



Rock River Reflections

A publication of the *Rock River COALITION* produced in cooperation with the University of Wisconsin-Extension Winter 2007 Volume 10, Number 1

THE ROCK RIVER BASIN NEEDS YOU !

by Ed Grunden, RRC Monitoring Director



Ed is ready for the upcoming monitoring season at our newest monitoring location at Aztalan State Park on the Crawfish River.

Monitors are needed to take a few simple water quality tests. Although simple in nature and user friendly to do, these tests when viewed as a whole begin to give us a view of the quality of water in the Rock River Watershed. With fresh snow blanketing the ground and ice flows slowing heading south on the Rock River, Wisconsin has once again become a beautiful winter wonderland.

As I begin my first year as Director of Monitoring for the Rock River Coalition, I look toward the monitoring season with great anticipation and excitement. I look forward to working with those of you who are 'veteran monitors', and hope that many new monitors will join our team. The information being collected is being used by the Department of Natural Resources and other environmental groups, as well as giving a general overview of the water quality of the basin.

Our 2007 monitoring season begins with a celebration of work completed by the volunteer monitors in 2006 at our annual Confluence. This year the Confluence will be held in Lake Mills at the City Municipal building on Saturday, March 3rd. I extend a hearty Wisconsin welcome and hope that all monitors and anyone interested in joining the monitor team will be able to attend. The Confluence will be followed with training sessions for new monitors in the spring. By then the monthly monitoring season will be in full swing with Wisconsin's winter wonderland giving way to spring flowers and the sound of migrating waterfowl and rushing water.



Ellen Rulseh, the Rock River Coalition's first Citizen Monitoring Local Coordinator and Outreach Coordinator is leaving the RRC. Here Ellen is learning how to measure dissolved oxygen on a cold wintry day at a state Water Action Volunteer training. This is just one example of Ellen's dedication as she helped establish our monitoring program in Jefferson, lower Dodge and Columbia counties. For more information see page 8.

Wetland Monitoring Coordinator Position

The Rock River Coalition has an immediate opening for the position of Wetland Monitoring Coordinator, working 10 - 15 hours/week. The position requires that the individual be active in recruiting volunteers, overseeing the various monitoring events occurring at the wetland areas surrounding the Lake Mills area, and helping the Coalition with fundraising and grant writing. For further information contact Ed Grunden at ed@rockrivercoalition.org or to apply, send a cover letter and resume to: Attention Ed Grunden, Rock River Coalition, 864 Collins Road, Jefferson WI 53549 (email application accepted). All applications need to be submitted by January 31, 2007.

Volunteer Monitoring Confluence: Saturday March 3rd

The annual Rock River Coalition Confluence will be held Saturday March 3rd, 2007 in Historic Lake Mills. The theme of this years Confluence is "volunteer monitors – the most important link" in the preservation of the Rock River Basin. We'll begin the morning listening to keynotes by DNR staff that strongly believe in citizen monitoring of our states environment. The breakout sessions will allow time for learning about advanced macroinvertebrate monitoring, identifying look-alike bird species of the wetlands, indicator species of healthy wetlands, computer data entry, or learn about the Native American structures beneath Lake Ripley – are they fact or fiction? The afternoon will provide time to be recertified in lake monitoring or stream monitoring. New monitors will be able to learn more about the monitoring program, ask questions, and meet the Coalition staff. Most importantly we welcome you to a day of meeting other monitors and being praised for the important work that you do for the environment of the Rock River Basin. To register please contact Kim at 920-674-7297 or kimb@co.jefferson.wi.us. For questions, or if you wish to join the monitoring effort, email Ed Grunden, Monitoring Director at: ed@rockrivercoalition.org.



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The Rock River Basin GFLOW Model Overview

by Joe Dorava, RRC President and GFLOW Coordinator

GFLOW Coordination

As the President of the Rock River Coalition and the GFLOW Project Coordinator, I thought it might be necessary to remind you about the groundwater modeling we are completing in the basin. I would like to describe the model so you understand its function, emphasize the importance of the groundwater modeling effort, and ask you for assistance in funding the project. We have already contracted with the United States Geological Survey (USGS) to complete the modeling, but have not collected enough money to support the entire project. During the next two years, while work is underway on the project, we will continue to solicit funds from Rock River Basin communities and businesses to support the modeling and to maintain the model once it is created. As the GFLOW Coordinator, I am available to answer any questions you have about the project and will be coordinating our requests for support for the project. You can reach me at 800-261-6468 or via email at jdor@vierbicher.com.

GFLOW Model

A groundwater flow model is a computer program that simulates the movement of ground water through geologic materials. Groundwater scientists and planners commonly use models to study and evaluate problems such as groundwater recharge, the movement of water to wells, wellhead protection, and the exchange of groundwater with surface water features such as springs, lakes, streams, and wetlands. Many different modeling codes (computer programs) are available for constructing groundwater models. A computer program called GFLOW will be utilized for the Rock River Basin effort because of its ability to simulate the interaction between groundwater and surface water.

