



# Thinking Like a Watershed

The semi-annual Newsletter of the  
Black Earth Creek Watershed Association

Volume 7, Issue 2

Autumn 2005

## *BECWA's 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 assets of the Black Earth Creek Watershed.
- To foster and encourage citizen and locally-based stewardship among the many members of the watershed community.
- To provide a forum for civil and informed discussion of issues and problems in the watershed.

## *BECWA Board Meetings*

BECWA Board Meetings are open to the public.

Check our website for the next scheduled meeting.

We hope you will join us.

## **Inside this issue:**

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## **BECWA and Wisconsin Heights Middle School Awarded Graham-Martin Grant**

*By Barbara Borns*

The Black Earth Creek Watershed Assn (BECWA) in cooperation with the Wisconsin Heights Middle School has been awarded a \$2500 grant from the

Graham - Martin Foundation to provide funding for wetland and prairie plantings at the Wisconsin Heights school. The Graham - Martin Foundation made funding available this summer through the

Dane County Lakes and Watershed Commission that provides native seeds and plants to homeowners, schools and organizations for use in raingardens and/or

*(Continued on page 3)*

## **Precontact Native American Settlement in the Garfoot Creek Valley: An Interim Report**

*By Norman M. Meinholz  
Wisconsin Historical Society  
BECWA Member*

Prior to Euroamerican settlement of the Garfoot Creek Valley in the early nineteenth century, the valley was the home for generations of Native Americans. Initial post-glacial settlement in the region dates to at least 10,000 years ago. Although the landscape has undergone immense changes since that time, producing a modern landscape perhaps unrecognizable to those first Native Americans, evidence can still be found of their presence.

The evidence is the bits and pieces of stone tools, chipping debris and pottery sherds still present across the landscape.

Ongoing research in the Garfoot Creek Valley has recovered evidence of Native American settlement dating from at least 8,000-10,000 years ago. Based on the frequency of projectile points with traits diagnostic to specific time periods and the location of these finds, a general picture is emerging of Native American settlement in the valley. Identifying

what activities were occurring at these sites is based on the recovery of tools, such as spear points, knives, scrapers or the chipping debris produced by specific activities. The density and diversity of artifacts at a site can suggest the number of individuals, length of occupation and the variety of activities that occurred.

One of the major problems in determining the sequence of Native American settlement is separating artifacts by time period. Cultivation over the past 150 years

*(Continued on page 2)*

## Swamplovers, Inc. Enhance the Ice Age Trail

By Kim Lamoreaux

A delicate haze shrouded the bluffs west of Cross Plains Saturday July 7, 2005 when about 100 people gathered for the dedication of parkland by Lee Swanson, Tom Kuehn, and Jerry Goth, a.k.a Swamplovers, Inc.

The area consists of over 400 acres of which 110 are restored prairie and oak savannah that the three owners, along with many of their friends and family, worked to return it to its natural state.

The land is located just west of CTH KP north, and the road leading to it, Scheele Road, is about one half mile from CTH KP

and USH 14.

The parkland will be considered part of the Ice Age Trail, which is still gaining additions after its conceptual beginnings in the early part of the century in the Kettle Moraine area. Since then, the Ice Age Trail Foundation has been acquiring more and more properties to fulfill its goal of a 1000-mile "trail" through the ice age formations in the State of Wisconsin. Since 1980 the trail has been officially part of the National Trails System.

The purchase of the land for designation as part of the Ice Age Trail came from funds contributed by the Department of Natural

Resources (DNR), the National Park Service, and Dane County at a total of \$2.1 million. According to the terms of the sale, the park will belong to Dane County by 2025.

Swamplover and former BECWA board member, Lee Swanson told the crowd, "our vision started 18 years ago when bought the land. Our intention was never to develop the land. An important partner that isn't with us today is Joe Kuehn. Joe had some early visions about how to protect this property."

BECWA thanks the Swamplovers for their generous contribution to our community.

## Garfoot Creek Valley

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has resulted in the mixing of all the artifacts dropped on the ground surface over the past 10,000 years. This means that a point or chipping debris produced thousands of years ago is now mixed with artifacts produced just hundreds of years ago or, for that matter, trash dumped in the same field yesterday. This makes it difficult to determine whether points that date to a specific period are associated with the non-diagnostic debris and tools found at plowed sites. Despite these inherent limitations, the following discussion and interpretation is based on the author's ongoing research.

