

Thinking Like a Watershed

Black Earth Creek Watershed Association

Spring 2016

Join BEC Habitat Snapshot Day!

Matt Krueger, Trout Unlimited

On Saturday June 4, BECWA, Dane County, the River Alliance of Wisconsin, Southern Wisconsin Trout Unlimited, and the Wisconsin DNR invite volunteers to participate in Black Earth Creek Habitat Snapshot Day—a single-day event whose objective will be to gather data on the stream condition of Black Earth that will be compiled and analyzed to prioritize future stream work projects, to the benefit of water quality and the trout population.

BECWA held a meeting in July 2015 that focused on the depressed trout population of Black Earth Creek. At that meeting, attendees learned that while there's no single “smoking gun” that definitively explains the low trout numbers, external stressors—such as uncharacteristically prolonged and cold winters in consecutive years—affected the survival rate of young fish, based on data gathered by Wisconsin DNR's Fisheries Management Bureau. Other stressors that were discussed and have likely impacted the trout population, but are harder to measure, are polluted runoff from encroaching urban development and agriculture.

It was also recognized that the in-stream condition of BEC itself in some areas (such as eroding banks) might be contributing to its degradation. At a follow-up meeting, concerned supporters of BEC hatched the idea of a Habitat Snapshot Day, as it's been years since a holistic assessment of stream habitat condition has occurred, and it would be a relatively easy and effective way for citizens to help characterize (or “snapshot”) the current conditions of the creek.

On June 4 volunteers will gather for a brief morning training, be paired into two-person teams, provided the necessary equipment, and will venture off to collect data on a ½ mile stream “beat” (on Black Earth, Vermont, Garfoot, and/or Brewery creeks) assigned to them. DNR Fisheries staff will be on hand to provide necessary training (no prior experience is necessary) and support. At the end of the event, volunteers will turn in their data to DNR staff, and join a volunteer celebration. The event is free and open to adults who have pre-registered (required!). Volunteers who wish to continue monitoring segments of BEC independently (in partnership with DNR) beyond the event will have the opportunity to do so throughout the remainder of the summer. DNR staff has mapped ½ mile segments of the entire BEC watershed, so there's plenty of a stream to monitor, for those interested.



Event details are still in development, but will be posted shortly at www.wisconsinrivers.org/home/events - the River Alliance's website. This is also the site where interested volunteers should register. This event will be a fun and educational way for lovers of BEC to engage in some “citizen science” to help the creek they love!



**Black Earth Creek
Watershed
Association**

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 management 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

- Greg Hyer, *President*
Bobbi Peckarsky, *Vice-President*
Barbara Borns, *Secretary*
David Lucey, *Treasurer*
Richard Anderson - Steve Born - Dan Buckland
Briana Burns - Kathy Haig - Christopher Long -
Debra Weitzel

- Deb Nemeth - *Newsletter Design*
Barbara Borns - *Newsletter Editor*
Briana Burns - *Proofreader*

Become a BECWA member or renew your membership

Send your check with name, address and email to:
David Lucey, 7952 County Highway K, Cross Plains, WI 53528

Lifetime Member - \$100 Business - \$50
Watershed Patron - \$35 Household - \$25 Basic - \$15

BECWA QUIZ

Note: Quiz should be taken after reading the update on biomonitoring of the BEC restoration. See if you were paying attention, and/or if I did a good enough job writing the article! (page 5)

Which of the following statement(s) is (are) true about the condition of the section of Black Earth Creek (BEC) in the Village of Cross Plains that was restored to meanders?

- The invertebrates indicate that the re-meandered section of stream has not completely recovered to the quality of a reference site with natural meanders.
- Monitoring methods used by volunteers throughout the State of Wisconsin do not require knowledge of invertebrate taxonomy, but are inadequate to detect recovery of the restored section of BEC.
- Extensive knowledge of invertebrate taxonomy and time intensive laboratory analyses are not necessary to continue biomonitoring the recovery of BEC.
- Continued biomonitoring of the recovery of BEC can be done entirely in the field using the Family Biotic Index as long as there is one person with knowledge of invertebrate families.
- All of the above.

Answer on page 7.

