

Bacterial Contamination in the Watershed

Two summers ago, BRWA began sampling streams in our watershed for evidence of bacterial contamination. The numbers that we, and other water quality agencies, are finding, cause concern.

While most of our samples indicate high water quality, occasionally we log numbers four and five times higher than the numbers EPA deems safe.

Where could such contamination come from? The chief suspects are failing septic tanks or sewage treatment facilities, land spreading of septage (from holding tanks and septic tanks), and manure spreading. At the moment, we do not know the source of our bacterial pollution. Some tests can distinguish between human and animal contamination, but they are expensive, and to date, we have not submitted any water samples for such testing.

Why the concern? *E. coli* is an indicator of related pathogens that can make people sick.

Doctors in central Wisconsin noticed a lot of young children showing up in their offices with otherwise unexplained cases of acute diarrhea. When the Marshfield Clinic investigated, they compared the household location of sick children with a control group of healthy children. The sick kids, they noticed, were far more likely to live in areas with higher densities of septic systems.¹

But they also noticed that the kids were not getting sick from well water, as they had originally suspected. Evidently, the kids were contacting the pathogens in polluted surface water, meaning that septic tanks were oozing waste water onto the land surface. ♦

Bad River Watershed Sites of Concern for *E. coli*

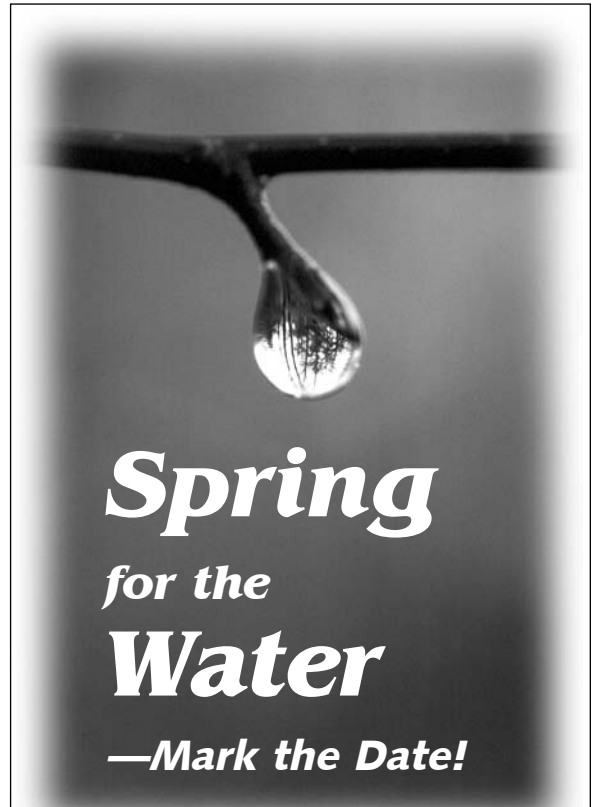
Site	Total # of <i>E. coli</i> samples	# of <i>E. coli</i> samples less than 236	# of <i>E. coli</i> samples between 236-500	# of <i>E. coli</i> samples between 500-1000	# of <i>E. coli</i> samples greater than 1000
Marengo R at Reimer Rd*	9	8	0	0	1
Vaughn Creek at Curry Rd**	14	10	0	2	2
White R at Maple Ridge Rd**	12	4	5	2	1
Marengo R at Gov Rd***	28	24	0	0	4
Marengo R at Rte 13***	22	16	1	0	0

Shaded areas indicate readings above the EPA acceptable level of 236 colonies per 100 ml of water sampled.

Testing agencies indicated as follows: * BRWA and Bad R. Natural Resources Department (BRNR) data, ** BRWA data only, *** BRNR data only.

BRNR data from Attachment K of BRNR Treatment as a State application available online at http://www.epa.gov/r5water/wqs5/pdf/badriver/badriver_attachment_klm.pdf

¹Borchardt, et al., Environmental Health Perspectives 111: 742-748, May 2003



**Spring
for the
Water
—Mark the Date!**

The Bad River Watershed Association's fifth annual "Spring for the Water" is Saturday evening, March 28, 2009, from 5:30 to 8:30 p.m. at the Northern Great Lakes Visitor Center.