To summarize, Native American

settlement of the Garfoot Creek Valley prior to Euroamerican settlement began as early as ten thousand years ago after the melting of the glaciers to the east. Settlement over the years has primarily been restricted to seasonal hunting and/or food and material gathering directed from permanent camps or villages located in the Black Earth Creek Valley. The most intensive use of the valley appears to have been during the Middle Archaic Period dating from ca. 4,000-2,000 B.C. Favored site locations were valley footslopes and low upland overlooks with access to the creek and wetlands as well as the uplands. The uplands served primarily as a source of chert used to make tools and for hunting and gathering. The recovery of tools made from non-local materials indicates that trade or travel far beyond the valley has existed for

thousands of years, linking it to a much larger region.



a, Late Paleoindian (ca. 8,000-6,000 B. C.); b, Early Archaic (ca. 6,000-4,000 B. C.); c-e, Middle Archaic (ca. 4,000-2,000 B.C.); f, Late Archaic (ca. 2,000-300 B.C.); h, Early Woodland (ca. 300 B.C.-A.D. 100); i-k, Late Woodland (ca. A.D. 500-1050)

## Highlights from the 2004-2005 BECWA Events

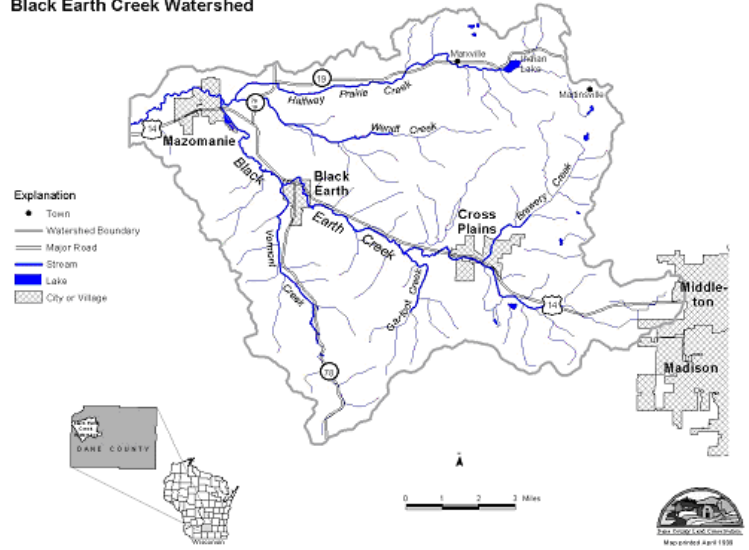
### Autumn/Spring Events

May 2004: Second Annual Passport to Your Watershed—Trout Days

October 2004: BECWA Bus Tour for Watershed Officials

March 2005: Public Forum: The Black Earth Creek Watershed: Past Present and Future

Black Earth Creek Watershed



### Graham-Martin Grant

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prairie plantings.

Over 100 homeowners and around 40 organizations in Dane County were selected to receive the seeds and plants. The purpose of the grant is to alleviate runoff from gutters, roofs, parking lots etc. leading to healthier lakes and streams in Dane County.

At the Wisconsin Heights School, there is a large parking lot on the north side of the school. Runoff from that area drains to a swale that feeds directly into the Black Earth Creek. Staff from the school had already recognized the potential for adverse effects from oil, gasoline and dirt washed off cars and into the waterway. So they had begun planting native



Barbara Born's Prairie

species on approximately 2/3 acre along the swale. The grant will provide seed to enhance that 2/3 acre and new seed to plant the remaining 1/3 acre. This will

cover the entire swale and hopefully remove pollutants before they get into the Black Earth Creek. In the low areas raingarden plants were planted, and prairie and native wildflower seeds will be used on the drier sections. Emphasis will be placed on plants that attract monarch butterflies to be a demonstration project for the 7th graders' living laboratory project.

Planting will be accomplished this fall with students from the middle school, community volunteers and BECWA all participating. Next spring we hope to see a more beautiful area but also expect the water quality in the Black Earth Creek will be improved as sediment is more effectively filtered before runoff enters the Creek.

