

## BRWA Celebrates 10 Years of Connecting People, Land and Water

2012 is a special year for us at BRWA, as it's our tenth anniversary of connecting the people, land and water of the Bad River Watershed. In 2002 BRWA started as a volunteer organization by a group of individuals with a dream of connecting people to the watershed that connects them.

Now, a decade later with five paid staff, over 120 volunteers, 90 water quality monitoring sites, 12 replaced culverts, and one watershed action plan later, we're still going strong. We invite you to celebrate with us all year as we take some time in 2012 to reflect on all the organization has accomplished, and what we're looking to in the future.

We're planning a special 10th Anniversary Party to be held on Saturday, June 23, 2012 at the beautiful Freehands Farm in Ashland. We hope you can join us—all members, volunteers, and supporters of BRWA's past and present—at this special event. Watch for more news about the event, interviews, and highlights that we'll be sharing this year to help celebrate the anniversary! ♦



### Have a story about the watershed?

We're working to gather your stories and testimonials about the watershed. What is special to you about our land and water? What's your favorite stream in the watershed? What's the big fish that got away? Why do you support the work of BRWA? Stories and testimonials submitted may be featured in upcoming newsletters, on our website, and in our new membership brochure. If you have a story you'd like to share please send to P.O. Box 875, Ashland, WI 54806 or [valerie@badriverwatershed.org](mailto:valerie@badriverwatershed.org).

## Have You Had Your Well Water Tested Recently?

Local citizens have voiced many questions and concerns about what will happen to the quality of our water with regards to the potential development of a mine in the Penokees. One of the questions we hear most is "What will happen to my well?" Any large-scale land use change that can affect water quality has the potential to affect our wells and drinking water. Testing your well is something that citizens can do to take care of their health and families, as well as be good stewards of the watershed.



Most people living in the Bad River Watershed get their drinking water from a private well. Unlike municipalities (who are required to test their water supplies regularly to ensure the water is safe to drink) there is no requirement to test a private well except for bacteria when it is first drilled or the pump is changed. Thus, private well owners are responsible for making sure their water is safe.

One of the best options available for our area is testing through the Water and Environmental Analysis Lab (WEAL) at the University of Wisconsin-Stevens Point. WEAL offers "homeowner" and "metals" packages that provide a good value to private well owners. Sample bottles are sent to you with instructions on how to take a sample. Your sample results, along with an interpretation of the results are sent back to you within 10 working days after your sample is received in the

lab. Visit their website at [www4.uwsp.edu/cnr/weal/Homeowner.htm](http://www4.uwsp.edu/cnr/weal/Homeowner.htm) or call the lab at 715-346-3209 for more details and pricing.

The Wisconsin DNR also offers an informational brochure about well testing and information about other state-certified labs that provide testing services: <http://dnr.wi.gov/org/water/dwg/pubs/TestsForWell.pdf> ♦

## BRWA to Hire New Executive Director

By Michele Wheeler, Executive Director



Since I became involved in BRWA, my strengths and strongest interests have focused on developing programs that connect people with taking care of the watershed in a meaningful way. As BRWA has grown, my role as Director has changed accordingly into more organizational development and fundraising, both rewarding endeavors in their own right, but outside of my greatest contributions to this organization I am so committed to.

As a result, I have decided not to return as Executive Director following my medical leave of absence. Instead, I'll return to BRWA with a focus on programs, leaving space for new leadership at BRWA.

With all that's ahead of us I'm excited for this change, and excited for someone new to bring fresh ideas to our group. More information on the Executive Director position will be coming this summer. Stay tuned for more details! ♦

## BRWA's Culvert Program: Using Temperature to Find High Quality Trout Habitat

by Michele Wheeler, Culvert Program Manager

BRWA's Culvert Restoration Program works to improve streams and fish populations through replacement of fish passage barriers. A good culvert restoration project will restore access to miles of good quality fish habitat. In the Bad River watershed, there is little survey data available on fish populations. This makes it hard to evaluate what the benefit is for fisheries in working in a given stream—because there isn't any data on who lives there.

