Thinking Like a Watershed

Black Earth Creek Watershed Association

FALL 2024 FALL 2017

GOOD NEWS - Status of Trout Populations in Black Earth Creek

Mitchell Trow – Wisconsin DNR Fisheries Technician

Wisconsin DNR fisheries management annually performs electrofishing surveys to monitor trout populations on Black Earth Creek (BEC) at three locations: (1) Zander Park in Cross Plains, (2) South Valley Road, and (3) Park Street near Black Earth. Consistently surveying the exact same stretches of stream with the same gear helps track changes to catch rates, size structure, and body condition of trout populations over time. Brown trout are the main trout species in BEC; but BEC also has a small population of brook trout.

DNR surveys consistently find the highest brown trout catch rates at Zander Park and the lowest catch rates at Park Street. Anglers can expect to find excellent angling opportunities at Zander Park where the 2024 survey found 1,200 brown trout per mile, which is very similar to catch rates over the last 10 years. Low habitat diversity in BEC near Park Street results in low trout abundances, but with excellent size structure. This monotonous section of stream has slow flow, no overhanging tree cover, and very few bends/riffles. It is also very wide, which causes extensive aquatic plant growth that can make fishing difficult. South Valley Road, very popular among anglers, has seen a significant increase in brown trout numbers since the completion of a DNR habitat improvement project in 2023. The 2024 South Valley Road survey had a catch rate of 587 trout/mile, much higher than the previous 5-year average of 290 trout/mile, and the highest on record since this survey was established in 2014. In 2024, the largest trout caught in Black Earth Creek was 19.8” with Park Street having the largest average size of brown trout (12.7“), followed by South Valley Road (10.3”) and Zander Park (9.3”).

Overall, Black Earth Creek continues to be an outstanding cold-water resource with trout populations that have the rare combination of good size structure and high abundance.

Black Earth Creek Watershed Association

www.becwa.org

For the wise management of the land and water resources in the Black Earth Creek Watershed.

BECWA Goals

- To protect, conserve, support and advocate for the wise, long term managment of the physical, biological, environmental, cultural and historical resources that constitute the heritage and future of the watershed.
- To foster and encourage citizen and locally-based stewardship among the many members of the Watershed community.
- To provide a forum for civilized discussion of issues and problems in the Watershed.

Board of Directors

Bobbi Peckarsky - Chair
Steve Born - Past Chair
Barbara Borns - Past Chair & Past Secretary
Kate Beardsmore - Vice Chair
Michelle Harris - Secretary
Mary Devitt - Treasurer
Johnny Armstrong - Website Manager & Past Treasurer
Pam Allen, Andy Morton

Deborah Nemeth - Newsletter Design
Bobbi Peckarsky - Newsletter Editor

SAVE THE DATE

BECWA Annual Fall Picnic

Saturday, October 19, 2024
11 AM - 2 PM

Please join us for our annual BECWA Fall Picnic. It's our chance to thank you for supporting BECWA and to connect with other members and donors.

Closer to the date we will send an email invitation with location and RSVP link.

Membership

We hope you enjoy reading the BECWA newsletter. It is our pleasure to share news and information from the watershed.

If you are not already a member - please join today! To become a BECWA member go to https://www.becwa.org/join-becwa and fill out a form to mail with a check or donate online.

If you choose to send a check please mail to:

BECWA
PO Box 164
Cross Plains, WI 53528

If you are already a member, renew online at the link above. Your support means so much to us!

Lifetime Member - $100
Annual - $25

Help us continue this important work!
We appreciate your support.

BECWA would like to recognize the following donors who have supported our organization between September 2023 & August 2024

Pamela Allen - Anonymous -Barbara Borns
Steve Born - Jim and Nancy Bruins
Chester Cheung - Gary Cox - Robert Dunnagan
Dennis Franke - Sharon and Warren Gaskill
Thomas Krauskopf - Dave Lucey - Nancy McGill
Benjamin Mechelke - Rose Meinholz
Greg Munda - Henry Nehls-Lowe
Gary Olson - Bobbi Peckarsky and Steve Horn
Lesli Redmond - Bret Schultz
Steve Richter and Laura Cominetti
William Sonzogni - Town of Vermont

Thank you!

