



# Thinking Like a Watershed

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

Volume 5, Issue 1

Spring 2003

## ***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.

The next meeting is scheduled for **April 23rd, 2003** from 7:30 PM to 9:30 PM in the Black Earth Library public meeting room. We hope you will join us!

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## **Black Earth Creek Watershed's Past Reflected: Native Americans of the Black Earth Creek Watershed**

*By Mindy Habecker  
Dane County UW-Extension*

Native Americans have lived in Dane County for nearly 12,000 years. They left behind many traces from their lives including artifacts, remains of campsites, cemeteries, villages and earthworks.

Perhaps the most impressive vestiges of these early peoples are the earthen mounds built during a 500-year period between 700 A.D. and 1200 A. D. Over 1500 mounds were built near the shores of the "Four Lakes." As many as 80% of the mounds have been destroyed by agriculture and urban expansion.

The region around Black Earth Creek also abounds in Indian mounds. Many of these mounds are distinctive in that they are shaped as various life forms such as birds, bears, turtles, panthers and bison. These are known as *effigy mounds* and many of them contain human burial remains. Ninety-eight percent of all Effigy mounds are located in the southern half of Wisconsin.

The Woodland Indians who built these mounds placed them on hallowed ground, not within their villages. This suggests that the area around Black Earth held some spiritual significance for

its original inhabitants. When the Smithsonian Institution reported from its expedition of 1872, the surveyor Charles Dean noted that one of the most remarkable mounds was an immense Man mound south of the Village of Black Earth. The figure had a length of 700 feet with arms stretched out from the body (each about 330 feet long) and the whole mound itself was 5 feet high. It was said to be a very impressive site as it lay in plain view. A house was eventually built on the chest of this Man mound and when the cellar was dug a number of bones were found (this is the

*(Continued on page 3)*

## **Dissolved Oxygen in BEC during summer runoff**

*By William C. Sonzogni  
Professor, Environmental Chemistry and Technology  
UW-Madison*

Over ten years ago, David Graczyk of the United States Geological Survey and I published

a paper in the *Journal of Environmental Quality* on dissolved oxygen in runoff. Dave had been monitoring streams all over southwestern Wisconsin, and noticed that when streams were high

with runoff they often had low dissolved oxygen. In our paper we showed that episodic oxygen reductions sometimes got low enough to cause fish kills.

*(Continued on page 2)*

## Messages from the President

By Barbara Borns

As the confident tone of the birds suggests, spring has arrived once again in the Black Earth Creek watershed. BECWA accepted their suggestions months ago and we have been working to organize several events for spring's arrival.

First, we are asking for volunteers to assist with the annual **BLACK EARTH CREEK CLEAN-UP**. This year the cleanup will occur on Saturday **April 26th**. We will divide the creek into small sections and have various groups assigned to each section using Salmo Pond as our meeting point to distribute plastic bags beginning around 9:00 AM. We hope you will join us!

Our second event will be on Saturday, **May 3rd**, when we are sponsoring **PASSPORT TO YOUR**

**WATERSHED**. Our goal is to emphasize the values Black Earth Creek imparts to all of us who live in or visit the watershed.

We plan to team up with the Lions' Club Trout Day events and use an area just off Main Street (across from the Mobil station) in Cross Plains as our center of activities. Involving students at local schools is one of our major

*Our goal is to emphasize the values Black Earth Creek imparts to all of us who live in or visit the watershed.*

goals. We will be inviting teachers to showcase projects related to the **BLACK EARTH CREEK** on which their student's may be working this semester.

There will be a series of activities BECWA plans to sponsor as part of this **PASSPORT**. Cooperating groups include: Natural Heritage Land Trust, Trout Unlimited, Wisconsin DNR, Dane County Land Conservation Department, and UW-Extension. You will be learning more about this event in other parts of this newsletter. Plan now to attend.

Finally, BECWA is governed by a Board of Directors, volunteers who live in the area or are interested in the health of the watershed. We are looking for new energy on our board. If you are interested in being more involved with BECWA, we encourage you to contact any of the board members.

My home phone is 767 3325 and

## Dissolved Oxygen in BEC during summer runoff

*(Continued from page 1)*

The low dissolved oxygen during runoff was somewhat surprising to us, since it had been assumed by most scientists that runoff would carry plenty of oxygen. However, we found that streams in our area that drain agricultural lands showed a loss of dissolved oxygen as flows increased during summer runoff. One of the streams that we talked about in our paper was Black Earth Creek.