But there is a good way to predict what kinds of fish can live in a stream—temperature monitoring. Temperature is one of the main factors that determines who resides in our waters. With colder water, comes different fish. Fish are picky, Brook trout in particular. Cold water is important to trout because of the higher oxygen levels found with cold water. Brook trout eggs and young fish can't survive in the lower oxygen conditions that come with warm water.

A first step in finding good trout habitat is finding cold water. We've identified streams that have culverts blocking upstream fish movement throughout the watershed, and now we want to know how cold they are. BRWA will be working with volunteers this summer to monitor temperature on those streams.

There are over 15 sites throughout the Bad River Watershed that we're considering for temperature monitoring in 2012. Temperature monitoring is an easy and fun way to get a lot of great data on streams with just a few days of volunteering. We'll provide all training and equipment you need. Then you'll head out to place data recorders in the stream in late May and secure them underwater. You leave them there over the summer months, and then go retrieve after summers warmest temperatures have passed (late October). Our spring Temperature Monitoring training event is being planned for Saturday, April 21, 2012. Please contact Michele at 715-682-2003 or [michele@badriverwatershed.org](mailto:michele@badriverwatershed.org) if you are interested in getting involved. ♦



### BRWA Team

**Michele Wheeler**

Executive Director/

Culvert Program Manager

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**Matt Hudson**

Watershed Action Director

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**Valerie Olinik-Damstra**

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**Sara Lehr**

Accountant

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**Breanne Large**

Culvert Program Crew Leader

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### Board of Directors

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Darlene McNamara

Vice-President

Jim Crandall

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Pam Roberts

Secretary

### At- large board members:

Jo Bailey

Kevin Brewster

Joan Elias

Randy Lehr

Bobbi Rongstad

Mike Ryan

Sjana Schanning

### What affects water temperature in streams?

- *Groundwater inputs:* The more groundwater, the cooler the stream. Take away the groundwater, and streams warm up
- *Water clarity:* Dirty water absorbs more heat from the sun
- *Sunshine:* Without trees along their banks to shade them, streams will warm up
- *Air temperature:* As you'd guess, warmer air leads to warmer water
- *Water depth:* Shallow water is often warmer because the sun heats it more readily

### What can you do?

- If you live on a creek, keep trees growing alongside it to maintain shade and cooler water temps.
- Keep dirt from getting into streams by preventing erosion on your property.
- Help BRWA find cold water by volunteering! Our volunteer training event is on Saturday, April 21, 2012. Call Michele at 715-682-2003 if you're interested in getting involved at a creek near you!

## Welcome New Board Member Mike Ryan!

### How did you first learn about BRWA?

I first heard of BRWA when my friend and neighbor Martin Hanson introduced me to Jeff Ehrhardt, who was a board member at that time. I met Michele a bit later when she was



working with a group of student volunteers from Northland College who were collecting some macroinvertebrate data from Trout Brook which runs through our property and is not surprisingly my favorite place in the watershed.

### Why did you decide to get involved with BRWA?

I decided to get involved because I believe that the work of BRWA is important not only in providing essential baseline data of water quality, but also supporting local citizens and governments in determining the best practices to maintain the health and vitality of the watershed and providing concrete means to put those plans in practice.

### What experience do you bring to the board?

I have recently finished a 30-year career as a financial advisor

working with families and consulting 401(k) plans. I twice served on the national board of our professional member organization the Financial Planning Association as well as serving for eight years as the Chair of the investment committee of the endowment of the NE Illinois Council of the Boy Scouts of America.

I hope to bring to the board my experience of the importance of a board serving as a policy maker rather than attempting to perform functions more suited to professional staff. Just as process and planning is important to the financial well-being of a family, so is it with an organization like BRWA.

### What do you hope to accomplish as a board member?

As chair of the Fundraising Committee I want to help as best I may in making sure that the BRWA has the financial foundation to enable us to sustain our current programs and encourage the financial support of our local community, and those who live outside the watershed but love this beautiful area, to develop new programs to address the many challenges we face.