Events in the Watershed

APRIL 23 - EARTH DAY - 9:00 AM
BEC Spring Clean-up Meet at Salmo Pond

MAY 7 - TROUT DAYS in Cross Plains
BUGS BY THE CREEK 1:00 PM
with Dr. Bobbi Peckarsky

Meet at the Creek back of CP Hardware Store

JUNE 4 - BEC HABITAT SNAPSHOT DAY
for details: www.wisconsinrivers.org/home/events

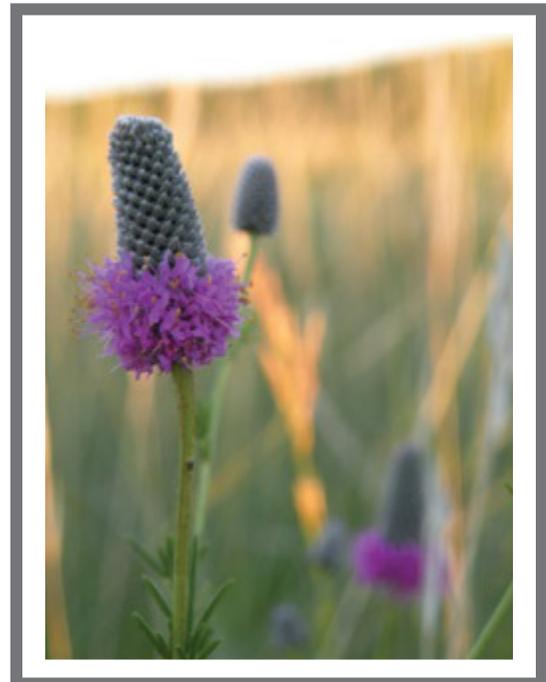


Photo by Katie Weber

Childhood Memories from Black Earth Creek

Steve Schmitt reflects on his boyhood near the creek

I have been in the Black Earth area for almost 70 years. I have really vivid and fond memories of growing up around the Black Earth Creek. My childhood days were spent with my buddies playing sandlot baseball or enjoying the time we would spend cooling off in the Black Earth Creek.

Unlike John Donaldson's story, which I truly enjoyed and respected, my time was spent on the east side of Black Earth, behind the old Black Earth School and beyond. Many of you may not know this but there was a large millpond behind Center Street. There was a dam that connected it to the creek. At its deepest point the millpond was about 3-4 feet. In the winter months when it would freeze over, we would skate & skate. One of our favorite hang outs was under the grey bridge on Highway 14. There was a ledge under the bridge that we would spend hours and hours just hanging out and fishing. We would catch Bluegills, Sunfish and Bullheads, but what we were really after was that trophy, the Trout! We would spend all of our time trying to catch it. All of my years as a kid, I never caught a trout out of the Black Earth Creek – Tough Luck and/or bad fishing tips!

Our all-time favorite spots, was up by the black bridge by Park Street and/or Kahl Road. That is where we would spend many, many hours swimming. We were able to jump, and even dive off of the railroad bridge, it was that deep! Now that area is all filled in, but it was such a fun time for us back then. The trains would come and we would lay our heads on the track to try and hear how far it was out. We would put pennies on the track and then dive under the bridge when the train would pass. There was a roaring noise under the bridge when the train would go over; it was a cheap thrill for us!

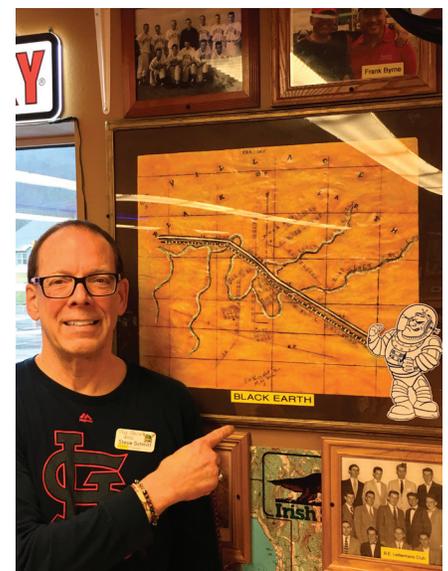
The big thrill though, was swimming in the creek. It was such a big deal to us, it was always a spur of the moment thing and of course, we never brought trunks along. Nobody bothered us; we just had a great time! I remember one time (before I knew how to swim), and there was a drop off about five feet from shore. I started to go in; somehow I caught my balance and came back up. It was shortly after that I learned how to swim, (it was either sink or swim)! While we were swimming it was common to see cow pies floating up stream. We never gave it a second thought, to us, it was just natural. We always made sure to check each other for blood suckers when we were done swimming. Many times they would be stuck to our skin somewhere and if they were deep enough, we would have to take a match and burn them off.

Another hang out for us was just behind the school by the railroad tracks, there was a little pond that had some natural springs, and it flowed into the creek. I have great memories of catching frogs and tadpoles along with building little forts and huts with my buddies along the trails.

I have so many great memories of the Black Earth Creek. The amazing days we spent swimming, fishing and more will not be forgotten. My childhood would not have been the same without it!

