR and designated vulnerable species on the IUCN Red List!

Environmental DNA (eDNA) is a modern way of testing for the presence of species-specific cellular material shed in an environment without having to capture or observe. This allows for more accurate inferences of population scope, abundance, and status of sensitive species that could help protect them and the habitats they rely on.

Eastern hellbender population decline is due to habitat loss of highly forested low anthropogenically impacted watersheds (think; sedimentation, mining, logging, quarrying, recreational activities, pet trade capture and disease introduction, and misunderstood eradication attempts). Contrary to folklore, hellbenders are not poisonous nor do they negatively impact fish populations! As habitat specialists that are intolerant of environmental pollution and changes, they are a great indicator species. If you see one, you're standing in a healthy watershed!

Although we do not expect to find hellbender eDNA in our initial sampling of the watershed, an absence of eDNA can give us a baseline. If hellbender eDNA is found in Deckers in the future it would help prove that watershed remediation efforts are paying off!

Thank you to Friends of Cheat for training us using the National Genomics Center for Wildlife and Fish Conservation protocols!



Collecting an eDNA filter to send off for analysis.

UPCOMING EVENTS!

Appalachian Voices is back on for **February 25th at Arthurdale Heritage**. Check out our website and social media platforms for more details.



Friends of Deckers Creek
PO Box 877
Dellslow, WV 26531



Haleigh Casto reading at the first annual *Appalachian Voices* last year.

Species Highlight:

Fantail Darter

(*Etheostoma flabellare*)

- Freshwater ray-finned fish
- Found in Aarons Creek, a tributary to mainstem Deckers Creek in: 2007, 2008, 2009, 2012, 2013, 2014, 2016, 2017, and 2022
- **Habitat:** Fantail darters live in riffle areas of streams where there are cobbles and gravel. They are especially abundant in streams that contain cobbles and gravel of limestone or shale.



FODC Made National News!

by Grace Townsend



This past summer Friends of Deckers Creek made national news when our Executive Director Brian Hurley took part in an interview with Paul Ziemkiewicz, Director of the West Virginia Research Institute. The interview took place at Kanawha Creek South site #1 where Brian and Paul gave Eliza, who is a reporter from the New Yorker, a tour of the active treatment system. During the tour they discussed Paul's groundbreaking research with extracting rare earth minerals from Acid Mine Drainage (AMD). AMD is a pollutant that is formed when pyrite-rich rocks that are exposed on the surfaces of coal mines come into contact with air and water.

Thus, releasing sulfuric acid that flows through our creeks, which makes the water acidic and unlivable for aquatic life. However, through recent research we now know that AMD contains cobalt, manganese, lithium, and rare-earth elements, such as neodymium that are essential to a wide range of our high-tech products ranging from batteries to magnets for wind turbines. Within the last few years scientists have been successful in extracting these metals from AMD. If these efforts and methods improve in efficiency and effectiveness we may begin to clean up polluted waterways while securing more rare earth minerals. Check out the link to the right for the full article!

THE NEW YORKER

U.S. JOURNAL

COULD COAL WASTE BE USED TO MAKE SUSTAINABLE BATTERIES?

Acid mine drainage has long been a scourge in Appalachia. Recent research suggests that we may be able to simultaneously clean up the pollution and extract the minerals and elements needed to power green technologies.

By Eliza Griswold
August 26, 2022

On a recent afternoon, near the headwaters of Deckers Creek, in West Virginia, Paul Ziemkiewicz, the biological scientist who directs the Water Research Institute at West Virginia University, squatted by a blood-red trickle seeping from a hillside. The color, he pointed out, was the telltale sign of water contaminated by a form of coal waste called acid mine drainage, which poisons

<https://www.newyorker.com/news/us-journal/could-coal-waste-be-used-to-make-sustainable-batteries>

