

# Watershed Notes

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## BRWA Named 2008 Watershed of the Year

On 1 November 2008, BRWA received the WV Watershed Network's "2008 Watershed of the Year" award at WVWN's annual Watershed Celebration Day. The award consists of a plaque, a highway sign made by and to be erected by the Division of Highways, and a check for five thousand dollars donated by Dominion Energy of Richmond, VA.

Over 100 volunteers attended Watershed Celebration Day on

anniversary of our celebration to honor the volunteers. This is a group of very special people who give their time, their money, their knowledge, and their energy to improve the quality of life within their watershed,"



Photo by Allison Sharp

Nov. 1. The group gathered at the Clay Center in Charleston to honor 19 watershed associations and one individual for their hard work and commitment in protecting and restoring streams and educating their communities about the importance of watershed protection.

"This marks the tenth

said Rick Buckley, Clean Streams Coordinator for the Federal Office of Surface Mining. "Their accomplishments are a testimony to each of us that we all can make a positive difference, for the health of our streams and rivers, by working together and being committed." are introduced.

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-Rick Buckley, OSM

*Speaking to the West Virginia Watershed Network about BRWA volunteers*

WVWN Press Release: **Charleston** - For the tenth consecutive year, watershed groups from all across West Virginia were recognized by the West Virginia Watershed

## High School Students Capture A Snapshot of the Buckhannon River

On April 8, 2008 science students at Buckhannon - Upshur High School and West Virginia Wesleyan College teamed up to measure the water quality of the Buckhannon River Watershed. This cooperative effort, involving both guidance from the college and students and administration at the high school, was facilitated by BRWA. The project resulted in the collection and analysis of over 50 stream water samples. The sites were selected by the students who live throughout Upshur County (see Figure 1). Because all of the samples were collected and analyzed on the same day, a "snapshot" of the water quality was cap-

tured at normal flows for this date.

Successive science classes performed many of the tests, with the remainder being completed at the college. The tests measured the water's pH, sulfate and

iron content, calcium hardness and the ability of the water to resist changes to its pH when acidic or basic contaminants are introduced. These tests are important because they can shed light on the existence of acidic mine drainage (AMD) contamination as well as the ability of the watershed to resist acid rain. These factors all affect the amount of calcium and other important

nutrients necessary to sustain aquatic life, such as trout and other aquatic species.

A few years ago, an analysis by the United States Environmental Protection Agency (E.P.A.) showed that some of the streams did not meet water quality standards and with the remainder being completed at the college. The tests measured the water's pH, sulfate and iron content, calcium hardness and the ability of the water to resist changes to its pH when acidic or basic contaminants

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[www.buckhannonriver.org](http://www.buckhannonriver.org)

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A few years ago, an analysis by the United States Environmental Protection Agency (E.P.A.) showed that some of the streams did not meet water quality standards and were impaired by AMD. A few of these small tributary streams are presently being treated by mining companies and the state of West Virginia with limestone (calcium carbonate) to alleviate the problem.

The results of the study indicate no violations of state standards and in fact appear to show that the AMD is being adequately treated. The "snapshot" also indicates that the ability of the watershed to buffer and neutralize acid rain is not very great in many areas and that the

watershed could be sensitive to the presence of acid rain. For a body of water to be resistant to acid rain, the alkalinity must be 20 ppm (parts per million) in calcium carbonate or higher. As can be seen from Figure 2, many samples appear to have alkalinity values lower than this.

As the forks of the Buckhannon River gather from the south at Alexander, the river has little alkalinity and calcium. As we move downstream after Alton towards Buckhannon, the measurements show an increase of sulfates, iron and calcium. This is indicative of waters treated for AMD from nearby mines.

This snapshot could not have been obtained in any other way. Only with the conscientious cooperation of the science students at Buckhannon-Upshur High School and of their teachers - Mr. Mike Lemley and Ms. Alisa Lemley - was this project possible. WVWC professor Dr Darcey Wayment and his student Thomas Buscher coordinated the project. BRWA board member Don Gasper also graciously donated his time and expertise to the project.

## watershed award continued from page 1

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The BRWA would like to thank their Planning Group members from state, federal, and NGO organizations for their valuable insights and recommendations. We also thank our local citizens for their help in promoting the watershed. This award represents the hard work of a lot of people dedicated to protecting and promoting our beautiful Buckhannon River.



**JOIN OR RENEW  
YOUR BRWA  
MEMBERSHIP TODAY!**

**Visit BRWA on  
the Web!**

Starting in December, 2008 the BRWA is back on the web with a page created by West Virginia Wesleyan senior and Bonner Scholar Amanda Wriston. Amanda has helped the BRWA establish a .org website hosted by an independent web hosting service. The website already features stories about WVWC successes, and soon will have a feature to allow members to renew or join the BRWA. We thank Amanda for this valuable service, and also for using her Bonner funds to print this newsletter!  
*Thanks Amanda!*

### Buckhannon River Watershed Association

Executive Director:  
G. P. Richter

Board Members:  
K. Bjorgo-Thorne  
R. Calkins  
K. Conde  
D. Gasper  
T. Landis  
J. Mitchell  
D. Wayment

## Fishes of the Buckhannon River Available online!

A Microsoft™ PowerPoint presentation of all the fishes found in the Buckhannon River is available from the BRWA.

This presentation was compiled by Ms Tiffani Chaney, a Bonner Scholar at West Virginia Wesleyan.

The presentation is approximately 50 slides, and includes the common and scientific names of the fishes of the Buckhannon River, their status as common or endangered, and

whether they are a game fish or not. Fish data were provided by the WV Division of Natural Resources. Many of the fish are illustrated with color paintings by US Fish and Wildlife Service artist Duane Raver.