The GFLOW model is a tool to help communities manage their groundwater resources. It will answer questions such as: How would a new large quantity groundwater user (such as an irrigation well, an ethanol plant, a large factory with water cooling needs, a large subdivision) affect the existing groundwater table? Will it dry up existing wells? Dry up springs or wetlands? Affect the flow in a stream or the Rock River? The GFLOW model will help answer these questions prior to problems developing.

GFLOW Model Uses

The development of a groundwater flow model for the Rock River Basin will take advantage of existing data and existing groundwater flow models in Dane and Rock counties and the SEWRPC region. These existing models are of different types, vintage, and scales, and were constructed with different objectives. However, through a step-wise approach, in which complexity is added to the model only as needed, the information supporting these existing models can be incorporated to provide a unified hydrogeologic framework for the Rock River Basin. The goals of Basin groundwater flow modeling are to:

- Improve the overall understanding of the hydrogeology of the Rock River Basin
- Identify areas where important hydrogeologic data are missing or sparse
- Evaluate surface water/groundwater interactions and baseflow contributions to the rivers and streams
- Provide a quantitative framework for testing the hydrologic effect of possible future site-specific changes in land use within the Rock River Basin
- Provide a hydrogeologic basis to interpret water quality data

We want to stress that this proposed basin-wide model will necessarily be simplified in order to cover the broad area of the basin within the scope of anticipated funding and data availability. In addition, the model will focus primarily on shallow groundwater resources and the relationships between shallow groundwater and surface water resources.

GFLOW Model Schedule

The United States Geological Survey will develop the model starting in October 2006, during year one existing information will be compiled, a base map will be selected, a water table map compiled and digitized, and a database constructed. The data and mapping efforts will be used to formulate a conceptual model of the regional hydrogeology. In year two, the model will be calibrated against simulated groundwater levels and measured stream flows. Particle tracking will be performed at various sites to illustrate groundwater flow paths and travel times. The model will be completed by September 30, 2008, after which it can be updated and refined to answer specific questions.

GFLOW Model Results

The final product will be a Groundwater Flow Model: to quantify the regional hydrologic flow system in the basin to provide a tool to evaluate specific groundwater resource management questions. The final report Simulation of Ground-Water/Surface-Water Interaction in the Rock River Basin, Wisconsin will describe the aquifer units, their hydraulic properties, extent, thickness and elevation, and will also summarize baseflow contributions by sub-basin and groundwater travel times.

GFLOW Model Support

We have established a goal for voluntary contributions based on community population paid over two years ranging from \$1,000 total for those with populations under 2,000 and \$6,000 total for those over 10,001 in population. Any contribution made will benefit you directly by providing essential information about groundwater dynamics in your area that will affect current and future available resources. Additionally, insights gained from the model will allow you, other Basin businesses, residents and officials the ability to better prioritize and take action through good land use planning.



Mission

"To educate and bring together people of diverse interests to protect and improve the economic, environmental, cultural, and recreational resources of the Rock River Basin in Wisconsin"

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RRC is a 501(c)(3) not-for-profit organization, providing equal opportunity in employment & programming.

If you need special accommodation for programs please contact the RRC at least two weeks in advance.

3 More Simple Things You Can Do!

Resolve this year to make three changes to your yard work which will help protect water quality.

Test Your Soil & Fertilize after Memorial Day

Most people apply more fertilizer than they need, and they tend to fertilize their lawns earlier than needed. Resolve this year to have a soil fertility test done to see what nutrients



your lawn really needs. The test results will tell you the proper amounts of phosphorus, nitrogen and potassium your yard needs as well as its pH. Every UW-Extension County Office has bags and instructions for testing your soil. Some will send in your samples, while others have you send it in yourself. The cost is typically \$15 per sample for lawns and gardens.

Many people fertilize earlier than necessary in the spring. If you wait until around the end of May, beginning of June, your fertilizer will be more effective for your plants and less likely to runoff. The next most effective time to fertilize is in the late fall typically after you've put away the lawn mower. If you feel your lawn needs another application, the third best time is in late August.

Wash Your Car on the Lawn or at a Car Wash



When you wash your car on the driveway, all that soap, dirt, and automobile chemicals wash down into the street, into a storm drain and directly into a river or lake. By washing it on your yard

the nutrients can be used by plants and the chemicals are bound up by the soil. If this isn't practical, support a local business that is connected to the city sanitary sewer system, then your dirty water will be treated properly. Do not wash your car on the lawn if you have very sandy soil where the pollutants could leach down into the groundwater.