We face many challenges but I am encouraged by the passion and commitment of our volunteers as well as our professional staff. We have much of which to be proud for the work of BRWA over the past 10 years. Yet I believe we are the verge of new growth and that the next 10 years promise very good things for the BRWA. ♦

## Meet One of BRWA's "Quality" Volunteers, Ron Nemec

By Jo Bailey, Board Member

"There is a special volunteer who has been with us less than a year."

Those could be the lyrics to one of Ron's guitar songs. Ron retired from his role as an Ashland Middle School science teacher in June. Looking for related involvement, he read about Bad River Watershed Association and our Water Quality Monitoring Project, called, and joined.

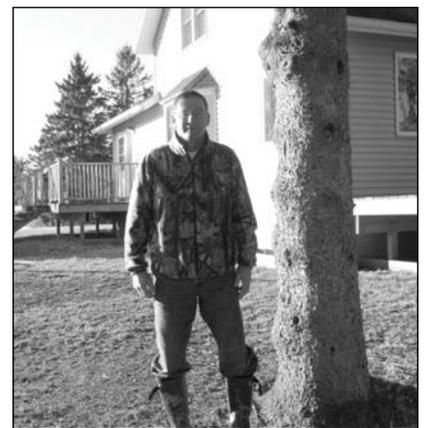
One Saturday a month Ron totes his "science kit," travels to the Tyler Forks River, and collects samples and data. He both taught and showed me what a careful and controlled process this is. The categories he records are: the sky status, the weather, the color of the water, algae present, aquatic vegetation, river bank conditions, and plant/wildlife observations. He traps water in a small bottle and caps it underwater. Then he adds chemicals as stated in the protocol. Analysis of the water is completed later. He tells me, "Tyler Forks has high quality water" with some pride in his voice.

This is especially important to him as Ron and his wife, Linda are one of eight owners of Olympia, a lodge and collection of cabins built in the 1930s as a mining camp on Lake O'Brien. It now serves as a hunting camp and respite for each family who owns a cabin. Ron feels that "good water is our most precious resource." He figures he was fortunate to be able to choose his monitoring sites close-by to Olympia where he spends much time on the water.

Ron also helps with BRWA's macroinvertebrate study in spring and fall. And, he partners with fellow retired Ashland science teacher, Bruce Prentice, to complete the famous "Bear Project" with local students as well.

When he does have some spare time, Ron doesn't just play his guitar (he shared the lyrics of a song analogous to the mine), but he also spends one Saturday a month at Bay Area Solid Waste, chatting with the "dumpers." Just in case he isn't busy enough, Ron also subs as a custodian for the Ashland Public Schools.

Ron knows BRWA's mission and expressed the importance of "good data to make good decisions." We are glad he made the decision to become involved with BRWA. ♦



### Would you like to join our team of "quality" volunteers?

Join us for our upcoming Spring Macroinvertebrate and Temperature Monitoring Training on Saturday, April 21, 2012 at the Mellen School. Please contact Valerie at 715-682-2669 or [valerie@badriverwatershed.org](mailto:valerie@badriverwatershed.org) to sign up today!

## BRWA Staff Monitoring Begins to Tell the Story of Clean Streams in the Penokees

By Matt Hudson, Watershed Action Director

Bad River Watershed Association (BRWA) staff presented the results of our 2011 baseline water quality monitoring from streams near the potential Penokee mine at the Morse Town Hall in Mellen, Wis., on Feb. 21. An eager crowd of well over 60 people showed up on a snowy night to hear about our continuous temperature and macroinvertebrate monitoring work. The results indicate the sites we tested in 2011 are currently very healthy, and begin to tell the story of clean streams in our watershed.

At the request of the Town of Morse, BRWA collected temperature and macroinvertebrate data to provide objective information about the quality of streams prior to potential development. The data are an important first step to understanding our water resources in the event that there is a formal proposal to develop an iron mine in the Penokees.

As BRWA staff began planning sampling work, we learned about other monitoring efforts being planned by natural resource agency partners. BRWA worked to bring these partners together and coordinate sample site locations to increase efficiency and avoid overlap. BRWA also worked with the Wisconsin Department of Natural Resources to ensure the data we collect are sound. As a result, the data from this project has been accepted into WDNR's statewide database for use in natural resource decision-making.