## Statewide Task Force on Manure Management

BECWA's own Steve Born, with former Senate leader Brian Rude, is chairing a statewide task force on manure management. The Task force was convened by the

secretaries of DNR and DATCP, and is charged with making recommendations to halt manure runoff events that impact water quality. More than 50 such

events have occurred in past few years. The Task Force is due to make its recommendations in January 2006.

## Let it flow, let it flow, let it flow

### *Development is depleting groundwater and eroding water quality*

By John Morgan

The following article is excerpted from the Isthmus newspaper of Sept 29, 2005 and is printed with permission of the author. It holds important implications for the Black Earth Creek.

Dane County essentially sits atop a layer cake of rock that acts like a sponge for groundwater to be filtered and stored. Rainfall serves to refill this sponge and provides every area well with clean water. But groundwater experts say development is impeding this process and threatening the future of both the county's water quality and quantity.

"What used to happen is rain water would fall on the ground, it would infiltrate, and become part of the groundwater system that ultimately feeds the springs," says Jean Bahr, a professor of hydrogeology at UW-Madison. But as the landscape is increasingly paved over, much of this water is hitting pavement, running into storm drains and ending up in lakes and rivers, bypassing the groundwater system.

Bahr and her students studied the groundwater geology of the Madison area. They found that most of the water making its way into Madison's municipal wells, the source of the city's drinking water, is "coming from relatively local recharge." Thus, she says, "paving over the landscape in the vicinity of the springs is the worst possible thing to do."

Bahr's work was part of a massive five-year research project, which concluded in July and was funded

by the U.S. Environmental Protection Agency. Its goal was to better understand the effects of urbanization on groundwater, provide practical solutions to emerging problems, and begin long-term monitoring.

"paving over the landscape in the vicinity of the springs is the worst possible thing to do"

Jean Bahr

Among the findings:

Groundwater levels in the Madison area are in danger of declining. A groundwater flow model was used to "simulate potential effects of urban expansion and increased groundwater pumping." It

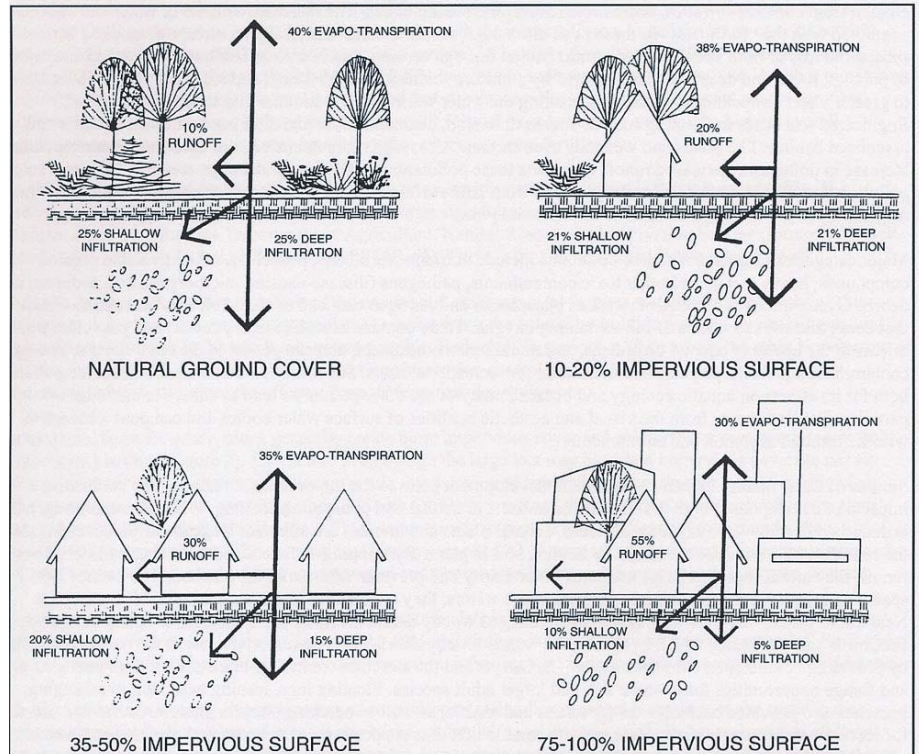
projected decreases in baseflow of up to 63% at Pheasant Branch by the year 2020 if current development trends continue.