A HEALTH REPORT 2024
Black Earth Creek Watershed

EXECUTIVE SUMMARY
produced by the Black Earth Creek Watershed Association

POOR | DEGRADED | NEEDS IMPROVEMENT | HOLDING STEADY | EXCELLENT

The Black Earth Creek Watershed is a highly valued natural resource and recreational area on the eastern edge of the Driftless Region in southern Wisconsin. This watershed covers 105 square miles and includes several tributaries that flow into Black Earth Creek. The watershed includes prime farmland, villages and rural communities, highly prized trout streams, paddling routes, parks, hiking trails, and the Ice Age National Scenic Trail and Scientific Reserve.

Positive indicators

- Black Earth Creek (BEC) is a nationally recognized WDNR designated Class 1 trout stream, with natural reproduction that sustains a wild trout fishery.
- Good overall water quality, along with public land for streambank access, parks, and trails, provide recreational opportunities for watershed residents and users.

Challenges

- Black Earth Creek can warm above the optimal water temperature for Brown Trout of 62^0 F during the summer.
- Practices that infiltrate rain and snowmelt, such as "Green Infrastructure," are important for cold, clean springs flowing into watershed streams.
- Invasive New Zealand mudsnails have been found in watershed streams.
- Neonicotinoid pesticides (AKA Neonics) and per- and polyfluoroalkyl substances (PFAS), occur in watershed streams and raise concerns. Neonics may be causing declines of aquatic insects, critical to the trout food base.
- Fertilizer and manure in agricultural/urban runoff can lower dissolved oxygen in the water to harmful levels for trout and other aquatic life.

BEC summer temperatures can be too warm for trout health

Source: USGS provisional data

Public Support

- A recent survey of watershed users and residents showed they have a sense of responsibility, ownership, affection, pride, and deep-rooted connectedness associated with the Black Earth Creek watershed.
- Local/state governments and nonprofits cooperated to fund continued monitoring of Black Earth Creek by USGS (over $75K per year).

"Black Earth Creek is a quality-of-life indicator for me. A healthy creek means we're trying to do our best to be good stewards of our corner of the world."

Survey respondent

Actions

- Encourage your local policy makers to adopt policies and pursue funding that support watershed improvement projects.
- Volunteer with organizations active in the watershed and support activities that promote watershed health.
- Become more aware and learn about aquatic ecology and other aspects of the watershed.

Information presented in this report was obtained from the Wisconsin Department of Natural Resources, Dane County, and the United States Geological Survey

Black Earth Creek Watershed Association

View the full report at becw.org

Green Infrastructure Plan Motivates Collaborative Effort to Fund Long-Term Monitoring in the Black Earth Creek Watershed

Nick Bower and Nic Buer - Capital Area Regional Planning Commission

Following the 2018 flood that caused extensive damage to homes, businesses, and infrastructure in the Black Earth Creek (BEC) watershed, local organizations began collaborating to develop a Green Infrastructure (GI) plan to improve flood resilience and water quality throughout the watershed (described in Fall 2020, 2021 and 2022 BECWA newsletters: BECWA.org). The Black Earth Creek Watershed Green Infrastructure Plan was completed in 2022 with support from FEMA and the US Army Corps of Engineers (https://becw-gi-carpc.hub.arcgis.com/). Several projects have been implemented using the GI Plan as a basis of concept or in pursuit of funding. For example, in 2024, the Village of Cross Plains received a FEMA grant to restore a wetland and floodplain upstream of the County Road P crossing of Brewery Creek.

One tool to evaluate the impacts of these GI projects is through stream monitoring (Fall 2023 BECWA Newsletter: BECWA.org). In 2023, the CARPC brought together over ten local governmental and non-governmental entities (including BECWA) to secure $21,900 from the Wisconsin DNR to help support the cost of monitoring for the next 5 years (https://www.capitalarearpc.org/regional-stakeholders-come-together-to-fund-usgs-monitoring-program-in-black-earth-creek-watershed/). Data will be collected by the US Geological Survey at four monitoring stations on BEC and Brewery Creek; and new equipment at one station on BEC will be operational by the end of summer 2024. Long-term, continuous monitoring stations will provide objective water quality and quantity data crucial for making science-based management decisions to support the health and enjoyment of this valuable resource. Real-time data will be available on the USGS National Water Dashboard and USGS WaterAlert. Links to the data will be made available at BECWA.org.