A total of 12 sites were sampled near the proposed mine site. Some sites were located in areas that are most likely to be affected by any mining activities and others were located in areas less likely to be directly affected by mining (Figure 1). We also chose sites that were on streams that have special designations by the State of Wisconsin, including trout streams and Outstanding or Exceptional Resource Waters (O/ERW). These waterbodies have additional protections from pollution compared to most waterbodies in the state. In particular, no changes to baseline water quality conditions in O/ERW are allowed. Therefore, collecting baseline information on these streams is important because very little currently exists.

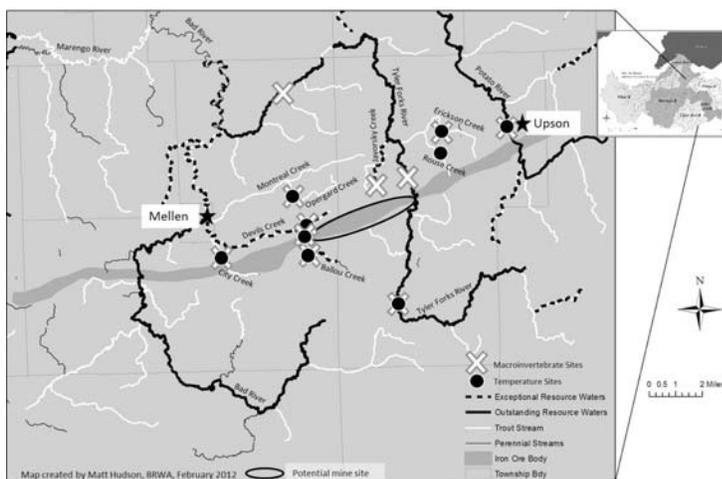
Temperature, collected using small data loggers submerged in the stream, is one of the most important factors determining what types of organisms can live in a stream. Some organisms prefer cold water (such as brook trout) and do not do well when temperatures get too warm. Others prefer warmer water (such as smallmouth bass) or can survive across a broader range of temperatures.

Temperature data loggers were placed at nine sites in May and retrieved in November 2011. The loggers were programmed to collect a temperature measurement once per hour, meaning we collected over 4,000 temperature measurements at most sites! Streams are classified using different temperature ranges, and these ranges tend to support specific types of aquatic communities (Table 1). Of the stream sites monitored in 2011, five sites had maximum daily mean temperatures in the "cool" category and the other four were in the "cold" category (Figure 2).

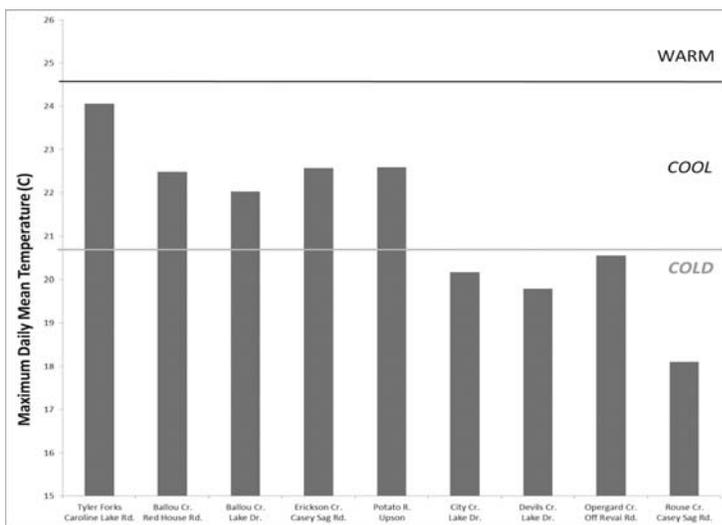
Continued on page 5

Stream type	Maximum daily mean water temperature	Fish communities that live there
Cold water	Under 20.7°C (69.3°F)	Brook trout, mottled sculpin
Cool water transition	Between 20.7°C - 24.6°C (69.3°F and 76.3°F)	Brook trout, white sucker, and many minnow species like blacknose dace, creek chub, central mudminnow, common shiner
Warm water	Over 24.6°C (76.3°F)	Larger variety of species including above minnow and smallmouth bass, walleye, northern pike, sturgeon