Why tamper with success? The event will again feature:

- Soothing music by Glenn Walker Johnson
- Mouthwatering gourmet hors d'oeuvres, buffet dinner and desserts by Northwoods Catering
- Assortment of complimentary beverages
- Exciting silent auction of high quality handcrafted items and beautiful art objects, including outdoor adventures
- Useful information on the Bad River watershed and activities of the Association

It's a wonderful evening of great food and great people—you won't want to miss it! If you have never attended, then just round up a few friends and show up. Tickets are \$25 per person, payable at the door or preferably in advance to BRWA, PO Box 875, Ashland, WI 54806. ♦

From the Director

By Michele Wheeler

Well, the time has come. Last week, BRWA moved to a new—and bigger—office space. Those of you who visited our previous office—or should I say closet—will understand how very excited we are about the move. That small space in the AADC building met our needs through the transition from an all-volunteer to a staffed organization, but we've moved up in the world.



Matt Hudson (Watershed Monitoring Specialist) and Michele Wheeler (Executive Director) in the new office. Volunteer coordinator Bob Rice was on the phone.

We're now in the "penthouse" of 101 W Main Street—the building on the corner of Main St. and Ellis (the one with the mural on the back, kitty-corner to M&I Bank, with lions, no less, topping each corner of the building). Our new space has two offices, both with windows! I don't even turn the lights on most days.

Of course, what this really means is that we have grown organizationally. We now offer more programs and more staff to "get stuff done"—fixing culverts, finding problems that are important to local people and fixing them in a way that builds partnerships and coordinates activities.

And since we can now fit more than two people in our office at one time, we're going to have an "office warming" get-together on March 25th from 3–5 p.m. Swing by after work to check out our digs, or just to gaze out the windows.

Thanks to all that helped with painting, moving office furniture and setting up the new space: Jim Crandall, Bob Rice, Matt Hudson, Dorothy Lagerroos, Tom McNurlin, Shari Eggelson, and Thomas Wyse. And thanks to NW CEP and Dorothy Lagerroos for office furniture donations. ♦

BRWA Culvert Program – Expanding, Evaluating

BRWA's culvert program, which aims to find and fix problem culverts, is now in its fourth year. Based on volunteer and student assessments at over 700 places where roads cross streams, we now know that many sites throughout the basin prevent fish from moving through and some allow a lot of extra soil into our streams.

All that on-the-ground assessment is paying off. Because of really good information made easily accessible, many other agencies have joined forces with us to fix culverts in their own jurisdictions.

With assistance from Northland College students, BRWA and partner agencies developed a Strategic Plan identifying 19 sites for repair in the next five years. (Check out our Strategic Plan on our website to see if one of these sites is near you. www.badriverwatershed.org)

This coming summer, we will be working with local partners to fix six of these sites. At most of these sites, we will purchase bigger pipes, and set them lower in the stream bed. In theory, both of these actions help to keep the stream looking and functioning like a natural stream even though it goes under the road.

But what really happens after we fix a culvert?

Is it working? Are fish better able to move upstream as a result of our road stream crossing restorations? Are stream channels functioning more naturally with the new culverts?

Evaluation is an important part of any environmental restoration work, but we are one of the first places in the nation to do this work in such a large watershed and in so many places, so it was not immediately obvious how to evaluate our work. In order to determine exactly what and how to measure changes



in streams and fish populations following culvert restoration, BRWA and the US Fish and Wildlife Service hosted a monitoring workshop last December.

More than 20 natural resources professionals from the US Forest Service, Wisconsin Department of Natural Resources, Bad River band, Ashland County Land and Water Conservation Service, the Nature Conservancy, US Geologic Survey, and Northland College attended the workshop. This summer, BRWA will be working with local partners to start answering these questions.

"What's exciting about having monitoring protocols in place," says BRWA Director Michele Wheeler, "is that now we have a good idea of how to learn about and document how our culvert replacements are benefiting our rivers. Six different agencies will each carry out a smaller part of the overall program. So by working together, we're getting a lot more done than any of us could do on our own."

"All the partners in this effort—BRWA, state, college, tribal, federal—want to learn together," says Pam Dryer, fisheries biologist for USFWS. "That is relatively unusual." ♦

When Our Gardens Spread into the Woods

We garden to bring beauty and health to our world, and ourselves. But sometimes garden plants escape and become invasive. The term “invasive” is reserved for the most aggressive plant species that grow and reproduce rapidly. Invasives cause major changes to the areas where they become established, and have negative effects on economy, environment, and human health.