P.S. – I was 12 years old in 1959,
the same age as the boys in Sandlot & Stand By Me!

Steve Schmitt



A New Look at Festge Park

Dave Lucey, BECWA Board Member

A traveler through the watershed, west of Cross Plains on Hwy 14, has certainly noticed the changes happening at Festge Park. Recently, along the highway, at the intersection with Scherbel Road, a large area of invasive trees have been removed, revealing a stand of red pine trees reaching 50-60 feet high. The origin of the trees is unclear, but they are thought to have been planted in the sixties by Dane County Parks, shortly after they acquired the land. Approximately 300 pines were planted along the edge of a three acre field, providing

harmed by planned prairie fires, the pines also may be subject to pine bark beetles that have ravaged pines in the area. High winds may snap off the trees, now that the barrier of invasives in front will no longer offer a level of protection. Removal of the pines will also afford a more stunning view from the hilltop of the valley below and Blue Mounds in the distance. Although the trees were planted too close, some have reached a diameter that may have some commercial value. An attempt is being made to solicit bids to harvest the trees, providing some money



an inviting look at what was then, a new county park. The pines have matured, and the rest of the field had grown up with a combination of buckthorn, box elder, honeysuckle, cottonwood, and other undesirable species. In the last few months, the area in front of the pines, and the sloping hillside behind the pines, have been cleared of these invasives, in preparation for a planting of prairie flowers and grasses.

The question has come up – what to do with the pines? Although pine trees are associated with park settings, these pines do not fit in with current plans to restore the park to a prairie/savanna setting. In addition to being

to Dane County Parks to carry on restoration activities. With spring weather approaching, work at the park will shift from chain-sawing and burning (over sixty brush piles were burned once there was snow cover) to weed control and seed sowing. Current plans are to burn all the cleared areas, totaling almost 40 acres, including 10 acres cleared in 2015. Prairie flowers favoring pollinators, such as butterflies and bees, will be planted along Hwy 14 and at the top of the hill along Scherbel Road, in the ball diamond area. In the next few years, these areas will present a visual delight to those passing by, and a bonanza for our pollinator friends.

Update on Biomonitoring Invertebrates in the Black Earth Creek Re-Meander

Bobbi Peckarsky, BECWA Board Member

In October 2015, 12 graduate students enrolled in an Insect Ecology class at UW continued the invertebrate biomonitoring project initiated in fall 2013 after a channelized section of Black Earth Creek in the Village of Cross Plains was restored to meanders (Figure 1). In 2013 and 2014 UW students completed comprehensive analyses showing that the diversity and species composition of invertebrates in the restored site were comparable to those of a naturally meandering reference site downstream. However, the density and quality of invertebrates had not completely recovered, although they ranked higher than a section of upstream that remains channelized. Therefore, continued monitoring is required to follow the recovery of the stream invertebrates until communities reach the benchmark of the reference site.



Figure 1

This year we decided to test whether methods that could be completed entirely in the field would be sufficient to detect recovery of the restored section of Black Earth Creek. With the help of Claudio Gratton (Professor) and Margot Cumming (undergraduate assistant), I designed a project to compare Hilsenhoff's Family Biotic Index (FBI), which requires knowledge of the families of invertebrates, to two generations of biotic indices used by Water Action Volunteer indices (WAV I and WAV II) to monitor streams throughout Wisconsin. Students collected invertebrate samples in the restored, reference, and a site that remains channelized, and calculated all three indices on the same samples.

Those efforts showed that the FBI provided the greatest resolution enabling finer distinction among the conditions of the sites. Furthermore, conclusions derived from interpretation of the two WAV indices were not consistent, nor were they comparable to those of the FBI (Figure 2).

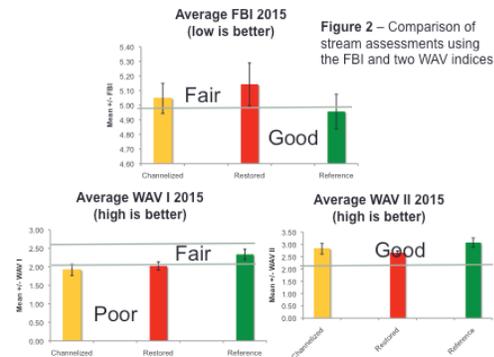


Figure 2

WAV I tended to undervalue and WAV II overvalued sites compared to the FBI. For example, according to the FBI, the restored site and channelized sites were rated “fair” while the reference site was rated “good”. The WAV I rated restored and channelized sites “poor” and the reference site “fair”, while WAV II rated all three sites “good”. The FBI also enabled us to estimate diversity (number of families per site). As in 2013 and 2014, the diversity was similar among the channelized, restored and reference sites, but the number of high quality families (EPT = mayflies, stoneflies, caddisflies) were greater in the restored and reference sites than in the channelized site (Figure 3).