Move Your Down Spout to the Lawn

One of the Rock River Coalition's goals is to infiltrate as much rain water as possible instead of letting it runoff into streams and rivers. For every square foot of roof about 15 gallons of water runs off each year. You can help improve the Rock River Basin by routing your downspouts to your yard, if they don't already



do so. Just think of it, a simple 2,000 square foot ranch could infiltrate up to 30,000 gallons each year. Of course some of it may still runoff, so consider installing a rain garden for each downspout to capture it all.

Earth Day 2007

by Jan Ruster, RRC Board Member

April 22 will be the 36th anniversary of Earth Day founded by Wisconsin State Senator, Gaylord Nelson. 1970 was a volatile time politically and today's hot issue global warming was just one of many concerns involving air pollution, water quality, temperature changes and land conservation. Since that first Earth Day, we have seen legislation and numerous volunteer efforts to address each of these issues. This is indeed a time to celebrate those gains.

But let us not forget three simple steps we as individuals can continue to do daily that contribute to these successes. Save or use less energy, use less water and reduce/reuse/recycle whether at home or work. Using energy efficient products, turning off lights and computers when not in use, taking the stairs instead of elevators, using cloth napkins or towels rather than paper, donating extras to people in need rather than throwing them away and utilizing a compost pile are just a start. Every community has a recycle program to keep landfills at a minimum. And then the biggest sacrifice of all, car pool, bike or walk instead of using your car for every trip.

Above all, volunteer your time to efforts that are dedicated to improve our quality of life. The Rock River Coalition has a number of programs that will fit into your time schedule and interests. Your tax deductible gifts are necessary to continue with our rain garden building, stream and wetland monitoring, and environmental conservation programs that are available to the public.

We appreciate your support.

Earth Day Ideas for Schools

by Suzanne Wade, UWEX Rock River Basin Educator



It's not too late to begin planning for school or youth group activities for the spring. The Rock River Coalition's *Rock River Basin Environmental Action Resource Guide* can help you in planning.

The guide describes these ten actions: Storm Drain Stenciling, River & Lake Clean-ups; Monitoring Programs including stream, lake, butterflies or frogs; Prairie Restoration; Shoreline Restoration; Controlling Purple Loosestrife and Garlic Mustard; Rain Gardens; Reduce, Reuse, Recycle; Lake or River Festivals and Groundwater Guardians. You can get a copy

by calling 920-674-7297 or by emailing kimb@co.jefferson.wi.us.

Websites featuring Earth Day activities include:

<http://www.epa.gov/earthday/classroom.htm>

<http://www.earthday.gov/classroom.htm>

<http://www.dnr.state.wi.us/ee/>

<http://www.eeweek.org>

3rd Annual Johnson Creek Earth Day Celebration

by Andrea Breen, Johnson Creek Green Committee

In celebration of Earth Day, April 22, the Johnson Creek Green Committee is once again planning activities which will be held on Saturday, April 21, 2007. The third annual Creek Clean-up will run from 9 am to noon. Activities include removing garbage and recyclables from the Creek shoreline, working on the nature trail system in the Village and other small ecology service projects. A fundraising brat fry will take place at Perna's Premium Meats, across from the elementary school. At last year's event, Senator Neal Kedzie and Village President Fred Albertz each addressed the volunteers during lunch.

Interested volunteers, including church groups or scout troops, who might want to increase their service hours, can contact the Village at 920-699-2296, or the Green Committee chairperson, Andrea Breen, at johnsoncreekgreen@charter.net. Please note if your group has particular interests or skills.

The volunteers will receive a commemorative T-shirt and a complimentary lunch at Perna's. Corporate sponsors are being sought for T-shirt sponsorship, and will be recognized with their logo at the event and on the shirts. Advanced registration, especially for groups, is appreciated to help with the planning efforts, but volunteers are gladly welcomed on the day of the event as well. Dress appropriately, bring work gloves if you have them. Activities will take place, even in light drizzle, unless severe weather requires us to postpone the date to the following Saturday.



RRC 2007 Election: Call for nominations

The Rock River Coalition is looking for dedicated individuals who would like to make a difference in the Rock River Basin. If you feel you have the time, and interest to be a board member, please contact the RRC President, Joe Dorava at jdor@vierbicher.com or at 800-261-6468.

We will have two openings in 2007 with a three year commitment: one to replace Roger Kist and another to take Warren Topel's standard board position. Warren will continue to serve as Past-President.

Elections will be held at the annual meeting on May 8, 2007.



Roger Kist, one of our original board members came back to help us again from 2004 - 2006. We sincerely thank him for his service.



Adopt a Rain Garden

The RRC has assisted a number of communities over the past three years develop rain gardens.

We are looking for volunteers to adopt these rain gardens. Responsibilities will range from just checking them out and letting us know all is well, to helping with weeding and maintenance.