Invasive plants can greatly impact the health and regeneration of forest lands. For example, garlic mustard can rapidly spread into the understory of hardwood stands, and has been documented to suppress other understory plants, which may reduce tree seedling establishment.

Japanese barberry, an invasive shrub, not only crowds out other plants, but also alters soil conditions to its benefit. Deer avoid eating this spiny shrub, which means they browse more on native trees, slowing the growth of seedlings or even killing them. Dense thickets of Japanese barberry or other invasive shrubs like Asian bush honeysuckle displace native plants and wildlife dependent on those plants and also create tangles that make it difficult to walk through the forest.

While most ornamental plants that spread vigorously (hydrangea, for example) are not invasive, some species jump from gardens to natural areas and do too well there, causing long-term ecological consequences. So when planning a garden, color, shape and size are usually what govern our choices, but it is equally important to consider each plant’s potential to invade. **Our personal choices sometimes have consequences beyond the confines of our private gardens.**

Choosing substitutes for invasive plants is simple. First, consider what makes any plant “ornamental.” Most people are drawn to flowers, often a plant’s most conspicuous and colorful attribute. But perhaps it’s the foliage of the plant throughout the season, or the berries and dried seedpods for late season interest. Once you identify specific traits that are appealing, you can find plants that match those traits, but without the aggressive invading traits that make some ornamental plants so harmful. While it is not always possible to match every attribute, the compromise is usually minimal.

There are hundreds of native and non-native alternatives to invasive species that look beautiful in your garden and do not pose a threat to the natural world. Non-invasive plants can offer stunning color, wildlife forage and interesting growth habits. If you have some invasives in your yard, try replacing them with some of these non-invasive plants. ♦

INVASIVE SPECIES	NATIVE AND NON-NATIVE ALTERNATIVES
<ul style="list-style-type: none"> • Japanese Barberry (<i>Berberis thunbergii</i>) 	<ul style="list-style-type: none"> • False Indigo (<i>Amorpha fruticosa</i>) • American witch hazel (<i>Hamamelis virginiana</i>) • Winterberry holly (<i>Ilex verticillata</i>) • Ninebark (<i>Physocarpus opulifolius</i>)
<ul style="list-style-type: none"> • Common and glossy buckthorn (<i>Rhamnus cathartica</i> and <i>R. frangula columnaris</i>) 	<ul style="list-style-type: none"> • Speckled alder (<i>Alnus incana</i>) • American hazelnut (<i>Corylus americana</i>) • High-bush cranberry (<i>Viburnum opulus subsp. trilobum</i>) • Chokecherry (<i>Prunus virginiana</i>)
<ul style="list-style-type: none"> • Morrow honeysuckle (<i>Lonicera morrowii</i>) • Tatarian honeysuckle (<i>Lonicera tatarica</i>) • Showy pink honeysuckle (<i>Lonicera x bella</i>) 	<ul style="list-style-type: none"> • Serviceberry (<i>Amelanchier arborea, A. laevis, A. spicata</i>) • American elderberry (<i>Sambucus canadensis</i>) • American red elderberry (<i>Sambucus pubens</i>) • Red honeysuckle (<i>Lonicera dioica</i>) • Swamp fly honeysuckle (<i>Lonicera oblongifolia</i>)
<ul style="list-style-type: none"> • Autumn olive (<i>Elaeagnus umbellatus</i>) 	<ul style="list-style-type: none"> • Silky willow (<i>Salix sericea</i>) • Red osier dogwood (<i>Cornus sericea</i>) • Gray dogwood (<i>Cornus racemosa</i>) • Silky dogwood (<i>Cornus amomum</i>)
<ul style="list-style-type: none"> • Oriental bittersweet (<i>Celastrus orbiculatus</i>) 	<ul style="list-style-type: none"> • American bittersweet (<i>Celastrus scandens</i>) • Virginia creeper (<i>Parthenocissus quinquefolia</i>) • Trumpet vine (<i>Campsis radicans</i>) • American wisteria (<i>Wisteria frutescens</i>)

This table was modified from the Midwest Invasive Plant Networks brochure “Landscape Alternatives for Invasive Plants of the Midwest” available online at www.mipn.org.

First Person Memories Shared

By Ed Sindelar

It was with great delight that “Bud” Peters told of the time in the 1960 while as mayor of Mellen, production directors from 20th Century Fox came into his office to ask about filming *Adventures of a Young Man*, the film based on the Nick Adams stories by Ernest Hemingway. Seems Mellen had the perfect setting in the old railyard needed for the movie. Peters, with a chuckle, said he contacted 20th Century Fox to confirm that these men were for real, and sure enough Mellen became the back drop for this now legendary film.