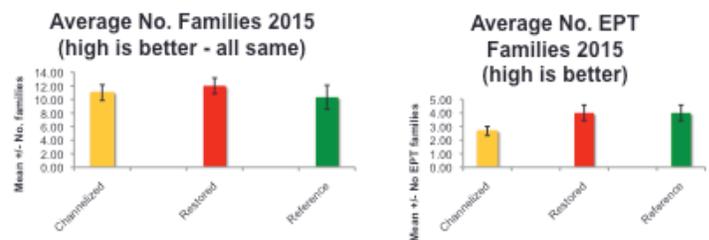


Figure 3 – Number of families (diversity) similar among all three sites. However, the channelized site had fewer desirable families (E, P, T = Mayflies, stoneflies and caddisflies)

We conclude from this study that the simplest methods (WAV indices), which do not require knowledge of insect taxonomy, are inadequate for following the recovery of the restored section of BEC. However, implementing the FBI, which does require at least one person with knowledge of invertebrate families but can be completed entirely in the field, does provide the resolution needed to continue biomonitoring the restoration until the benchmark condition is achieved.

After Leak Repairs, Renovated Lake Marion Ready for Refilling, Restocking This Year

Christopher Long, BECWA Board Member

With help from relatively mild temperatures, the Village of Mazomanie repaired leaks in Lake Marion over the winter and was preparing to refill the renovated former millpond and restock it with fish and aquatic plants this spring and summer.

Testing by Cason & Associates, the Village's technical consultant for the project, found major leakage in the 50-year-old clay liner, bordering the area excavated earlier to add greater depth for fish habitat. Boehnen Excavating of Cross Plains removed a thick layer of sediment and applied additional clay to the area. To aid in additional testing, workers used excavated material to build a low berm across the width of the lake, creating a temporary partition to allow separate testing of the north and south parts of the lake.

Bulldozers and trucks also cleared away the remains of last summer's abundant weed growth from the lakebed, moving the decaying vegetation, mixed with several inches of snow and ice, to a dry area south of the main lake where it was left to melt and decompose.

During early March, as spring-like conditions arrived, the Village proceeded with test filling the lake on the south side of the test berm, with plans to continue to the next stages of refilling if no additional substantial leakage occurred. At normal lake level, the test berm will be submerged several feet below the water surface.

Lake Marion was constructed in 1855 as the water supply for the Village regional grain mill. The renovation project began in summer 2014 with construction of a new high-capacity well to replace Black Earth Creek and a dilapidated diversion dam as the lake's water supply. The Village wants to minimize leakage from the lake in order to reduce the need to pump from the aquifer that also serves as the Village's public water supply.

To create a family recreational fishery, the Village will stock the 16-acre pond with largemouth bass, panfish, yellow perch, channel catfish, and minnows as forage. Aquatic plants will be reintroduced in shallow-water areas where gravel spawning beds and wood habitat structures have been placed as part of the project.

A Dane County Partners for Recreation and Conservation (PARC) grant helped fund construction of the new well. The renovation project implements the lake management plan developed with assistance from the Wisconsin Department of Natural Resources and in part by a WDNR lake grant.

Christopher Long is principal of CCL Consulting, LLC and a project consultant to the Village of Mazomanie.