If you'd like to know more, please contact Suzanne at either 920-674-8972 or by email at suzanne.wade@ces.uwex.edu



The UWEX Jefferson County Rain Garden is one of the gardens in need of a few stewards to help keep the lawn from encroaching along with general weeding and maintenance.

Controlling Carp in the Rock River Basin

It's unbelievable to most that carp were purposefully introduced in 1881 as a sport fish. Today they are one of the biggest reasons our lakes are cloudy and weedy. According to DNR Fisheries Biologist Kurt Welke; carp set off a chain of events that tip the normal balance of a clear water lake toward that of a turbid one. First they graze off an aquatic plant called Chara that would normally seal the bottom. Without this plant, sediments can easily become resuspended. These sediments often contain phosphorus which can lead to explosive algae growth. Because the algae clouds the water, the rooted plant community shifts towards shade tolerant species such as Eurasian Water Milfoil. This invasive plant grows up and out, shading the bottom even more. This change in the plant community also results in a change to fish populations. The dense non-native vegetation provides great hiding places for prey species such as bluegill. The bluegill population increases, but their size is stunted due to lack of food. The dense vegetation makes it hard for predator species, that anglers prefer, to find their prey and when they do the fish are smaller, so they have to expend more energy hunting. Carp also resuspend sediment by their habit of rooting through the sediment looking for food.

Several lake communities in the basin have recently begun work to both study and do something about this problem. On this page and the next we highlight their efforts.

Geotubes are working to restore wetlands in Lake Sinissippi

by Greg Farnham, Lake Sinissippi Improvement District

The Lake Sinissippi Improvement District in Dodge County completed the initial phase of a wetland rehabilitation project using a novel technology: Geotube® geotextile fabric containment tubes as an offshore breakwater. This is the first time Geotube technology has been used in Wisconsin for lake and wetland rehabilitation.

Working under regulatory permits from county, state and federal agencies, the lake district and contractor installed 760 feet of tubing across the mouth of a 24-acre embayment. Hydraulic pumping filled the tube with sediment slurry dredged from the lake. Water from the slurry passes through the porous polypropylene fabric and the entrained sand, silt and clay remain within the tube. The tubing is 30 feet in circumference and when filled with sediment has a height of about five feet. The filled tube rests on the lake bottom in four feet of water, with about one foot of the breakwater extending above the water. Additional sediment was pumped behind the tube to form a berm. Close to 3,000 cubic yards of sediment were removed from



Aerial photograph of Geotube breakwater structure on Lake Sinissippi.

-photo by Greg Gasper, lake property owner



Sediment-filled Geotube breakwater structure on Lake Sinissippi.

-photo by Pat Hahn, freelance reporter

the lake to create the breakwater structure. A gravel outlet culvert with mesh screening was constructed at one end of the tube to allow for water flow and to restrict passage of carp attempting to migrate from the lake into the bay.

Fisheries biologists from the DNR Horicon office used an air boat to distribute rotenone, a fish toxicant, throughout the embayment. It was necessary to eradicate the carp in the bay to allow the native seed bank in the sediment to germinate and grow and to create a suitable substrate in which to plant other aquatic plant varieties. Submergent and emergent varieties of pondweed, white water lily, hard and soft stem bulrush, pickerel weed and blue flag were planted within the embayment near the breakwater by the lake district and Ducks Unlimited. An important objective of the project is to restore lost wetland vegetation and re-establish wildlife habitat.

We will provide updates on the success of this project in future issues of the newsletter.

Lake Wingra Carp Slated for Removal

by David S. Liebl, Friends of Lake Wingra

The Wisconsin Department of Natural Resources, the University of Wisconsin, Dane County, City of Madison and the Friends of Lake Wingra are collaborating in a project to improve water quality and aquatic habitat by reducing the population of common carp *Cyprinus carpio* in Lake Wingra. Evidence from many research projects around the world indicates that the presence of carp is a primary cause of poor water quality and destruction of native macrophytes (rooted plants).

In 2005, DNR's Richard Lathrop placed a carp enclosure on the north shore of Lake Wingra and removed the carp from it. The aerial photo, below, shows the greatly improved water quality within the enclosure, as compared to the turbidity in the rest of the lake. Ongoing monitoring of native macrophytes shows improved native plant habitat, demonstrating what the lake could be like with low carp densities. Now, we are exploring how we can reduce the



numbers of carp in the Lake, with the hope that the improvements seen within the enclosure become widespread.

However, maintaining a carp-free environment over the long-term does not seem feasible because the occasional inundation of the Wingra dam provides access to the Lake by other carp populations. Since the introduction of carp to Lake Wingra in the mid-1800s, there have been repeated attempts to control their population through periodic whole-lake seining, but this technique harms macrophytes and game fish.