Anderson

Peters shared the stage with Myron Anderson, a local farmer of the White River Valley, at the last edition of the Bad River Watershed Association’s “First Person Local” oral history event last winter.

Both Peters and Anderson have been lifelong residents of the Bad River Watershed having grown up in the Mellen area and on a farm near the White River respectively. Both men knew and were friends with noted environmentalist Martin Hanson, who will have a portion of the Brunswieller River named in his honor when it is designated as one of Wisconsin’s Wild Rivers. Peters told of one of his and Hanson’s canoe trips down the Bad River from below Copper Falls, “We didn’t make it far, only down to the first horseshoe, when we wrapped the canoe around a rock!”

Myron Anderson is known for his efforts as a founding member of the “Friends of the White River,” who has enlisted the aid of Trout

continued on page 4

Financial Incentives for Conservation Buffers

By Darienne McNamara

The Bayfield County Land and Water Conservation Department is offering landowners an opportunity to conserve natural resources and pocket significant payments through the Conservation Reserve Enhancement Program. CREP (or “krep”) is a program that offers financial incentives for landowners to create natural buffers or wetlands on their land. The goal of the program is to improve water quality in the Lake Superior basin.

While CREP is good for water quality and wildlife, it can also be good for business. For farmers, it can ensure revenue on marginal lands which are often less productive. Participants will receive an average of \$700–\$1,100 per acre enrolled. Payments come in three forms: up-front payments, annual payments, and cost-share payments.

Up-front payments are made soon after the contract has been signed. On average, CREP participants receive an up-front payment of \$150 per acre for a 15-year contract, or \$580 per acre for a perpetual conservation easement.

Annual payments are made each year for 15 years, with payments averaging \$41 per acre per year. Payments are determined based on the soil type, the type of conservation practice installed, and the annual land rental rate.

Cost-share payments help defray the cost of installing buffers, such as tree planting, seeding, weed control, etc. Up to 110% cost-share assistance is provided for eligible expenses.

Sound too good to be true? Keep reading...

In order to qualify, land must be open (rather than forested), have clay soils, and be adjacent to a stream or wetland. These characteristics create a recipe for high runoff, which directly affects water quality. Buffers range from 200-300 feet extending out from the edge of the waterway. Trees and shrubs must be planted on at least half the buffer, although the entire buffer can be planted as well.

Although individual buffers and wetlands may be small, their collective impact is substantial. With less sediment washing into Lake Superior streams, fish have better habitat for spawning and feeding. Buffers and wetlands also filter pollutants such as fertilizers and pesticides, which can affect insects and other wildlife farther up the food chain.

Interested landowners should contact Darienne McNamara, Conservation Specialist at the Bayfield County Land and Water Conservation Department. There is no waiting period; enrollment and eligibility determinations are made on a first-come, first served basis. For more information, call 715-373-6167. ♦



CREP buffers plant young conifers and native shrubs along streams to capture runoff.

First Person Local *(continued from page 3)*

Unlimited to purchase and establish a wilderness area along the White River that will allow fishermen and canoeists access to some beautiful stretches of the River, and also preserve the area for those magnificent Boone and Crocket caliber Whitetail Bucks to roam. Myron says you better be careful if you want to canoe the White River in the spring, “You don’t want to fool with that River during the Spring floods, it’s a wild river!”

Anderson’s dad came here from Norway in 1905 and settled into farming 40 Acres in the Marengo highlands. Peters’ family first came to the area in the 1880s and settled in Mellen. Both men were young adults when the floods of the Bad River Watershed hit in ‘41, ‘46 and ‘49. They were devastating, but somehow everyone pulled together and got back on their feet. Mellen was underwater, and in Bayfield the cemetery was washed out with caskets floating out in the Lake.

Both men also remember when John F. Kennedy came through, first as a senator campaigning for the presidency and later as president. They talked of Mr. Kennedy’s character and how Mrs. Peters, Bud’s mom, a bit of a Republican had said she might vote for the democratic Kennedy, because he seemed....”a nice man.”