What causes the low dissolved oxygen in runoff? We noted several possible contributing factors (e.g., increased water temperature during runoff, making oxygen less soluble), but thought that runoff in contact with oxygen demanding (consuming) material was the

main reason for the low oxygen. Various types of organic material can use up oxygen, but probably the main mechanism is reaction with ammonia.



Black Earth Creek flowing through the Town of Black Earth. Photo courtesy of the Wisc. DNR.

When ammonia is oxidized, the free dissolved oxygen is consumed. Ammonia often builds up in manure, so barnyards and feedlots can hold lots of ammonia.

Liquid ammonia is often applied directly to fields as fertilizer.

At the time we studied Black Earth Creek with continuous oxygen monitors, the dissolved oxygen fell to about 4 mg/L. We suggested that if the dissolved oxygen went much lower, fish kills could occur.

In my opinion, it is quite likely that the dissolved oxygen did go lower during our catastrophic BEC fish kill a few years ago. The cause may have been an overflowing manure storage facility or perhaps a combination of things.

Clearly, the quality of the runoff that flows into our streams can affect the viability of the stream, so good watershed management is very important.

## BECWA Events

### Mark Your Calendars

#### Spring Events

**April 23rd, 2003:** BECWA Board Meeting. 7:30 PM to 9:30 PM at the Black Earth Library Community Room on Main St.

**April 26, 2003:** Annual Earth Day Spring Clean Up of Black Earth Creek. Meet at 9:00 AM at Salmo Pond to receive garbage bags and join a group in cleaning up the creek. Contact 265-6712 for info.

**May, 2003:** Trout Days—Passport to your watershed. 11:00AM to 3:00 PM, across from the Mobil Station on Hwy. 14 in downtown Cross Plains.

Black Earth Creek Watershed



## Native Americans of the Black Earth Creek Watershed

(Continued from page 1)

typical location within an Effigy mound where the burial site occur). Some residences speculated that it could have been the burial site of a great chief in this huge Man Effigy mound. Eventually most of this mound became obliterated.

When white settlers moved into the watershed, this area was home and favorite hunting grounds to the Winnebago (Ho Chunk) Indians. Mazomanie, Cross Plains and Black Earth were first permanently settled in the 1840's. Winnebago villages were located by waterways and close to land suitable for gardens. They preferred to put their homes on sandy, well-drained soil in spots sheltered from the wind. The Winnebago grew corn, beans and squash and typically lived in large oval wigwams.

The rich soils along Black Earth Creek and its tributaries, the excellent fishing and abundant



Winnebago Indians. Photo from: The Winnebago Tribe website, <http://www.omaha.lib.ne.us/transmiss/congress/winnebago.html>.

game must have made the area and ideal home for them.

Kawneeshaw or White Crow also known as the One-Eyed was a prominent civil chief of a Winnebago village that resided on the shore of Lake Koshkonong and one of the orators of his people. He headed the group of Indian chiefs who brought about the ransom of the Hall girls at Blue Mounds in the Black Hawk war in 1832 following the Indian massa-

cre near Ottawa, Illinois. About two years later he died and was buried at the base of a bluff next to what is now the eastern end of Bourbon Road in Cross Plains. Early settlers had witnessed other Indians being buried at this cemetery.

In 1836 a Mr. Stephen Taylor was touring the country with a comrade and was headed home on the military road in Cross Plains when he encountered a large number of Winne-

bagoes, among who was Waunke-sha, or Whirling Thunder, a subordinate chief of the tribe. The Indians were involved in solemn ceremonies, paying their accustomed devotions to the last remains of their departed chief White Crow. This bluff area was also known to be a camp area for the Winnebagoes. Thus it becomes clear that this watershed has always been a desirable place to live, especially near its life-line – Black Earth Creek.

## Draft BEC Resource Area Plan Available

*From the Dane County Regional Planning Commission*

The purpose of the Black Earth Creek Resources Area Plan is to promote cooperative partnerships among a diverse array of public and private agencies, organizations and landowners to protect and restore the significant resources associated with Black Earth Creek.

The *Dane County Parks and Open Space Plan* identifies Black Earth Creek as a Resource Study Area. Plans are prepared which identify the resources to be protected and recommends various options available to landowners.

