



Thinking like a Watershed

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

Volume 7, Issue 1

Spring 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. If you would like to join us at our next Board meeting, please contact Briana Burns at 767-1475 for the date, time and location.

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Glacial History of Black Earth Creek Watershed

By: Mindy Habecker, Dane County UW-Extension

The Ice Age began about 2.5 million years ago and has repeatedly covered parts of Wisconsin. The Wisconsin Glaciation is the most recent glacial advance. Dane County was partially covered by the Green Bay Lobe of the ice sheet. It reached its maximum extent in the county about 14-18,000 years ago and finally melted out of the county by about 12-13,000 years ago.

The Black Earth Creek watershed bridges the boundary between the unglaciated Driftless Area of southwestern Wisconsin and the area covered by the Laurentide Ice Sheet during the Wisconsin Glaciation. These two areas have distinctly different topography and geologic materials



Approximately two-thirds of the watershed lies in the Driftless Area.

This area was not directly affected by glacial ice and therefore the landscape is less subdued and contains more topographic relief.

It has more wooded and steeper slopes and better-defined drainage patterns. Bedrock directly influences the appearance of the landscape in this area with numerous sandstone and dolomite cliffs. However, the Driftless area was indirectly influenced by the glacier in a way that has led to great fertility of the area's soils. Large volumes of loess (silt-sized dust) were carried by the wind as the glacier was retreating. Much of this silt probably was derived from the broad bottomland as wetness fluctuated daily and seasonally, exposing fresh material to dry and be blown by the high winds that existed at the time.

In Dane County this loess thickness is usually less than one meter thick and was initially deposited over the entire

Wisconsin Driftless area. This has made for the extremely fertile relatively young silt loam topsoil in the watershed.

Additionally along the existing stream corridors and especially in a wide flat band along Black Earth Creek and Halfway Prairie Creek are major deposits of sand and gravel deposited by meltwater from the front of the ice margin. Generally there is coarser aggregate material near the ice margin and finer materials get washed further downstream, in this case further west.

The glacier directly affected the eastern one third of the watershed. Glaciers move over time, advancing and retreating and the moving ice is a viscous fluid carrying rocks and debris on its surface and also within it like a conveyor belt. The underlying ground surface is churned leaving the remaining relief softened especially when the glacier encounters less resistant rocks.

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The terminal edge of the glacier is marked by an end moraine usually composed of till (material directly deposited by ice) and may be littered with boulders and contain poorly sorted stratified material in places.

The surface of the moraine is hilled up and hummocky as the glacier paused here for considerable time as the conveying ice moved debris forward to the edge. The end moraine runs just east of the Village of Cross Plains in a northwest/southeast direction. An excellent view of this is from Timberline Road near Shoveler Sink.

Looking east the near hill is the end moraine and looking west is Driftless Area. Shoveler Sink and the other small lakes nearby are glacial lakes that were formed when a preglacial valley was dammed by the glacier and by glacial debris. East of the end moraine is primarily hummocky till in the watershed. This area is full of mounds, knolls, wetlands and lacks well-defined drainage. This topography collapsed upon the landscape as the ice melted out. There is also some outwash material along Black Earth Creek as it extends towards Middleton and another smaller recessional moraine as the glacier paused and materials were again conveyed to its edge to form a ridge perpendicular to the ice movement.

What does all this mean to the watershed? First that this is a relatively young, fertile landscape. The materials that formed most of the watershed's soils are only about 12,000 years old compared to some southern landscapes in the United States that are millions of years old and the soils are much more weathered and have less remaining natural fertility. The watershed also has a lot of variety of materials for the parent material of its soils since this was such an active landscape with loess, outwash, till, end moraine and other materials, some of these having traveled great distances in or on the moving ice.

Cross Plains to Vote on Creek's Fate

**By: Bill Novak The Capital Times
Cross Plains**

Editor's Note:

The Referendum passed on a vote of 55% to 45% on April 5, 2005. BEWCA looks forward to seeing the Village of Cross Plain enact this clear mandate.

Voters here will go to the polls in April to protect the village's most valuable natural resource, Black Earth Creek.

Village leaders put a referendum question on the April ballot asking voters if a "water quality corridor" should be established along the banks of Black Earth Creek, protecting the waterway from development as well as protecting the ground water in the area that feeds into the village's municipal well water system.