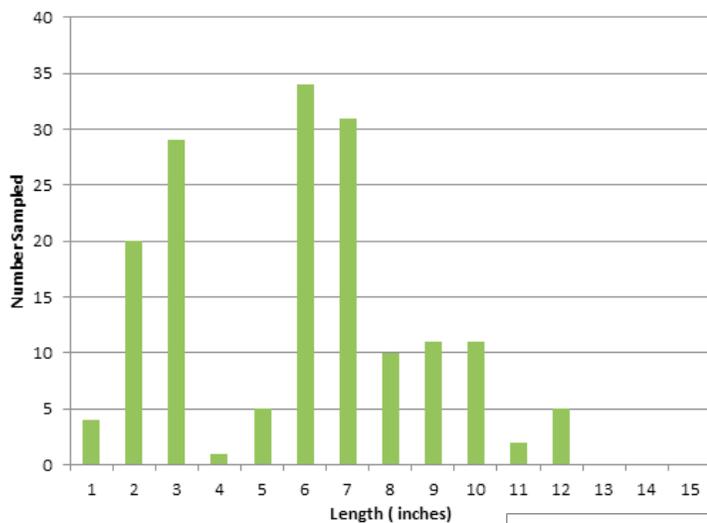
Fisheries Update

Kurt Welke, Wisconsin Department of Natural Resources

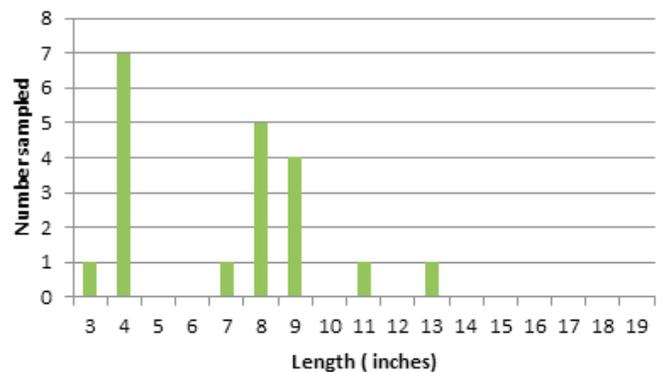
The Wis-DNR Fisheries biologists are fully engaged now that spring has sprung prematurely. What I can report is that the 2015 TREND sampling we did in Cross Plains - at Park street, below South Valley Road and through Zander park showed some modest increases in catch rates. Most noticeably there was an increase in smaller size fish in upstream reaches. Lower reach stations had low overall catches. We have to remember that all stream reaches are not equal in terms of habitat and what the stream will support. It is natural that lower reaches will not harbor the numerous juvenile fish we see in the Cross Plains portion of Black Earth Creek. The regional decline we have been watching appears to have slowed. Trout numbers are still reduced compared to the higher than average abundances we witnessed in the mid-2000's. The number sampled falls within known bounds, and compared to other trout waters (both in Dane county and regionally), BEC is in the upper percentiles for numbers of fish of any given size.

We will continue to monitor so that realistic expectations- based on observed and quantified values, can be set. Fish are but 1 metric of a stream's condition and it's important to frame any given year within the spectrum of years on which we have information. BEC provides a full range of opportunities.

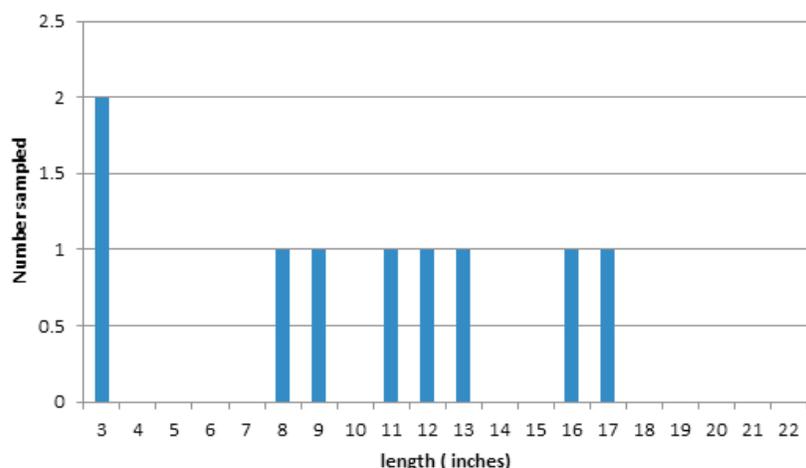
BEC at Jovina Street 2015



BEC at South Valley Road 2015



BEC at Park Street 2015





Black Earth Creek Watershed Association

c/o Greg Hyer
4296 County P
Cross Plains, Wi 53528

Good News from the BEC Neighborhood!

Dane County recently awarded the Village of Mazomanie a new PARC grant to help fund construction planned this summer of a half-mile bike-ped trail that will safely connect Lake Marion and the county's Highway KP on-road bike trail with the downtown business district. It will also provide easy access to Wolf Run Trail and other existing and future outdoor recreational facilities located in the Village and on adjacent county and state public lands.

The Village is also moving ahead to put its newly adopted Mazo 2020 Economic Positioning Strategy and "Live Outside" community branding program into action. The plan, developed with assistance from Vandewalle & Associates and CCL Consulting, presents a long-term vision for Village development and projects that will make the community more attractive to residents, job-seekers, families, visitors, and businesses. The plan is available at the Village website at www.villageofmazomanie.com.

In addition to the PARC grant to Mazomanie, the Village of Cross Plains was awarded \$200,000 for the Zander Park Trail Expansion segment of the proposed Good Neighbor Trail between Middleton and Mazomanie, a 2700 ft. paved bicycle/pedestrian trail that will extend the current trail system in Zander Park along Black Earth Creek. The total project cost will be \$902,840.