Another eradication approach, the wholesale poisoning of all fish species with subsequent reintroduction of those deemed beneficial, is incompatible with our vision of lake stewardship. We are proposing to suppress the carp population through methods that do not threaten other fish and plant species.

Over the last year DNR's Kurt Welke has been studying the movement of carp in Lake Wingra using radio telemetry (see above), and discovered that carp congregate in the warmer waters of Vilas Park lagoon in early spring time. We believe this situation presents us with an opportunity to cull significant numbers of carp during the spring spawning period. To accomplish this we will erect a fish weir trap at the entrance of the lagoon, and fencing barriers at the channels to the east lagoon (see photo below). We expect large numbers of spawning carp to enter and become trapped in the lagoon. Commercial fishermen will be employed to seine the lagoon in mid-to-late May.

Using fin-clip data from the removed carp, we will be able to estimate total Lake Wingra carp population, and the impact of our removal project. If our approach is effective, we expect to repeat the carp removal in subsequent years, until the carp population is reduced to the lowest level feasible. At the same time, we expect to see dramatic improvements in Lake Wingra's aquatic habitat. For more information on the project see: www.lakewingra.org.



-photos courtesy of the University of Wisconsin

It's Time to Renew Your Membership in the Rock River Coalition!

The Rock River Coalition is very appreciative of your annual membership dues. We are excited about the accomplishments your membership helped to make a reality, including such important programs as volunteer monitoring, rain garden, shoreline buffer and basin-wide community education efforts. You have also underwritten educational programs for children and the public at large. Furthermore, you have helped us lead crucial public awareness initiatives such as the importance of maintaining quality and adequate groundwater in our Rock River region. Thank you for your support!

We have introduced new business and individual sponsor member benefits for 2007. As a member of the RRC you receive many benefits including:

- Advanced notice of events and activities
- Discounts on seminars and programs
- Quarterly newsletters
- Voting privileges at annual meetings

NEW this year!

A membership or donation at the \$100 level will be recognized on our RRC web page.*

Member/donors at the \$500 level will receive a quarter page ad in the Rock River Reflections newsletter for one issue.*

Member/donors at the \$1,000 level will receive a quarter page ad in the Rock River Reflections newsletter for four issues.*

Member/donors at the \$10,000 level will receive a half page ad in the Rock River Reflections newsletter for four issues*. They will also be invited to a luncheon meeting with the RRC President to discuss the RRC initiatives and future directions. In addition donors at this level will be invited to our annual "Send Your Legislator Down the River" event with complimentary picnic dinner provided.

With your support, the following programs are planned for 2007:

Targeted Runoff Protection: The RRC, as part of a partnership, has applied for a grant to control sediment and phosphorus loading to Horicon Marsh.

Water Star Community: The RRC is working to design a new state-wide program to honor communities with good environmental practices.

Residential Phosphorus Bans: The RRC will work to educate citizens and municipalities about the concerns of phosphorus pollution in our lakes.

Volunteer Stream Monitoring: With the support of General Motors, the Rock River Coalition will initiate a school monitoring program in the Janesville area with the goal of eventually expanding basin-wide.

* Business ads will be subject to RRC Board approval for content consistent with the Rock River Coalition mission.

UW Discovery Farms and Tile Drain Research

In Wisconsin, the UW Discovery Farms are conducting research on tile drainage and water quality. They have a research location in northeast Wisconsin and another in the Rock River Basin.

The Discovery Farms goal is to first find out if there are problems with subsurface tile drains and if there are, to look for solutions such as the devices discussed in the next article. While their research is preliminary, they have seen some interesting results.

Subsurface tiles are good at doing what they are supposed to do: remove water from fields. If water is leaving the fields then there is great potential for sediment and nutrients to be leaving as well. Many of the tile systems they are studying rarely stop flowing, even when the ground is frozen, so nutrients can be leaving at any time of the year. Tiles can have less sediment movement than surface water runoff, but a large amount of nutrients can be removed from agricultural fields via subsurface drains.

If you would like to keep up with Discovery Farms research on this or other topics go to: www.uwdiscoveryfarms.org as well as look for updates in future newsletters.

Research Projects in the Rock River Basin

The Kopeke Farm, located in Waukesha County, is involved in a unique partnership between the Farm, UW Discovery Farms, the Sand County Foundation and the Wisconsin Buffer Initiative. Two questions are being examined at the farm:

Wisconsin Buffer Initiative

The objective of the Wisconsin Buffer Initiative is to create tools to use as guides for designing effective buffers on typical ag landscapes. The challenge we face in Wisconsin is to determine how to design, locate, and maintain buffers so that desired and specified environmental and possibly economic benefits can be gained while still protecting the interests of private landowners and public revenues. Wisconsin Buffer Initiative conducts research on two in-field test sites at the Kopeke Farm.