**Table 1: The Wisconsin Department of Natural Resources (WDNR) uses temperature and other data to classify streams based on the kind of fish communities that live in them.**



**Figure 1: Map showing location of continuous temperature and macroinvertebrate sites sampled by BRWA staff during 2011. Streams with Outstanding/Exceptional Resource Water and/or trout stream designations (Class I, II, III are all shown in white) are identified.**



**Figure 2: Graph of the maximum daily mean temperature (warmest average daily temperature during 2011) for each of the nine sites monitored by BRWA staff. All sites fell within either the "cold" or "cool" temperature class.**

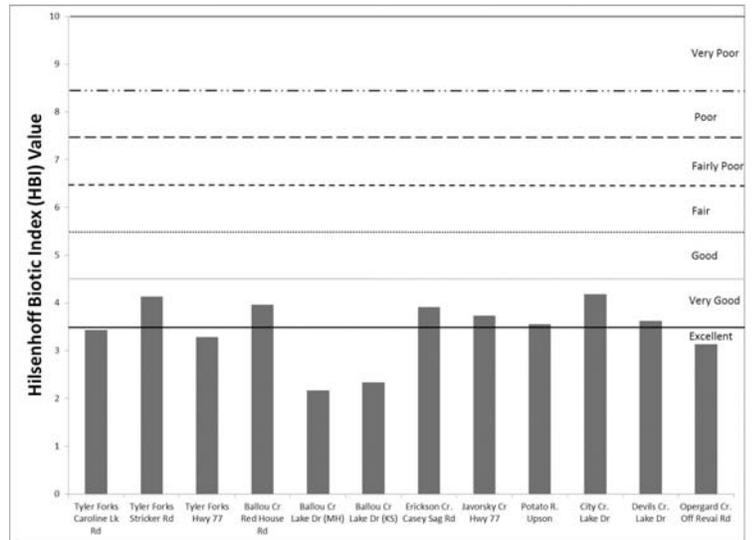
**Clean Streams** (Continued fom page 4)

Macroinvertebrates are the aquatic bugs that live in our streams and are attached to whatever is on the stream bottom including rocks, logs, and leaves. Macroinvertebrates provide important long-term information about water quality in a stream because they typically spend a large part of their lives in the water and differ in their tolerance to pollution. Therefore, the types of macroinvertebrates we find in a stream give us important information about whether there are pollution sources making the stream unhealthy.

Macroinvertebrate samples were collected by staff in September and October 2011 from 11 sites (Figure 1). Staff collected what's known as a "composite, multi-habitat" sample from a 100-meter (~300 ft) section of stream at each site. This type of sample contains twenty small samples from the different types of macroinvertebrate habitats present at each site. The samples were preserved and identified by Dr. Kurt Schmude at UW-Superior, and entered into WDNR's statewide data base.

The results indicate that overall, the stream sites monitored in 2011 had diverse populations of bugs that we typically see in streams that are receiving little to no pollution. This is illustrated well with the Hilsenhoff Biotic Index (HBI) (a more detailed version of the Hilsenhoff Family-Level Biotic Index that is used in BRWA's volunteer program). The HBI at all sites monitored during 2011 indicate either "Excellent" or "Very Good" water quality conditions (Figure 3).

Overall, BRWA's continuous temperature and macroinvertebrate monitoring data provides a solid foundation for understanding the health of streams prior to any mining in the Penokee hills. The data indicate streams near the potential mine site are currently very healthy and likely contain both cool and coldwater aquatic communities. Along with data collected by our other partners in 2011, we have a good start to beginning to understand water resources near the potential mine site.



**Figure 3: Graph of the Hilsenhoff Biotic Index (HBI) calculated for each macroinvertebrate sample collected by BRWA staff Sept-Oct 2011. Results from all sites indicate either "Excellent" or "Very Good" water quality.**

BRWA aims to collect at least four years of data from a stream site before we have a reasonable baseline that captures year-to-year variations. Because weather patterns vary so much between years, one year of data only tells a part of the story. To evaluate potential impacts from a project with a large footprint like a mine is best done with as much baseline data as possible.