Protecting private property rights is a key consideration in implementing the plan, which was developed with the assistance of a Steering Committee representing a cross-section of the various public and private interests in the wa-

tershed during numerous public meetings. The recommendations contained in the plan are voluntary or advisory in nature. It directs the County Parks Department to target limited financial and personnel resources where they will have the most beneficial effect as well as combine its efforts with those of other groups.

The draft plan will be presented to the Dane County Parks Commission along with a draft resolution seeking approval by the County Board adopting the plan as an element of the *Parks and Open Space Plan*. This would allow the County Parks Department to leverage county funds with other federal, state and local fund-

ing sources to acquire property or conservation easements from landowners to protect and restore the resources identified in the plan. These generally include buffer areas along the creek and associated wetland areas, prime farmland, significant wildlife habitat areas, as well as scenic ridgelines and hilltops. It also ties in with other organizations and their efforts such as the Ice Age Trail and Scientific Reserve, the state Black Earth Creek Fishery Area, as well as trail linkages between and among communities in the valley.

To receive copies of the draft plan or if you have any questions call Mike Kakuska at 266-9111.

*"Protecting private property rights is a key consideration in implementing the plan"*

## New Development Proposed Near Cross Plains

By Nick Lelack, Schreiber/Anderson Associates

On **April 24**, Midland Builders will conduct the third community-wide meeting with the Cross Plains community about creating a new neighborhood on the Plastic Ingenuity property, which is located immediately east of the Village. The meeting will be held at **Glacier Creek Middle School**

**from 7 to 9 p.m.** The doors will be open to the public at 6:30.

Midland Builders, working with Madison-based planning, urban-design and landscape architecture firm Schreiber/Anderson Associates (SAA), is creating a new neighborhood with significant

public input on 161 acres of the 488-acre property. These public meetings are being held to give residents an opportunity to participate in creating the new neighborhood.

Community residents identified a number of issues that must be addressed in the development of this property at the first meeting on January 6. Some of the important issues raised include traffic patterns and volume, storm-water management, environmental protection, and the preservation of community character.



Photo credit: Schreiber/Anderson Associates, Inc.

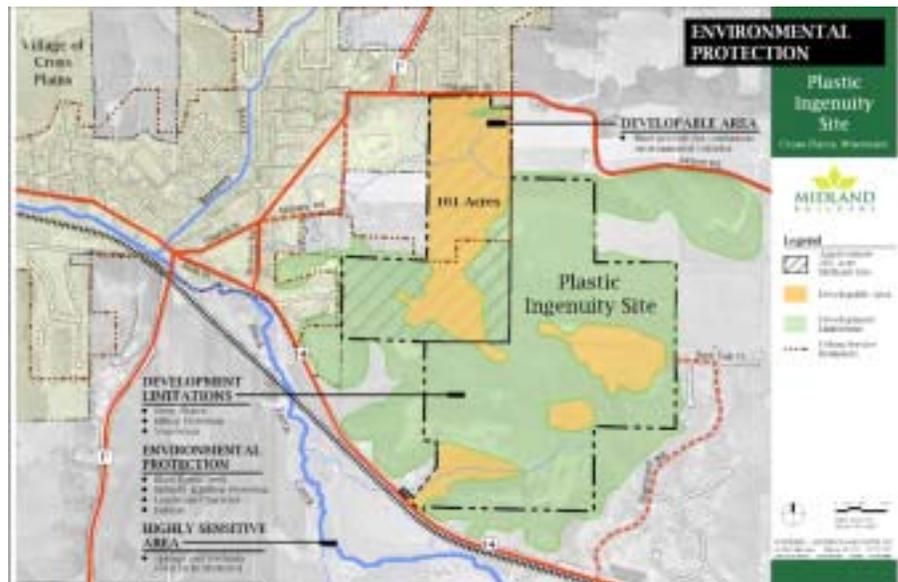
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# New Development Proposed Near Cross Plains

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At the second meeting on February 26, Midland and SAA answered a wide variety of questions from residents about the new neighborhood, including how and when growth and development will occur in Cross Plains and throughout the Black Earth Creek Watershed.

The April 24 meeting will include more detailed discussions about the new neighborhood and continue to encourage public input. To learn more about the planning process, please log on to the project's web-site at [www.crossplains-midland.com](http://www.crossplains-midland.com), or call Midland at 271-4445 or Schreiber/Anderson Associates at 255-0800.