It is amazing what has gone on in this area over the years, the history, the growth of a nation and of the environment. These men have seen it in many forms and many political lights over the years. Today, they work for the preservation of the resource and sustainable activities. We look forward to their guidance and leadership in preserving the resources of the watershed long into the future. ♦

2009 Quality Control Sessions Held at Northland College

By Bob Rice

On February 23rd and March 11th, the Bad River Watershed Association held its 5th annual quality control session for water chemistry monitoring volunteers in Andy Goyke's biology lab at Northland College. Many thanks to Andy and to Northland College for the ongoing generous support of the work that BRWA does through making the lab available for these sessions and our macroinvertebrate identification sessions!

At the QC sessions, volunteers are challenged to test water samples with known concentrations of the parameters we test for each month (Thanks to BRWA Technical Advisor, Tracey Ledder, for setting these up for us). By comparing our volunteers results with the known samples, we ensure that our data is credible and consistent among the 18 sites we sample

across the basin.

Ed Kolodjeski and Naomi Tillison from the Bad River Natural Resources Department came along as well, bringing the probe that they use for their monitoring. The side-by-side monitoring conducted by BRWA volunteers and tribal technicians is a practice that helps us ensure that data from our two groups are comparable and that results are consistent.

In addition to helping volunteers get refresher training on how to complete the various tests, we continued to find that our volunteer data is reliable. Our volunteers are collecting meaningful data we can use to care for our watershed. Thank you to all BRWA Volunteers who were able to attend the 2009 Quality Control Sessions! ♦

Thank You!

Thanks to our Water Quality Volunteers: Tracey Ledder, Dane Bonk, Joan Elias, Mike Klump, Karen Danielsen, Leslie Kolesar, Kent Goeckermann, Andy Goyke, Ulli Kastens, Jack Wichita, Roland Wolff, Tana Turonie, Colleen Matula, Naomi Tillison, Darienne McNamara, Suzy Sanders, Tracey Ledder, Morris Lewis, Thomas Wyse, Bob Rice, Krista Bloomquist, Thomas Wyse, and Charlene Herron-Jordan.

A big THANK YOU to new donors who are contributing to newsletter costs, as well as to our loyal contributors: Steve and Margaret Baumgardner, John Bonk Agency, Tracey Ledder, Ron Stauske, Matt and Sara Hudson, Colleen Matula, Clyde Eilo, Rebecca McDowell and Davis Taylor, Eleanor Bussey, Jim and Mimi Crandall, Linda Jorgenson, Dennis and Pat Musil, Jo Bailey, Bobbi Rongstad, Chris Duke and Autumn Kelly, Edward Sindelar, Kelly J. Randelman, Kent Shifferd, Ronald Parkinson, Elden Tetzlaff, Robert Rue Parsonage, Kurt Schmude, Granger Builders, Karen Danielsen and Dale Thomas, Joe Maday, Joy Perry, Jack and Mary Wichita, Ann Schultz, Eleanor Williams, Allison Slavick, Ramona Hann, Dorothy Lagerroos, Brian Capps and Nyasha Spears, Ray Latvamaki, Robert J. and Sondra Dunne Jr., Landis and Steven Spickerman, Janice Vogel, David Nortunen, Ulli Cords-Kastens, Steve Yoshikane, Gerald and Judith Dybedal, Judith Bennington, Irene Blakey, Iron County Land and Water Conservation Dept, Mark Leach, Linda Rise and Andrew Noyes, Mike and Cheryl Trieschmann Foundation, Ed and Teri Isaac, Andrea Pokrzywinski and Tom Doolittle, Jeff and Mardy Ehrhardt, Jack and Ann Helgeson, Roland and Birgit Wolff.

Thanks to our funders: Center for Watershed Protection, US EPA, and USFWS Coastal Program.

Support the work of BRWA

If you live in the Bad River watershed, you're automatically a member of the Bad River Watershed Association. Consider enhancing your membership by making a financial donation to help support our work.

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Spring 2009 Watershed Waves

OFFICE-WARMING PARTY

NEW OFFICE!
NEW ADDRESS!
Come see our room
with a view!

3:00-5:00 p.m. on March 25
Bad River Watershed Association
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Volunteers Needed for Summer Testing

Please help us document bacterial problems in the watershed. We need volunteers this summer in all parts of the watershed to sample one a month and during rain events. We provide training and equipment. To volunteer, please call Bob Rice at 682-2425.

If you would prefer to get this newsletter in electronic format via email, please send a message with that request to:
brwa_wi@yahoo.com