For more information, or to request a copy of the presentation, contact BRWA board member Kim Bjorgo-Thorne at [bjorgo@wvwc.edu](mailto:bjorgo@wvwc.edu) or by telephone at 304-473-8126.

## Watershed Successes

The BRWA would like to congratulate our fellow WVWN award winners:

- Flood Mitigation** - Morris Creek Watershed Association, Kanawha County
- Habitat** - Horseshoe Run Watershed Association; Tucker County
- New Watershed Association of the Year**-Elks Run Study Committee, Jefferson County
- Non Point Source**- North Fork Watershed Project, Tucker County
- Outreach and Education** (*this category had two winners*) - *Friends of Deckers Creek*, Monongalia County and Upper Guyandotte Watershed Association, Wyoming County
- Polluted Coal Mine Drainage** — Plateau Action Network, Fayette County
- Recreation** - Baker Run Conservation Society, Hardy County
- Solid Waste** - (*this category has two winners*) Opequon Creek Project Team, Berkeley County and Lower West Fork Watershed Association, Harrison County
- Stream Partners** - (*this category has two winners*) Davis Creek Watershed Association, Kanawha County and Guardians of the West Fork, Harrison County
- Urban Work** - Piney Creek Watershed Association, Raleigh County
- Wastewater**- Coal River Group, Kanawha County
- Water Quality Monitoring**- (*this category has two winners*) Sleepy Creek Watershed Association, Morgan County and Friends of the Cheat, Preston County
- Youth Participation**— (*this category has two winners*) Greenbrier River Watershed Association, Greenbrier County and Campbell's Creek Watershed Association, Kanawha County
- Guiding Light** - Amanda Lachowski, Monongalia County

## BRWA Volunteers Attend Coalfield Watershed Conference

Three members of Buckhannon River Watershed Association attended the Eastern Coalfield Watershed Training Conference Oct. 27-29 at Canaan Valley Resort in Davis, WV. Eastern Coal Regional Roundtable and the Environmental Protection Agency hosted the training to address issues of water quality in the Eastern Coal Region. Roianne Hackett, Tom Hackett, and G. Paul Richter, all of Buckhannon, attended.

Training sessions addressed issues such as acid mine drainage (AMD) and straight pipes, which have left thousands of miles of streams from Ohio to Alabama too polluted for swimming, fishing, or drinking. ECRR hopes that by helping individuals find ways to restore local streams, citizens will bring business and recreation opportunities to their communities and improve residents' quality of life.

Participants received intensive instruction and hands-on practice in water monitoring, grant writing, and organizational development. Representatives from various public agencies presented information on funding opportunities and development projects. Karen Vuranch, one of West Virginia's most celebrated performers, performed her original script, Coal Camp Memories.

The event was part of Hope and Hard Work, a partnership between ECRR and EPA to build the capacity of grassroots watershed groups in the Eastern Coalfield Region. The event drew 88 individuals representing local groups from Maryland, Ohio, Pennsylvania, and West Virginia.

"It was an awesome investment of our time. We learned so much, and the program was so well organized."  
Roianne Hackett

## Drinking Water Storage

A previous article took a look at bringing drinking water from the source, through the treatment process and into the distribution system. Now let us take a closer look at storing that water. After water leaves the treatment plant, but before it reaches the customer, it must be adequately and safely stored without impairing the water quality.

Some functions of a storage facility include providing a reserve of treated water that will minimize interruptions of supply due to main line breaks or equipment and power failures, help maintain uniform pressures, provide a reserve for fire fighting and other emergencies and allow pumping at the average rather than the peak flow demand just to mention a few. Storage volume requirements are based upon the functions required of individual tanks in a particular water system. After determining system function requirements, growth and development must also be considered.

Once the function and volume requirements are determined, the type and placement of a tank can be determined. Water tanks can be made of concrete or steel and can take various forms. Our system has six storage tanks all made of steel. The tanks are placed to provide adequate supply and pressure to all municipal customers.

Problems associated with water storage facilities include maintenance of the tanks and sufficient turnover (keeping fresh water circulating in and out of the tank).

Maintenance usually starts with periodic inspections to identify existing or potential trouble areas that require attention. The interior along with the exterior of the tank are inspected. Paint deterioration, rusting, pitting, sediments and structure stability are some of the things checked during inspections.

[www.buckhannonriver.org](http://www.buckhannonriver.org)

BRWA is a tax-exempt, 501(c)3 organization based in Buckhannon, WV. It is dedicated to preserving, conserving, and monitoring the health of the Buckhannon River Watershed and promoting our West Virginia river heritage through public awareness.

BRWA has received federal and state grant funding to cap a coal refuse pile, to reduce metal-containing acidic drainage into Mud Lick Run, and to capture and neutralize acid mine drainage on Smooth Rock Lick Run.

BRWA is a Community Engagement Partner of West Virginia Wesleyan College.

For information about the watershed or BRWA, contact BRWA Executive Director G. Paul Richter at 304-472-3317 or at [brwainc@3wlogic.net](mailto:brwainc@3wlogic.net).

BRWA  
112 Fayette Street  
Buckhannon, WV 26201

**The Buckhannon River Watershed Association**  
**Telephone: (304) 472-3317**

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**Become a BRWA Member Today!**

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Individual memberships \$5.00 / year  
Business memberships \$25.00 / year

Mail to: BRWA, 112 Fayette Street,  
Buckhannon, WV 26201

Clip this out and mail to join the BRWA

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