Map created by Schreiber/Anderson Associates, Inc.

## Trout Days—Passport to your Watershed

Brought to you by BECWA

On Saturday, May 3rd join us for **Passport to your Watershed**, as part of the Trout Days celebration in downtown Cross Plains.



very own oak tree. Learn about stream bugs, water, and more in the process.

And that isn't all! **Virgil Beck will be painting a watercolor on site.** The painting will be raffled off at the end of the day. Tickets cost only \$3.00. You can also make your very own BECWA T-Shirt

**Student projects** about the creek will be on display. And local organizations like the Natural Heritage Land Trust will be on hand to tell you about their work in the watershed.

Find us in the park, across from the Mobil station on Hwy 14.

This is a series of fun and educational activities for people of all ages. Get your passport stamped at every station and receive your

## Black Earth Creek Fishery Update

By Kurt Welke, Dane County Fisheries Manager, Wisconsin DNR

In response to an inquiry from BECWA about the recovery of fish populations since the fish kill, I reviewed the fisheries survey information for stations where data exists from which to draw comparisons.

Annually in spring before the opening of trout season (usually the 1st Saturday in May) DNR

conducts an electrofishing (shocking) survey at a minimum of five index stations from Cross Plains downstream to Black Earth. The survey characterizes population size, reproductive success, and general length (size) distribution.

*"Spring 2002 surveys showed slight improvements"*

The kill had its most pronounced effect in the area from Scherbel Rd, downstream to below Park St. in Black Earth. Summer and fall 2001 surveys showed numbers reduced by as much as 85% in some stations.

Spring 2002 surveys showed slight

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# Black Earth Creek Fishery Update

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improvements at the South Valley Road index site and the station



Brown Trout. Photo courtesy of WDNR.

from KP to CTH P in Cross Plains.

Black Earth Creek typically supports trout from as many as 6 or 7 discreet year classes. The kill did not discriminate on the basis of size or age of the fish affected.

While there will be immigration by fish into the depopulated areas, it is reasonable to assume that it will take a similar number of

years as the number of year classes typically present (6 to 7) to get back to a pre-kill condition. This of course precludes any significant failures in spawning success and other major factors which could impact the fishery.

Surveys for 2003 are planned for late March. I will coordinate with BECWA to share the information as it becomes finalized.

## Carl Jones Jr.—a BECWA Board Member Profile

By Juniper Garver-Hume

Carl Jones Jr. has lived in the Black Earth Creek Watershed for 39 years, primarily in the Town of Cross Plains. While he was born in Arkansas, family connections quickly brought his parents back to Wisconsin.

His schedule is usually dictated by his cows. Carl started out as a carpenter in the area, and after 20 years of building homes,

he became a dairy farmer. The cows must be milked morning and evening, religiously.

*Carl says he became a member of the [BECWA] board 'in self-defense'*

Despite this demanding schedule, Carl makes time to serve the community he lives in. He volunteers as a building inspector for the Town of Cross Plains. About two and a half years ago he was asked to

join the Black Earth Creek Watershed Association Board of Directors. Carl says he became a member of the board 'in self-defense' to help the under represented section of rural farmers and residents of the watershed. In his opinion, the Board did not accurately reflect the diversity of the watershed community and the rural farmers were represented by only one other person on the

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## Tom Ehlert—a BECWA Board Member Profile

By Juniper Garver-Hume

Tom Ehlert has lived in the watershed almost thirty-five years. One reason he and his wife, Karen, moved here was the area's scenic beauty. The tree-covered ridges and the creek flowing through the rich farmland in the valley between them have long been a treat for the eye and the spirit.

In recent years, Tom has expanded his appreciation for the place. He's become a passionate

trout-fisher and highly regarded, regional fishing-guide. And he has contributed to sustaining the watershed's health in the mid-90s through his service as President of the Southern Wisconsin Chapter of Trout Unlimited, and currently as its Special Projects Chairperson. In that last capacity, Tom identifies and supervises the organization's public-service projects, with a specific emphasis on maintaining the unimpeded flow of cold-water streams in

Dane county.

When asked why he accepted the invitation to become a BECWA director nearly eighteen months ago, he replied he saw yet another opportunity to preserve the quality of place that lured him here initially, at a time in his life when he knew nothing about the concept of "watershed." In his opinion, the unique beauty of the BEC Watershed is now threatened by

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## Carl Jones Jr.—a BECWA Board Member Profile

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board.