A water quality forum is set for Tuesday night at 7 at Glacier Creek Middle School, 2800 Military Road in Cross Plains, where experts will explain the reasoning behind the referendum.

"This is an important step to protect a world class trout fishery, a source of drinking water and the great community of Cross Plains," said Brett Hulsey, a Dane County Board supervisor and chair of the board's Lakes and Watershed Commission.

Village President Richard Anderson said the advisory referendum would give village leaders the tools needed to establish a water quality corridor, discouraging development along the creek's banks.

"We have a choice to make," Anderson said. "Build industrial parks along the creek or preserve these areas for future generations. For our quality of life, we need to protect both our drinking water and the creek."

The water quality referendum was prompted by a U.S. Geological Survey study of Black Earth Creek both east and west of Cross Plains. The study showed key areas where development could have a major negative impact on both the ground water that feeds into the village wells as well as Black Earth Creek.

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And A Creek runs Through It

By: Barbara Borns

Did you know that over 97% of the water on our planet exists in the oceans? Of the remaining 3%, icecaps/glaciers and groundwater comprise 99%. That leaves 1% for the water in the atmosphere, soil and lakes with only .0001% left for rivers and streams. Translating that into our local jewel, the Black Earth Creek is a rare and precious element in our midst. Not only is it rare and precious, it is fragile and often threatened.

On January 26 2005, BECWA sponsored a forum on the state of the Black Earth Creek Watershed. Our speaker, Dr. Randy Hunt from the USGS described the computer model he has been preparing that demonstrates visually, technical data he has collected over the past few years on physical parameters of the watershed. Similar studies have been done in Dane County, most recently in the Pheasant Branch Creek Watershed. The final model for Pheasant Branch allowed viewers to raise questions about "what would happen if" and the model could demonstrate the effect of changes. The USGS is working toward establishing the same type of model for the BEC. The timing of this modeling is important because there are a number of proposed developments that might adversely affect the Black Earth Creek.

At the conclusion of Dr. Hunt's presentation, we used a large map of the watershed to identify proposed developments in the BEC from Middleton to Mazomanie.

In Middleton, there is a proposal for 110 new homes on a parcel of land adjacent to the wetlands that comprise the headwaters for Black Earth Creek. East of Cross Plains and north of highway 14 there is a proposal for a large residential development. On the western edge of the Town of Cross Plains, there is a site proposed for an industrial park close to Garfoot Creek, a key tributary of the Black Earth Creek. The Village of Black Earth has three areas where developments have been proposed and Mazomanie has two possible sites. The impact of all this development is hard to predict but those interested in the health of our area, especially the water resources, are concerned. Keeping in mind that the water we drink and the water in the Black Earth Creek come from the same source, it is particularly important to preserve the integrity of this resource. On April 5, voters in Cross Plains were asked to express their opinion on creation of a water quality corridor along the BEC.

A number of local government officials attended our January 26 meeting. During the discussion that followed, Jeanne Poast, President of the Village of Black Earth suggested that there might be good reason to form a coalition of local government units in the area that would view the watershed in its entirety.

BECWA is enthusiastic about such an effort and stands ready to provide assistance to implement such a important endeavor.

Finally, I met this fall with an ad hoc Flooding Committee in the Village of Mazomanie who are very concerned about how development in the eastern part of the watershed will impact them. Mazomanie residents have seen several major floods in the last couple years.

There was another opportunity for watershed residents to hear more about the history, geology, hydrology and future of the Black Earth Creek on March 9, 2005 at 7:30 PM at the Glacier Creek School in Cross Plains. Dr. Randy Hunt was a speaker, as was Dr. Dave LePain from the Wisconsin Geological and Natural History Survey who discussed the glacial and geologic uniqueness of our watershed.



BECWA Events

Mark Your Calendars

Autumn/Spring Events

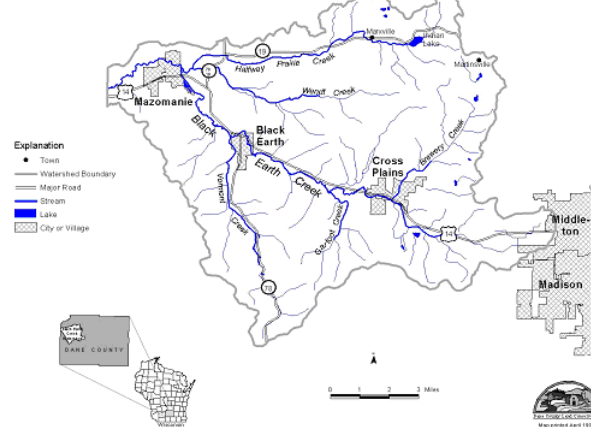
Saturday April 23, 2005

There will be a Black Earth Creek Spring Clean-Up Event to be held at Salmo Pond. Meet at 9 am at Salmo Pond.