Wetland diversity is being harmed. Paved surfaces allow for fast runoff of rainfall, which allows invasive species to "take advantage of the opportunity to establish new plants."

The problem is systemic. Throughout Dane County, the report states, "subdivision regulations generally encouraged, and in some instances mandated, 'high impact' development

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Figure 1. Water Cycle Changes Associated with Urbanization



Source: Environmental Protection Agency 1993

## Let it flow, let it flow, let it flow

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practices.” It adds that land development practices are ingrained in local and county regulations, and municipalities are reluctant to change. There is also a lack of knowledge about new infiltration practices.

To close this knowledge gap, other scientists contributing to the project took data such as Bahr’s and offered practical solutions for everyday citizens hoping to increase infiltration on their own properties.

Ken Potter, a professor of civil and environmental engineering at UW-Madison says there are things that individual homeowners can do to increase groundwater recharge.

One is to install rain barrels to trap and hold rainwater for

future use, or to release it slowly into a garden or on the lawn. Another is to encourage infiltration simply by directing downspouts into vegetation rather than letting the water flow down concrete and into streets and sewers.

“A garden with any kind of ornamental plants that will survive will do really, really well,” says Potter.

Some local homeowners have already created rain gardens, which use deep-rooted prairie plants that increase infiltration. But Potter says ordinary grasses, shrubs and vegetable gardens take in water very well. At his own home, he simply sets his rain barrel up to overflow into his garden as it fills, allowing the water to slowly infiltrate the soil rather than bombard it all at once during heavy rains.

“If you can store water and let it infiltrate, you can infiltrate more,” says Potter. “I’m surprised at how

little effort it’s taking.”

*For more information on rain gardens, rain barrels and other tips for citizens, visit the Dane County Lakes and Watershed Commission’s Web site:*

*<http://www.danewaters.com/private>*



Black Earth Creek from South

## Cross Plains Responds to US 14 Study

This fall the Wisconsin Department of Transportation (DOT) completed a comprehensive study of traffic through the Village of Cross Plains. During the process, consultations were conducted with Village residents, Village officials, Dane County and the Wisconsin Department of Natural Resources (DNR). Current traffic through the Village is approximately 14,900 vehicles daily. This density has already created congestion problems and the estimate of 25,000 vehicles daily by 2030 promises even more congestion will occur. Therefore DOT offered several options to the Village. First to expand Main Street to

four lanes, an option that would necessitate removing all buildings on the south side of Main Street. Second to use Main Street for two lanes flowing west and using an expanded Bourbon Road to carry traffic east. The third option was a by-pass of the Village. Late this summer the Village board voted to ask the DOT to begin investigating a by-pass option. The by-pass will require preparation of an environmental impact assessment. In the meanwhile some short term improvements will be put into place. These include: increased use of off-street parking, time of day no-parking regulations, improved pedestrian crossings

and signs, and a new traffic signal at Market Street. The DOT has acknowledged the potential impacts any of these changes could have on the Black Earth Creek. They will be working with the local stakeholders and the DNR to minimize negative impacts to the Creek.



## Meet the New Board Members

We are pleased to welcome three new BECWA board members, John Mulligan, Richard Anderson, and Barbara Peckarsky.

**John Mulligan** is a watershed resident and trout fisher. He comments, "I have resided in the Town of Cross Plains for 3 years, before that in Fitchburg for 16 years. I first came to the Madison area in 1980. I grew up in the Waupun and Beaver Dam area. While growing up I saw the changes in the Horicon Marsh area where the refuge area was expanded and large portions of the marsh were overrun by geese with the poor planning that occurred when local people were not consulted on the expansions. Most of the hunting and fishing in that area are greatly diminished today. When I first came to Dane County I discovered the fine trout fishing in Black Earth Creek.

I would hope to bring a cautious questioning to changes in the Black Earth watershed with me to the meetings. This approach should apply to new development, road construction, and also changes in the configuration of waterways. We sometimes run unexpected risks when we try to change the way things have developed. While trying to protect what is already here, we must also recognize the continued expansion that we will be unable to stop. The only thing we can accomplish is to lessen the impact and to make sure that people understand what will actually occur when changes are made.

We must make sure that local governments work together to assure that the downstream communities aren't ignored by those at the headwaters."