In 2012, BRWA plans to continue water quality monitoring activities in the Penokees, and other locations in the Bad River Watershed, and is currently looking for funding support to complete this work. Check out our website for more information about streams and monitoring near the potential mine site at [www.badriverwatershed.org/index.php/learn/potential-mine-information/stream-monitoring](http://www.badriverwatershed.org/index.php/learn/potential-mine-information/stream-monitoring). ♦

**Support the work of BRWA**

Anybody who supports our mission can become a member of the Bad River Watershed Association. Consider enhancing your membership by making a financial donation to help support our work.

\$100                      Your name \_\_\_\_\_

\$ 50                         Address: \_\_\_\_\_

\$ 25                         \_\_\_\_\_

\$ \_\_\_\_\_                Phone and/or email: \_\_\_\_\_

Clip this form and send with your tax-deductible check to: Bad River Watershed Association, P.O. Box 875, Ashland, WI 54806. Thank you!

## Watershed Moments



**Left: Mike Fiene of the US Geological Survey presents information on groundwater modeling at a meeting of natural resource professionals collecting data in the Penokees on January 18, 2012 at the Northern Great Lakes Visitor Center. The meeting was coordinated by BRWA in order to learn more about data collection efforts, preliminary results, and plans for continued monitoring into 2012.**

**Right: BRWA Board and Staff met on February 4, 2012 to review the organization's Strategic Plan 2008-2025, and begin prepping a new three-year work plan for 2012-2014. It was great to see what we've accomplished since this plan was initiated in 2008, and we look forward to what lies ahead in the future! You can read BRWA's Strategic Plan at <http://www.badriverwatershed.org/index.php/about-brwa/strategic-plan>.**



**Above: BRWA hosted its quarterly meeting of the Marengo River Watershed Partnership on March 1, 2012 at Four Corners Saloon. Ellen Kwiatkowski of the Bayfield Regional Conservancy attended to present information about a Community Forest Project and land protection along the Marengo River.**

### About BRWA:

#### What we do

We are a community organization that works to involve all citizens in taking care of and enjoying their home watershed. We accomplish this by conducting educational programs and forums about how our watershed can be affected by the decisions we make. In addition, we assist citizens to gather information, identify problems and implement solutions to maintain the integrity of our watershed for future generations.

#### Our Vision Statement

The Bad River Watershed Association envisions a future in which change and development within the watershed grow from a stewardship ethic that seeks to minimize ecological damage, while maximizing ecological and community health.

#### Our Mission Statement

The mission of the Bad River Watershed Association is to promote a healthy relationship between the people and natural communities of the Bad River watershed by involving all citizens in assessing, maintaining and improving watershed integrity for future generations.

# Thank You!

*Thanks to our Donors and New Members (as of 3/1/2012):* Allison and Dan Werner, Art Techlow, Bruce Kahler, Bruce Prentice, Catherine Miller, Cathy Techtmann, Colleen Matula, Cyrus Hester, Dane and Paula Bonk, Daniel and Elizabeth Scudder, Dave Olson, David and Karen Saarinen, David and Terri Bahe, Dennis and Pat Musil, Derek and Kim Ogle, Donn and Ann Christensen, Dr. Grace Heitsch, Dr. Heinz and Janice Vogel, Joan Elias and Jim Meeker, Wendy Stein, Pat Meredith, Glenn and Margaret Jackson, Jim and Maria Minikel, Ken and Darlene Raspotnik, Kevin Brewster, Nancy Larson and John Spangberg, Margaret Webster, Mark and Pam Dryer, Ned and Kathy Zuelsdorff, Gerald and Pam Richardson, Mike and Pam Ryan, Pam Roberts, Patricia Rose, Patrick Boerboon, Peter and Eileen Freiburger, Bob Traczyk, Bobbi Rongstad and Tom Podlesny, Roslyn Nelson, Ruth Oppedahl, Sheree Peterson, Tana Turonie, Terry Peters, Town of Grand View, Anna and George Magnin, George Magnin II, Carolyn Sneed, Jeff and Mardy Ehrhardt, Woodpickguards.com, and Cynthia Breunig, in honor of her parents Dennis and Jeanne Breunig.