Saturday May 7, 2005

The Village of Cross Plains will be holding their annual Trout Days.

Black Earth Creek Watershed



Fall 2004 In Review

By: President of BECWA

Fall of 2004 was an active season for BECWA. There were several events that BECWA either sponsored or joined with other watershed groups to sponsor.

On October 16, 2004 BECWA invited BEC watershed residents to join us for a tour of the watershed. On a cold, blustery day (we even saw a few snowflakes) around 30 people met at the new Cross Plains fire station. After coffee and introductory remarks we boarded a school bus and began our tour. The first stop was the Cross Plains sewerage treatment plant. Gene Laschsinger and Jerry Gray met us there to describe the operation of the plant, showing us the various steps in the process of water purification. Next our bus took us to the farm of Ken Olsen just west of Black Earth. Ken and his family participated in the priority watershed program several years ago. He showed us where installations were placed to help protect the creek and then we observed the improved stream banks, which resulted from the process.

Our next stop was at the Community Sponsored Agriculture farm –Vermont Valley owned and run by Barb and Dave Perkins. They explained their operation and showed us a typical box of vegetables provided to members each week. They also kindly provided us with the fresh veggies we used in our preparation for lunch.

As we headed back toward the Fire Station, Andy Morton pointed out a site along South Valley Road where the DNR has done a major restoration project involving the installation of lunkers and stream restoration. Then Tom Ehlert pointed out the work done by his Trout Unlimited colleagues along the Garfoot creek. They had cleared exotics, making large brush piles, pulled logs out of the creek and vastly improved the area from south of highway KP to the site of merger with Black Earth Creek.

After returning to the warmth of the fire station,

we enjoyed a fine lunch prepared with veggies from the Vermont Valley farm and with beef from the Othalla Valley farm.

After lunch, Pete Jopke from the Dane County Land Conservation office described the work that has been done by their staff, the USGS and the Wisconsin DNR in the St Francis subdivision north of Cross Plains. Erosion control devices and stormwater management practices were put in place as the construction proceeded from 1999-2002. The goal was to decrease the amount of sediment that runs off home sites especially during construction. For example homes had raingardens installed at the time of construction and narrower streets were also included in the planning for the new area. Pete demonstrated the improvement in sediment loading into Brewery Creek, important since Brewery Creek is a major tributary to the Black Earth Creek where they merge in Cross Plains. A USGS publication describing the project was made available.

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On November 6, 2004 BECWA was a sponsor and participant in "Voice of Our Waters", a participatory workshop for all friends of Dane County waters and watersheds. The lead sponsor of the workshop was the Dane County Lakes and Watershed Commission. The UW-Arboretum provided a welcoming atmosphere for this event.

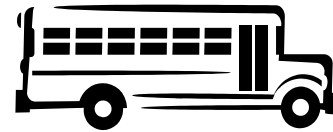
While BECWA focuses its attention on the BEC, similar groups represent and protect many other watersheds in Dane

County: Upper Sugar River Watershed Association, Friends of Lake Wingra, Pheasant Branch Watershed Association, Friends of Starkweather Creek. The purpose of the workshop was to share experiences; to learn what worked and what didn't, to get acquainted with each other's goals and aspirations and finally to join together where multiple voices may have more impact than our individual ones would.

After four speakers shared "Tips for Success: Case Studies" participants were invited to

take part in a series of "brainstorming" workshops dealing with various aspects of our watershed activities. Participants gave strong support to the idea of continuing this dialog.

More information about the event is available at:
http://www.co.dane.wi.us/commissions/lakes/voice_of_our_waters.shtml.



They Are Poets, and Now They Know It, With a Little Help From Friends

By Kris Loman

Wisconsin River of Words PEN Pilot Project Coordinator, Black Earth Creek Watershed

In early December, fourth grade students in Mazomanie and Cross Plains completed an exciting interdisciplinary watershed education program called the Wisconsin River of Words PEN Pilot Project.