Since December 2002, Carl has been a link for communication between folks in the township and BECWA. He wants to be sure that the interests of farmers and others in the rural landscape of the watershed are not forgotten.

As a farmer, living off the land, Carl is well aware of conservation needs, but also believes that caring for land should not trample on people's rights. Carl believes that solutions need to be found, but with adequate discussion, rights are less likely to be taken.

"Black Earth Creek Watershed is a beautiful area," Carl says, and he would like to see that preserved, but in a way that does not hinder other activities. He cites another township in Wisconsin where the residents wanted to

preserve the scenic beauty of the area. To achieve this, they passed an ordinance requiring that all new homes be built away from the road, so they couldn't be seen. The result was really frustrating for hunters. Because the homes weren't visible, they couldn't often tell where one property ended and the next began. Conflicts arose as hunters inadvertently hunted on land where they had not obtained permission.

When asked what he hopes BECWA can achieve in the watershed, Carl first acknowledged the limited resources of the organization. He then offered up some low cost ways the organization might make a difference. He would like to see BECWA create some brochures about the impacts of landscape and home design on the creek, which could be handed out to new home builders. As a former carpenter and a building in-

spector, Carl feels this is a useful time to provide residents with information and choices. If the information is there in the planning stages of construction it is more apt to be used. If the home is already well established, it can be hard to go back and ask for changes.

Carl urges the balance of conservation with the interests of private citizens in managing the land and water resources of the Black Earth Creek Watershed. He hopes that the government administrators and legislators think about the potential impacts of the rules they make. While the intentions may be well founded, the actions taken may not achieve what was intended. He wants public discussion about potential solutions before they are put into effect.

## Tom Ehlert—a BECWA Board Member Profile

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the Greater Madison Area's exponential growth. One consequence of this growth is the more-than-potential degradation of the region's inherent appeal.

Tom believes there is a significant incompatibility between satisfying the needs of those wanting to relocate to the watershed, or to the communities beyond, and protecting the place. He is concerned that ever-increasing traffic volume on Highway 14 (currently more than 25,000 vehicles pass through Cross Plains daily), and the continued loss of forested ridge-tops and open spaces no longer farmed to residential devel-

opment will conspire to ruin the place.

He's convinced he's not alone in this outlook. Underlying these threats to the Watershed, says Tom, are an other-than-altruistic attitude shared by too many and a lack of awareness of the finite nature of the earth's resources. In order to preserve what's left, Tom believes we need a change in attitude and popular enlightenment:

*"We need to get the word out that we all rely on finite resources for*

*"One consequence of this growth is the more-than-potential degradation of the region's inherent appeal."*

*sustenance at all levels. As humans, we have intellectual, emotional, spiritual, physical needs. But we have to get beyond taking things for granted, beyond the pursuit of our own self-satisfactions without regard for costs to others and to the environment. We have an obligation to the place and its preservation as a place freed from exploitation."*

He believes that BECWA offers an opportunity for those who live in the Watershed to gather to talk about the specific threats to the region, and to formulate strategies to deal with them.

BLACK EARTH CREEK WATERSHED ASSOCIATION

c/o UW-Madison, Gaylord Nelson Institute for Environmental Studies  
550 N. Park Street, 70 Science Hall  
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ADDRESS SERVICE REQUESTED



## Black Earth Creek Watershed Association

Established 1987

**Board of Directors:**

Barbara Borns, President  
Jim Troupis, Vice-President  
Tom Ehler, Secretary  
Wendy Sterne, Treasurer  
Steve Born                    James Van Duerzen  
Carl Jones Jr.                Vern Wendt

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

**Many Thanks to our Major Donors of 2003:**

- ~ Badger Fly Fishers ~
- ~ Black Earth State Bank ~
- ~ Dane County Conservation League ~
- ~ Gaylord Nelson Institute for Environmental Studies ~
- ~ Michael, Best and Friedrich LLP ~
- ~ Natural Heritage Land Trust ~
- ~ Southern Wisconsin Trout Unlimited ~
- ~ Trails Media Group, Inc. ~
- ~ Wisconsin Department of Natural Resources ~



# 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
- Household                                \$15
- Basic                                         \$10

\* All donations are tax deductible.

Name \_\_\_\_\_ Date \_\_\_\_\_

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