**Richard Anderson** was born and raised in Minnesota on a dairy farm that had a trout stream flowing through it. He has great memories of fishing for brown trout as a kid. Richard was educated at the University of Minnesota and Yale University in Medicine and also holds a Doctorate in Biochemistry and Molecular Biology. He has been a Professor at the University of Wisconsin-Medical School since 1986 where he is a cancer researcher and teaches Medical Students.

Richard and Kelle Anderson moved to Cross Plains in 1992 and they have two boys, Gabe (10) and Sam (5). One of the major attractions was the Black Earth Creek Watershed. Richard fishes the Creek when he finds the time, but says, "the fish here seem to be smarter than those he remembers in Minnesota". The major reason Richard has volunteered to be a BECWA board

member is that he feels the Black Earth Creek is one of the key quality of life features that makes Dane County one of the best areas to live and raise a family. He says, "In the coming years the Black Earth Creek will have more pressures from development that will threaten its vitality as a cold water stream. Today there is little doubt that the majority of citizens

in Dane County and the Watershed want to preserve the Creek for their children and grandchildren. However, the creek's long-term health will take hard work from many groups including BECWA."

**Barbara Peckarsky** is an Honorary Fellow at the University of Wisconsin. She states, "I appreciate the opportunity to serve on the Board of Directors of BECWA, and look forward to learning more about its history and activities. In July 2005 I took early retirement from Cornell University after 26 years on the faculty in the Departments of Entomology and Ecology & Evolutionary Biology. At Cornell I taught courses in Stream Ecology and Aquatic Entomology, and spent as much time as possible on outreach activities related to conservation of streams and watersheds, both in New York State and in the Colorado Rockies, where I work in the summers. For over 30 summers I have been doing research on trout streams near the Rocky Mountain Biological Laboratory (RMBL) in western Colorado. At RMBL I have also participated in teaching courses in Aquatic Entomology, Stream Ecology, Environmental Impact Assessment, and the Ecology of Stressed Ecosystems.

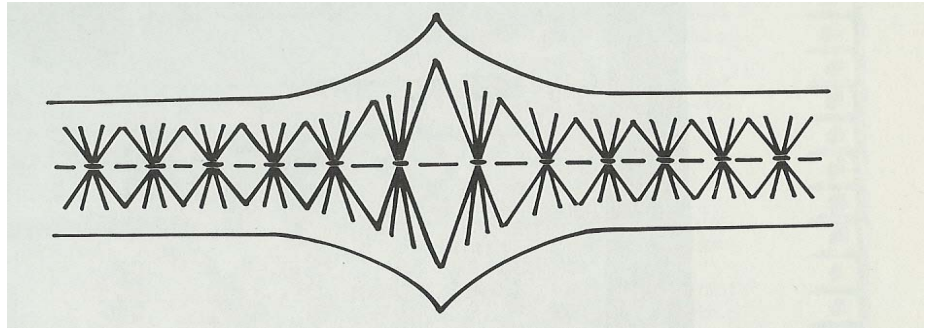
I currently am appointed as an Honorary Fellow at the University of Wisconsin in the Zoology Department where I got my PhD in 1979. I will continue to do research at RMBL in the summers, and will be involved in teaching and outreach at UW. My husband (Steve Horn) and I, both natives of Wisconsin, live in Oak

*(Continued on page 7)*

*"We must make sure that local governments work together"*  
*John Mulligan*

*(Continued from page 6)*

Valley Estates on north Stagecoach Road, and serve on the Environmental Committee of the Homeowners Association. We are happy to be back in Wisconsin, and to be living in the Black Earth Creek Watershed, under the stewardship of an organization like BECWA.”



## Can't We All Just Work Together? President's Column

*By Barbara Borns*

This summer and fall BECWA launched an effort to get the towns, villages and city in the watershed to join together to look at the longer-term cumulative impacts created by our land use decisions. In 1996 BECWA commissioned Howard Bellman, a nationally known mediator, to assess prospects for a similar type of watershed coalition. He concluded then after interviewing community leaders across the Black Earth Creek Watershed that there was "...a fairly strong case against consensus building..." in the Watershed. Has anything changed??