Students were led by their classroom teachers, a professional poet, and a naturalist in workshops focused on watershed education. In the process of writing poems about their watershed, students were encouraged to make an emotional connection to the place in which they live and to express what they learned about their watershed homes in a form that can reach and touch other students, family members, friends and other members of their communities.

The students presented their poems at poetry readings in Mazomanie and Cross Plains,

and there will be displays of student work at the Mazomanie and Cross Plains libraries and businesses in the spring. Also, the poems were compiled into a book entitled, "Watershed Poems – Voices from the River of Words", which is available at the Mazomanie and Cross Plains schools and public libraries. A copy can be found at the Whistle Stop Café in Mazomanie as well.

I would like to thank the following people and organizations for their efforts in making this donor/grant-funded project a happy success:

The 58 fourth grade students at Mazomanie and Park Elementary schools, Fourth grade teachers Kathy Evert, Cora Gullickson, and Claire Zeitlin, Poet Alice D'Alessio and Naturalist Peggy Traver,

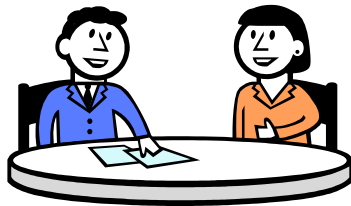
Dennis Franke, biologist and trout fisherman, Judith Strasser, Mary Pardee, and Martin Scanlan who helped bring the River of Words project to the Black Earth Watershed community, school principals Karen Jones, Julie Cushman, and Deborah Stellar, The Quixote Foundation for funding, The Dane County Cultural Affairs Commission for additional funding, Members of the Southern Wisconsin chapter of Trout Unlimited, the Black Earth Creek Watershed Association (BECWA), the Black Earth Creek Conservation Organization (BECCO), and Park Elementary School PTA for generous local funding of the project, and Richmond Powers for designing the poetry book, and Judith Lary for proofreading and editing assistance.



Meet The New Board Members

We are happy to welcome several new BECWA board members, Barbara Fess, Porter Martin and Wayne Rounds.

Barbara Fess lives in the town of Vermont near Ryan Creek, a tributary of Black Earth Creek, and joined the board several months ago. She works in a Montessori classroom with children between the ages of 2 ½ and 6. A large part of the Montessori philosophy focuses on respect and care for one's environment and those beings in it. A friend suggested she join the board because of her interest in ecology. She feels that what affects the creek affects us all. By serving BECWA, she hopes to help change a small part of the world for the better, feeling the best way is to work locally to raise awareness of watershed issues. She says, "I feel it's all alive, it's all intelligent, and it's all connected."



Porter Martin is an attorney with Michael, Best & Friedrich in Madison and lives near Mt. Horeb. He moved to Mt. Horeb specifically so he could be twenty minutes away from his favorite pastime of fishing Black Earth Creek. He joined the BECWA board six months ago with the goal of protecting the watershed in ways that work with the community. He grew up with agriculture, so he recognizes the watershed communities' needs for agriculture as well as development. He hopes BECWA can help facilitate development in good ways that will be win-win situations for both communities and the watershed. As a farmer's son, he feels he has seen both appropriate and inappropriate agricultural uses and feels that ag use and the watershed can coexist. He also notes that even small improper ag actions can cause damage to the watershed. He is pleased to see the high level of awareness on the part of the ag community in this watershed, working with government agencies to do things in a manner that preserves the creek and the trout.

Wayne Rounds Jr. and his wife Sara own and operate Twin Valley Farms. He says, "Our farm encompasses a large area of the headwaters of Black Earth Creek and portions of the former Lake Middleton lakebed. I joined the BECWA board in the fall of 2004 at the invitation of Jim Troupis, a neighbor and current board member. My family has always had an interest in preserving the creek and its resources, dating back to the original fight against the Refuse Hideaway Landfill. My motivation in being a BECWA board member is to bring another voice from the agricultural community to help balance the philosophy of the group. I believe agriculture is and will be an important activity in the watershed now and in the future. Good soil conservation practices and good water quality are paramount objectives of every farmer. The top two threats to the watershed in my opinion are erosion and nutrient loading from uncontrolled runoff in urbanized areas. My hope is that BECWA can help to bring members of the agricultural, development, and preservationist communities together for meaningful dialog. This will help develop fair and balanced planning for use and protection of the watershed and its finite resources.