Sand County Foundation

The Sand County Foundation is a non-profit organization committed to advancing the use of ethical and scientifically sound land management practices and partnerships for the benefit of people and the ecological landscape. This initiative focuses specifically on reducing nitrogen runoff into our waterways but has the potential for adaptation for other environmental amenities. UW-Discovery Farms is working with Sand County Foundation to evaluate nutrient and sediment losses through tile line systems. This research will also stem into experimentation with different cover crops on top of tile line systems to reduce nutrient runoff.

Drainage Water Management Benefits Both the General Public and Farmers

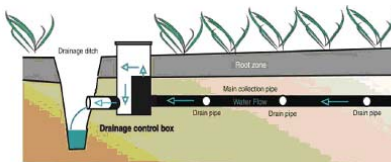
by Tracey Novak, RRC Board Member and farmer

In this and future newsletters we will provide updates on new practices being done by farmers to address water quality. A fairly new concern is how much sediment and nutrients are leaving fields through tile drains. Nationally, this is being examined and new systems studied.

It is estimated that drainage water management can reduce nitrogen outflows by 30 to 60%. This reduced nitrogen outflow benefits the general public by having lower nitrogen being released to our surface waters. Nitrogen is one of the main culprits for the hypoxia (dead) zone in the Gulf of Mexico. The Rock River Basin is one of the top ten contributors of nitrogen to the Mississippi River. Drainage water management may benefit farmers through increased crop yield. Nitrate-nitrogen is a naturally occurring form of nitrogen and is an integral part of the nitrogen cycle in our environment. Nitrate is formed from fertilizers, decaying plants, manure and other organic residues. Plants use nitrate and ammonia, but sometimes rain can move this nitrate into shallow groundwater or through subsurface drains to surface water bodies.

The Natural Resources Conservation Service awarded a \$1.9 million grant to the Agricultural Drainage Management Coalition (ADMC) to show producers a new way to look at drainage. This grant is being implemented in partnership with Iowa State University, University of Illinois, Purdue University, Minnesota Department of Agriculture, University of Minnesota, Ohio State University, USDA-Agriculture Research Service, National Corn Growers Association, and members of ADCM.

CONTROLLED DRAINAGE SYSTEM



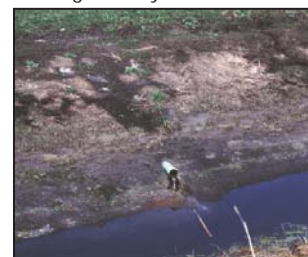
a drawing; the two illustrations were taken from the ADCM Conservation Innovation Grant Fact Sheet. With control devices, water level is retained until the water table rises above the "drop logs", but drains before the higher water table rises into the root zone and causes crop damage.

By holding a higher water level, managed subsurface drainage reduces the total amount of subsurface drain water outflow by 40 to 50% over the course of a year. Because the annual outflow is reduced by 40 to 50%, the nitrate load is also reduced by approximately the same amount.

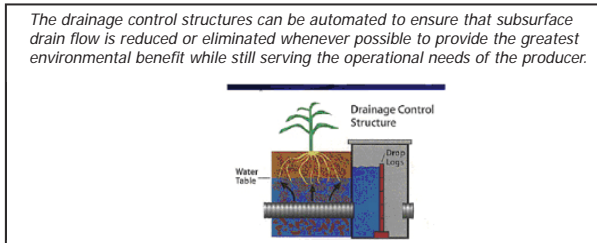
Installing the Drainage Control Structures on previously tiled land with little slope is an affordable practice because large areas can be covered with fewer control devices. For example, a fairly level, 40 acre field would have, on average, 3 drainage control structures on one main line. The drainage control structures cost about \$1,250 each, or an initial cost of about \$94 per acre. It becomes more costly with fields that have larger slopes, but the benefit of increased nitrate soil levels, as well as higher water levels will still be evident.

While there are studies concerning water quality being conducted in Wisconsin, this brief overview shows how much concern the nation as a whole has about our water quality. The sidebar story describes two of these studies that are occurring in the Rock River Basin.

Diagrams provided by the Agricultural Drainage Management Coalition. Photo by Suzanne Wade



A tile drain outlet in a farm field along Highway 18 in Jefferson County discharges to a ditch and ultimately ends up in Lake Ripley. Work farmers can do to reduce the amount of nitrogen and other agricultural chemicals is important to our downstream water quality.



The drainage control structures can be automated to ensure that subsurface drain flow is reduced or eliminated whenever possible to provide the greatest environmental benefit while still serving the operational needs of the producer.