*Thanks to our Volunteers:* Tracey Ledder, Tom Podlesy, Bobbi Rongstad, Joan Elias, Jack Wichita, Don Smith, Roland Wolff, Darienne McNamara, Ulli Kastens, Henry Gradillas, MaryJo Gingras, Jim Crandall, Ron Nemece, Mike Klump, Mike Stobbe, Colleen Matula, Ed Kolodziejki. *Special thanks to Sharon Anthony for hosting our Volunteer Quality Control Session at Northland College February 7-8.*

*Thanks to our Funders:* Norcross Wildlife Foundation, Great Lakes Restoration Initiative, National Fish and Wildlife Foundation, US Fish and Wildlife Service Coastal Program and Great Lakes Basin Habitat Partnership, US Forest Service, Great Lakes Indian Fish and Wildlife Commission, Dutton Foundation, Bock Foundation, Wisconsin Environmental Education Board.

## Rivers of the Bad River Watershed Wordfind

l	d	s	q	w	s	c	t	e	w	p	s	s
f	n	v	b	f	x	h	e	h	f	o	m	j
s	d	c	a	v	d	g	k	k	h	t	ki	d
k	b	u	d	u	f	j	l	b	k	a	t	t
p	r	i	u	y	g	i	g	x	o	t	f	h
t	u	f	k	i	g	h	n	g	i	o	d	c
b	n	x	m	m	h	s	n	p	d	d	l	h
k	s	c	l	l	u	e	w	a	v	a	n	s
g	w	p	s	k	r	o	f	r	e	l	y	t
b	e	l	f	a	m	n	z	t	o	j	d	o
d	i	n	m	j	k	g	c	r	n	k	h	p
k	l	a	x	h	o	u	g	a	n	i	s	g
l	e	r	s	f	p	k	j	e	t	i	h	w
f	r	e	f	x	b	m	x	b	t	b	k	f
z	k	d	d	a	c	f	b	v	c	s	t	b

**Word Bank**

- Vaughn
- Bad
- White
- Beartrap
- Potato
- Brunswailer
- Tyler Forks
- Marengo

## 10th Anniversary Trivia: What was BRWA's first water quality monitoring site?

Email your answer to [valerie@badriverwatershed.org](mailto:valerie@badriverwatershed.org). The first person with the correct answer will win a special prize!

### Upcoming Events:

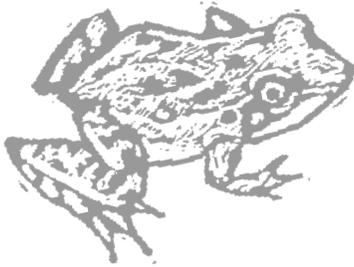
- **Mining Impacts and Lake Superior: A Basinwide Approach**  
 Hosted by the Lake Superior Binational Forum  
 Friday, March 23, 2012 – 12:00 pm to 5:00 pm  
 AmericInn Conference Center, 3009 State Hwy 2 East, Ashland  
 More information: [www.superiorforum.org](http://www.superiorforum.org)
- **Wild Rivers Chapter of Trout Unlimited Fishing Expo and Auction**  
 Saturday, March 24, 2012 – 2:00 pm to 8:00 pm  
 Northern Great Lakes Visitor Center, 29270 Cty Hwy G, Ashland  
 More information: [www.northerngreatlakescenter.org](http://www.northerngreatlakescenter.org)



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## Spring 2012 Watershed Waves

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If you would prefer to get this newsletter in electronic format, please send a message with that request to: [valerie@badriverwatershed.org](mailto:valerie@badriverwatershed.org)



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WATERSHED ASSOCIATION



FIND US  
ON  
FACEBOOK



Want to join the BRWA crew this summer? We're hiring a seasonal position to help with the Culvert Program! Visit our website for details.



# SAVE THE DATE!

BRWA's  
10th Anniversary Party  
6:00pm  
Saturday, June 23, 2012  
at Freehands Farm  
6044 E Summit Rd, Ashland