There was a step in the right direction this fall when Mike Schutz, Cross Plains Village President convened a "Good Neighbor" meeting. In attendance were elected officials; Jeanne Poast and Jeff Wirth, Presidents of the Villages of Black Earth and Mazomanie, Vern Wendt, Mel Bankes and Carl Jones from the Towns of Black Earth, Berry and Cross Plains. While the main agenda item was the expansion to four lanes of highway 14, it was agreed that there are a number of other issues that affect the entire watershed and this first "Good Neighbor" format should be

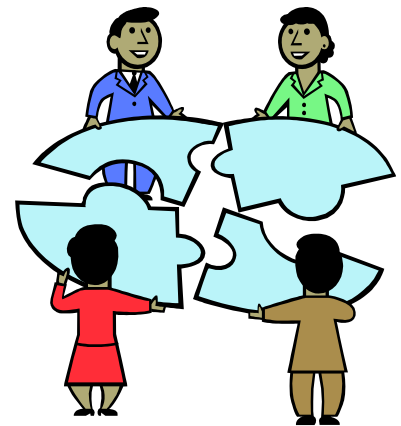
continued. Furthermore, representatives from the eastern end of the watershed, as well as the towns of Springfield, Vermont, and Mazomanie should be included in future meetings.

BECWA is pleased that this first step in watershed cooperation has occurred and hope other significant pressures on the natural resources of the watershed can be addressed cooperatively. Examples of these pressures include: population increases (already experienced and new proposals for development,) transportation issues, major flooding events in recent years in the western part of BEC, and degradation of water quality as demonstrated by a fish kill in the Creek just west of Cross Plains in June of 2001.

Providing background for the concept of comprehensive watershed planning are two ongoing efforts: first, the Statewide Comprehensive Planning Law encouraging all towns, villages and cities in Wisconsin to complete a plan for future growth; and second, a comprehensive hydrogeologic study of the watershed undertaken by the United States Geological Survey (USGS). In 2003 the USGS began compiling existing data from BECWA to

construct a ground and surface water computer model. The second step was to collect field data inserting that into the model and the third phase, begun in October 2005 will complete the model and allow assessment of the consequences of development for various scenario simulations. This model will provide a powerful tool for assessing how alterations to the watershed system will affect water quality.

BECWA will convene a meeting early in 2006 with all local watershed officials to demonstrate the results of the USGS model and take a comprehensive look at development and watershed protection. It is our hope that by working together we can accomplish many of the goals we all hold dear. Stay tuned as we move forward.



**BLACK EARTH CREEK WATERSHED ASSOCIATION**

c/o UW-Madison, Gaylord Nelson Institute for Environmental Studies  
550 N. Park Street, 70 Science Hall  
Madison, WI 53706-1491



**Black Earth Creek Watershed Association**

Established 1987

**Board of Directors:**

Barbara Borns, President  
Porter Martin, Vice-President  
Secretary  
David Lucey, Treasurer  
Richard Anderson      Steve Born      Carl Jones Jr.  
John Mulligan          Barbara Peckarsky  
Jeff Postle              Wayne Rounds

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

**BECWA MEMBERSHIP RENEWAL TIME**

Much of what BECWA accomplishes each year is dependent on your membership in the organization. Your dues money makes possible the education and advocacy efforts that is BECWA's mission. Membership in BECWA runs from January to December, which means your membership expires soon. Please consider renewing your membership by filling out and sending in the membership enrollment form found in this newsletter. Thank you for your continuing support.

Dave Lucey, Treasurer



**Join BECWA Today!**

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

By joining BECWA today you become part of a dedicated community of people who recognize this gem we have in our midst.

Your membership will support BECWA's:

- Educational Forums
- Annual Earth Day Creek Clean-Up
- *Thinking Like a Watershed*, our twice annual newsletter

Please lend your support to protecting this outstanding creek which runs through the heart of our community!

*Note: If you are already a member, check your address label on this newsletter for your membership expiration date.*

- Membership:
- Watershed Patron      \$25.00
  - Household                \$15.00
  - Basic                         \$10.00

**Yes! I'm interested in volunteering my time to BECWA.**

\* All donations are tax deductible.

Name

Date

Address

Phone

Email

**Fill out this form and mail it with your check to:**

BECWA- Treasurer  
David Lucey  
7952 County Hwy K  
Cross Plains WI 53528

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