President's Message

During my first few months as President I have been surprised by the level of activity underway at the Rock River Coalition. Numerous activities simultaneously progress amongst the directors, our staff, the coalition members and volunteers. For example, we have hired a new Administrative Assistant, Jennifer Hanneman and a new Wetland Volunteer Monitoring Coordinator, Stefanie Nadeau who has since decided that she is not the best fit for the position, so we are looking to replace her.

We have pursued grants from the Quirk Foundation for a Watershed Education Center, from WDNR for a Water Quality Educational Program, and from EPA for a Watershed Study near Horicon Marsh. We have secured a contract with the USGS for the GFLOW modeling and another with Earth and Water Works, LLC for their work with our fall rain garden programs in Middleton and Madison. We also sponsored a workshop on agricultural runoff regulations in Dane County.

In addition to the numerous projects we have underway, we have been developing some new policies including a new personnel handbook and working through staff transitions. Soon, my attention will be on replacing our able board members, Roger Kist and Warren Topel.

Each of these items requires the president's attention to be sure the Coalition continues to move forward towards our mission. It's not all work, there are some very enjoyable aspects to being President. Coming up soon, at our annual meeting, will be our biennial awards presentation. I hope you each consider nominating a person, elected official, business or organization. Then my favorite program in June, Send Your Legislator Down the River, an opportunity for the Coalition and each of you, to interact with local politicians while enjoying the beautiful Rock River Basin.

The recurrent reward of reaching the public or new partners with our message of enhancing cooperation in the Basin keeps us all happily pursuing our mission. -Joe Dorava, RRC President

Nominate a Rock River Basin Protector Today!

The RRC, every two years, recognizes individuals, organization, and businesses who have made positive contributions in the basin. The Rock River Basin Protector Awards are given for significant contributions in the areas of economics and in environmental, cultural and recreational resource improvement or protection.

Protector awards are offered in the following categories:

Individual: For individuals, teams and families.

Educator: K-Adult educators, classroom and nonformal i.e. nature centers, museums, Universities, Tech Colleges, UW-Extension.

Organization: Non-profits, agencies, municipalities or municipal departments.

Legislator: Any elected officials who has sponsored bills or laws, or brought unique resources to the basin for any of our mission categories.

Business: Any LLC, partnership or corporation who has provided support, completed projects, or instituted internal procedures or methods improving our Basin's environment.

Awards will be based on results and the significance of the accomplishment. All actions must either be completed, or major results realized. To be considered significant, there must be a demonstration of economic, environmental, cultural and/or recreational benefit to the basin.

Nominating someone is easy, just send the following information to the RRC:

Nominator name and contact information

Nominee name and contact information: Include title and organization (if appropriate), address, phone number, and email. If the nomination is for a business or organization, include a contact person with title.

Category: state which category the nomination is for.

Description of Accomplishments: Detail why the nominee deserves the award use no more than two pages. Supporting documents can be included such as publications, news articles, websites, etc.

Corroborators: Provide the names, phone and email (if available) of two other people who could be contacted to corroborate the accomplishments.

Nominations are due by April 27, 2007, they should be sent to the Rock River Coalition Awards Committee, 864 Collins Rd, Jefferson WI 53549.

Awards will be presented at the RRC Annual Meeting on May 8.

Become a RRC Member

In addition to supporting RRC work, members receive newsletters, notices of forums, conferences, and special events. To become a member, complete the following:

Name _____

Title _____

Affiliation _____

Address _____

City _____ State _____

Zip _____ Phone (____) _____

E-mail _____

Annual tax deductible membership fees

Individual	\$ 25	_____
Family	\$ 35	_____
Student/Senior Citizen	\$ 15	_____
Classroom	\$ 25	_____
Affiliates*	\$ 50	_____
Corporate	\$ 200	_____

*Includes small businesses, organizations, lake districts, and municipal departments

Any donation of \$100 or more will be recognized and linked to your website from our website.

Tax deductible donation

Amount	Purpose
	General Support
	Citizen Monitoring
	Rain Gardens
	Other:

Donations are greatly appreciated and can be targeted towards specific projects.

Please mail this completed form with check to:

Rock River Coalition
823 Lucas Lane
Jefferson, WI 53549

or register and pay online with PayPal at:

www.rockrivercoalition.org/membership.asp





Mark Your Calendars

Send Your Legislator Down the River
June 11, 2007

The Rock River Coalition's annual "Send Your Legislator Down the River" event will be held on June 11th, 2007. This year's outing will be in Dane County on the scenic Yahara River between Babcock County Park in McFarland and Fish Camp County Park on Lake Kegonsa. This event will be part of the Dane County Lakes and Watershed Commission's annual Yahara Lakes Week. We also hope to have copies of the new Yahara Water Trail Guide available for our use on this trip.