Update on the status of the invasive New Zealand Mud Snails in Black Earth Creek

Kim Kuber- Wisconsin Department of Natural Resources (WDNR)

New Zealand Mud Snails (NZMS, *Potamopyrgus antipodarum*) are a widespread aquatic invasive species that can have negative effects on the other organisms living in streams they invade. First detected in Wisconsin in 2011 in Black Earth Creek (BEC) at South Valley Road (SVR), they have been documented in 13 primarily cold water trout streams in Wisconsin. In 2018, WDNR water quality staff began conducting annual surveys to monitor NZMS populations on four streams in Southern Wisconsin, including BEC at SVR. NZMS densities were highest in 2018, followed by a steep decline possibly caused by the massive 2018 flood (see graph). After slight increases in 2020 and 2021, NZMS densities have remained relatively low in 2022 and 2023. These data represent the only the SVR stream reach, but not BEC as a whole. Interestingly, densities of NZMS have been increasing over this same time period at other locations along BEC (e. g., Zander Park); and two tributaries to BEC, Garfoot and Vermont Creeks, have verified populations of NZMS. Results from the 2024 sampling at SVR (completed on July 25, 2024) will be available in spring 2025.

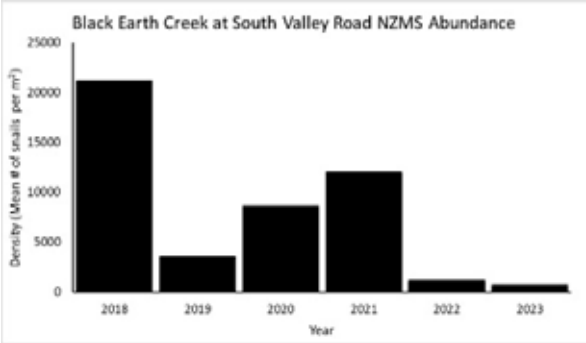

Photo credit: *Kim Kuber*

Jonah Hoeper and Emma Bailie are Water Quality and Fish Management Interns from UW-Platteville.

Wisconsin Neonic Forum

Save the date!

Neonicotinoids, or neonics, are the most widely used insecticides in Wisconsin, applied to millions of acres of agricultural and urban land each year. What benefits do they provide and what risks do they pose?

TOPICS INCLUDE:

- What neonicotinoids are and where these chemicals are used in Wisconsin
- Economic benefits of neonicotinoid use
- Risks to the environment
- Wisconsin's oversight of neonicotinoids
- Regulatory approaches from other states and countries

Registration Opens August 1st
Register at CleanWisconsin.org/neonic-forum

OCTOBER 30
8:00 am - 4:30 pm

DeLuca Forum at the UW-Madison
Institute for Discovery
330 N Orchard St, Madison, WI

BECWA is among several organizations providing support for this event. Concern over neonicotinoid pesticide impacts to ecosystems and insects, in particular, is increasing and receiving worldwide attention. Neonicotinoid pesticides have been found in recent water samples collected in streams of the Black Earth Creek Watershed at levels considered harmful to certain aquatic insects that have recently declined in abundance (Fall 2023 BECWA Newsletter at BECWA.org). These insects are important food items for trout and other aquatic organisms.

Andy Morton - BECWA Board Member

BECWA Partners with Watershed Public Libraries

Michelle Harris – BECWA Board Member

BECWA has a long history of initiating educational activities as part of its goal to "foster and encourage citizen and locally based stewardship among the many members of the watershed community". In 2024 BECWA is teaming up with the Black Earth Library, Mazomanie Free Library, and Rosemary Garfoot Public Library in Cross Plains to offer a series of family-oriented events to increase awareness and understanding of the Black Earth Creek and Watershed.

On April 26 the Black Earth Library invited families to celebrate Earth Day by decorating flowers to show how they feel about the Black Earth Creek and being outdoors, go on a scavenger hunt to find critters from the Watershed, decorate fish, and recycle paper rolls to make birdfeeders and binoculars.

On August 26, BECWA, Black Earth Library Youth Services Librarian Kirsten Rogers and Mazomanie Free Library Director Brian Cole hosted a "Wading in Black Earth Creek" activity at Salmo Pond. WDNR stream biologists Camille Bruhn and Kim Kuber and UW-Madison Biocore Program Lab Manager Seth McGee led an engaging workshop for Wisconsin Heights families. Participants experienced the creek firsthand as they waded to collect and examine macroinvertebrates and fish and learned how to identify the invasive New Zealand Mud Snail. Participants also saw a demo of how WDNR uses electroshocking to examine fish diversity and populations. Planning has begun in collaboration with Rosemary Garfoot Library for an October creek wading activity for families in Cross Plains.