Fish Kill On The Sugar River Leads To Formation Of Manure Spreading Task Force

By: Barbara Borns

On March 1, 2005 the Wisconsin Department of Natural Resources (WDNR) reported a fish kill on the West Branch of the Sugar River, which ironically had just celebrated its removal from the State's impaired waters list last fall. Staff from the WDNR investigated possible sources of

the fish kill. Liquid manure spread on steep frozen slopes was suspected to be the cause.

The weather this past fall prevented many farmers from emptying their manure storage facilities.

Many of these structures reached capacity early in March before the ground thawed so manure could be safely spread and incorporated into the soil.

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However, if the following conditions occur -- frozen ground, warm temperatures, melting snow and intermittent rain -- liquid manure spreading can easily threaten the nearest lake or stream, even if that water body is miles away.

After the spill, Dane County Executive Kathleen Falk and Chair of the Dane County Lakes and Watershed Commission Brett Hulsey announced the

establishment of a task force to evaluate the risks associated with winter spreading of manure, especially liquid manure, and to recommend winter spreading restrictions. "This task force has the right mix of farmers, conservationists and elected officials to figure out how to stop liquid manure from hurting our lakes and streams," said Falk.

"This manure management task force can help lead the County to protect our rivers and streams, our great fisheries and our vibrant farm economy," Hulsey said.

The committee is composed of farmers, environmental groups, and several Dane County Board Supervisors. Falk and Hulsey are asking the Task Force to make recommendations to the County Executive, Land Conservation Committee, Lakes and Watershed Commission and County Board by May 1.

Reducing Impact of Spring Thaw and Spring Rains

By: Sue Jones, Dane County Lakes and Watershed and Richard Lanthrop, Wisconsin DNR

Dane County Urges Actions to Reduce Impact of Spring Thaw and Spring Rains. Composting street gutter material and using it on flower beds is one action

Where did all that snow go?

Runoff of agricultural manure is not the only water quality issue during spring snowmelt and spring rainstorms. Snowmelt and rainfall runoff in our neighborhoods with the sediments and pollutants it carries also threatens lake and stream quality. Each of us should take steps to reduce impacts of urban runoff, according to Wisconsin DNR Limnologist Dick Lathrop.

"While the ground is frozen, all the nutrients in leftover leaves, garden debris and yard waste are stopped in place. In spring, the nutrient-laden melt water runs to the nearest storm drain and into the nearest lake or stream," says Lathrop.

Melt water contains dissolved materials including those nutrients that contribute to algal blooms. Melt water tends to run slowly, picking up speed during the day as it warms.

The silt and organic particles like leaves moved to the lakes and streams by the faster flow carry nutrients to the lakes, but also contribute directly to sediment buildup and shallowing of the water.

Sediments provide habitat for invasive plants and other aggressive invaders, which damage native vegetation, fish and other elements that maintain the health of a lake.

"Salt is also an issue. We're raising salt levels in groundwater and in lakes. Although it's not at a toxic level, chloride levels are getting higher. It's the constant loading to groundwater that could be a serious issue in 100 years," says Lathrop.

How can non-point pollution from snowmelt and spring rains be reduced?

"To help, you can remove street gutter material and compost it for use on flowerbeds rather than let it gather in the gutters to be taken down to a storm drain headed for the lakes. Street sweeping stops for the winter and leaf material in the gutters will leach its materials and go straight into the waterways if not removed from the gutter," says Lathrop.

For more information on what you can do to help the lakes and streams in your area, visit

www.myfairlakes.com or

www.countyofdane.com/lwr/d/lakes/stormwater.shtml



Black Earth Creek Watershed Association

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**Black Earth Creek Watershed Association
Established 1987**

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Jim Troupis, Vice-President
Tom Ehlert, Secretary
David Lucey, Treasurer
Steve Born Barbara Fess
Carl Jones Jr. Porter Martin
Jeff Postle Wayne Rounds

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

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Please remember to renew your membership this month! BECWA depends on contributions from members like you to support our efforts in the Black Earth Creek Watershed. Please consider a gift today!



Join the BECWA Today!
For the wise management of the land and water resources in the Black Earth Creek Watershed

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.

*Donations are tax deductible as allowed by the law

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