A picnic meal will be served at Babcock Park from 4:30 - 6:00 p.m. Attendees will have the opportunity to talk with local legislators during a roundtable session from 5:00 - 5:45. The 3.5 mile canoe trip will launch shortly after 6:00 p.m. and is expected to take about an hour and a half to reach Fish Camp Park. Ground transportation between the two parks will be coordinated. Babcock County Park is located in McFarland on U.S. Highway 51, 2.5 miles South of U.S. Highways 12 & 18 in Madison.

Canoes, paddles and life jackets will be provided for participants who need them. Participants are encouraged to bring their own canoes or kayaks if convenient. We hope to be able to use the DNR's two 25 foot voyageur replica canoes for this event as well.

Additional information and registration forms will be available in early Spring. Put this fun and interesting event on your calendar now. Contact Ken Wiesner at wiesnerk@msn.com if you have any questions. Contact the UWEX Jefferson County office at 920-674-7297 or kimb@co.jefferson.wi.us to be put on the mailing list.



Calendar of Events

RRC Board Meetings

Jan 25 and March 13: Board meetings typically start at 4:30 pm and are held at the UWEX Jefferson County Office, 864 Collins Rd, Jefferson

Groundwater Issue Team

Feb 1, 2007 1:30 - 3:30, DATCP with speakers Kevin Masarik and Lynn Markham, UWEX Specialists to discuss protecting groundwater through comprehensive plans

From Plan into Practice: Solutions for Our Changing Lakes: Feb 24, 8:00 - 4:00 Waukesha Technical College, go to www.wisconsinlakes.org for more information

RRC Volunteer Monitoring Confluence

March 3, 8:30 - 3:00 Lake Mills Community Center

DNR Runoff Management and Urban Nonpoint Grants Workshop

Feb 21, 1:00 - 4:00 Madison DNR Gef II Rm G09

Newsletter Deadline

Deadline for the spring newsletter is April 9, 2007

RRC Annual Meeting and Awards Celebration

Tuesday May 8, 2007

Send Your Legislator Down the River

June 11, 4:30 - 8:00, Babcock Park, McFarland

Ellen completes Rain Garden Project: Moves on to new challenges

Thank you Ellen for all you gave to the Rock River Coalition

Four years ago, Ellen Rulseh came to the Rock River Coalition wearing two hats: she was our Community Outreach Coordinator and a Stream Monitoring Volunteer Coordinator funded through two DNR River Planning Grants. With Ellen's great passion for rain gardens she was able to install rain gardens as community projects at Horicon, Hustisford, Watertown and the UWEX Jefferson County Office. As a direct result of her work we were able to successfully write grants to support our "Rain Garden in Every Community" Project. Ellen worked through great challenges in bringing together interested teachers and schools with municipal departments that needed to control runoff. She had to work around downpours washing away plants and creating muddy sites, school schedules and city constraints. Ellen can be very proud of her accomplishments where students from seven schools and ten grade levels, as well as one youth program, installed nine rain gardens. Schools included: Middleton Elm Lawn Elementary and Kromrey Middle schools; Johnson Creek High and Middle schools; Stoughton High School, Madison Whitehorse Middle School, Beloit Synectics Charter School, and Madison's Boys and Girls Clubs. All told she saw more than 18,050 square feet of rain garden installed which infiltrate a conservative estimate of 2,674,353 gallons of rain water.

The program directly educated more than 451 youth (54 elementary, 104 middle & 45 high school students), 56 adults (14 teachers & 42 parent & community volunteers) as well as 20 community leaders/elected officials about the concerns of storm water runoff. More than 200 adults attended an open house at the Boys and Girls Club plus more than 10,000 people learned about the project through radio, newspaper articles and newsletter articles.

The Coalition will continue to work with communities on storm water and rain gardens but without Ellen's expertise our involvement will be much more limited.



Watertown River Walk

The Mayor's Committee will miss Ellen's work on publicity and meeting organization. She was a catalyst that helped them get organized, establish goals and create a TIF district. She leaves them well poised for tackling the challenges of establishing a river walk. Through the work of consultants at VandeWalle & Associates and with the help of UW-Extension educators Steve Grabow and Suzanne Wade the riverwalk committee will continue to move forward.

Rock the Rock

The Rock River Coalition will carry on with its goal of \$100,000 in members and donors by December 2007, through the "Rock the Rock" Campaign Ellen initiated. Look for more information in future newsletters.

We will all miss Ellen's enthusiasm, expertise, unique hats, special surprises and the flowers she frequently brought to our office. Good luck Ellen and may your business, Earth and Water Works, LLC, prosper with the extra time you will have to devote to it.

Rock River Coalition to close Post Office Box

The Rock River Coalition will soon be closing its PO Box in Watertown and will only use its office address: 864 Collins Road, Jefferson WI 53549. Please make the appropriate changes to your address books and labels. Thanks!