BECWA Board Updates

We welcomed two new members to the BECWA Board of Directors in 2024

Michelle Harris

"My husband Andy and I have lived in or near Black Earth since 1994; and our children Olivia and Jack are graduates of the Wisconsin Heights School District (WHSD). Our family has spent many happy hours exploring Black Earth Creek, most recently via kayak on many beautiful paddles from Black Earth to Mazomanie. I earned my PhD from the UW-Madison Zoology Department in 1999, focusing on vertebrate functional morphology. I was privileged to teach highly motivated honors Biocore students at UW-Madison for the next 23 years. During that time I spent 18 years as the advisor to the Biocore Outreach Ambassador Program, begun in 2004 by selfless Biocore students interested in working with K12 teachers and students to enhance science education. The Ambassadors have partnered with the WHSD since 2007 to offer a one-week Summer Science Camp each June; and Black Earth Creek has been a favorite outdoor learning lab for many campers conducting research under the guidance of my wonderful Biocore teaching partner Seth McGee. I joined BECWA after I retired from UW-Madison in July 2022, and I'm delighted to continue learning about our very special watershed as I work with my dedicated BECWA colleagues."

Pam Allen

"I am excited to be a part of the Black Earth Creek Watershed Association organization and Board of Directors. There is so much to do! The watershed's agricultural uses and resident demographics are changing rapidly creating new challenges we need to work together and address. My farm is located west of Cross Plains and surrounds the confluence of the Black Earth Creek and Garfoot Creek near Salmo Pond. I raise row crops, hay and Angus beef cattle. The opportunity to farm in the valley came as a teenager, and I jumped at the chance to work some of the finest soil in the state. I quickly realized that opportunity also came with being a responsible steward and adopting practices to preserve and protect the creeks running through the property. I hold a BS in Agricultural Education from UW-Madison and MS from UW-River Falls. Since 1989, I have taught Agricultural Sciences and been FFA Advisor at Mt. Horeb High School. Over the years I have taught courses covering subjects in Veterinary Science, Agronomy, Horticulture, Livestock Production, Natural Resources, Biotechnology, Agricultural Mechanics, and Welding. Our FFA activities include an annual wilderness camping and fishing trip to northwestern Ontario our students really look forward to and enjoy. We also have an active partnership with the DNR and students raise trout in our school's Aquaculture Lab. Public policy is a personal interest. I recently chaired a DPI writing committee to revamp the Wisconsin Agricultural Education State Standards, which included an overhaul of the Natural Resources pathway and will be used to guide instruction and measure student proficiency. In the1990's, I served as WI USDA Farm Service Agency State Chair.. I am happy to be a part of the BECWA family and look forward to helping continue the good work of the organization!"

Black Earth Creek
Watershed
Association

PO Box 164
Cross Plains, WI 53528

Debra Weitzel retires from the BECWA Board of Directors

Barbara Borns – BECWA Board of Directors

Debra Weitzel joined the BECWA Board of Directors in Spring 2014. Deb was a science teacher at the Middleton/Cross Plains high school for 34 years, where she served as a member of the Wisconsin Environmental Education Board representing environmental educators. She routinely brought her environmental studies students to Black Earth Creek to monitor water quality and observe trout population surveys conducted by the WDNR biologists. After retiring from teaching in 2011, she was far from retired from being a valuable contributor to Western Dane County environmental organizations. In addition to her 10 years on the BECWA board, Deb was also (and continues to be) a key member of the Friends of Pheasant Branch Conservancy. She has also hosted numerous Wisconsin Master Naturalist courses at Black Earth Creek, Pope Farm Park and Pheasant Branch. Deb was an active and involved member of BECWA taking a lead role in many of our educational activities. Her keen knowledge of the watershed and her ability to engage students of all ages has been a real asset to BECWA. We know she will continue to be an advocate for the environment—no matter where her future finds her. BECWA thanks Deb for her years of valuable contributions to making our corner of Dane County (and the world) a better place.

Thank you!