



WATERSHED ALLIANCE OF ADAMS COUNTY

NEWSLETTER

NOVEMBER 2005

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Rock Creek Assessment- Training Workshop

On October 29, 2005, a group of people gathered in the early morning of a brisk fall day to learn about aquatic macroinvertebrates, bugs in water. The group consisted of folks from all walks of life. We had farmers, retired and semi-retired individuals, college students, a high school student, several teachers, we even had a pre-schooler in attendance after her AYSO soccer game. What all these people (with the possible exception of the pre-schooler) had in common was that they all wanted to learn about the health of Rock Creek and were going to do so through looking at the aquatic macroinvertebrates.

Gene Wingert of Alliance for Aquatic Resources Monitoring (ALLARM) from Dickinson College provided an introduction to aquatic macroinvertebrate sampling and instruction on field collection. He also provided 5 student helpers from Dickinson who weren't afraid to get their hands dirty or their feet wet.

Aquatic macroinvertebrates are an indicator of stream conditions over time. While chemical sampling remains an important component of our assessment, it is a snapshot of the chemical condition at the exact moment the water sample was taken. That is why both long-term chemical testing and regular aquatic macroinvertebrate sampling are important.

In the field, we used a "D" shaped net to collect the macroinvertebrates. We did this by choosing 3 separate riffles (where water bubbles over 3"-10" rocks) and taking 3 samples from each riffle area. Sample collection was done by placing the flat side of the "D" net firmly into the stream bed and washing the large rocks so that the water (and any bugs) would get filtered through the net. Then the area upstream of the net was stirred up by kicking and scuffing the stream bottom, again making sure the water and bugs were filtered through the net. At streamside, all invertebrates were collected to be identified and counted. Everything else (minnows and salamanders) were returned to the stream.

Macroinvertebrates as indicators of stream health are broken into 3 categories; indicators of good water quality, indicators of moderate water quality, and indicators of poor water quality. High quality indicators include larvae of stoneflies, mayflies, and case building and free living caddisflies. Moderate water quality indicators include larvae of net spinning caddisflies, crayfish, and some beetles. Low water quality indicators include larvae of blackflies, mosquitoes, and leeches. We found some of each water quality indicators. But when we calculated the numbers using an index that accounted for whether a certain bug's presence was rare, common or dominant; we found the low water quality indicators were rare while the good and moderate water quality indicators were common. So overall, both sites we sampled during the Saturday workshop showed that the water quality for Rock Creek at Taneytown Road and Little's Run at White Church Road was good.

A special thanks to our generous donors:

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Bill Kirk (R) and Maya Callenbach (L) proving you are never too young to care about good water quality.

Meet Wayne Belt, the Newest Member of the Board

Wayne Belt, Director

Watershed Address: Plum Run/
Marsh Creek watersheds

Autobiography: I retired from teaching science in Carroll County Maryland public schools after 34 years of service. My tenure in public high school education expanded my college knowledge base in biology and ecology to physical science and physics. In

retirement I am teaching biology laboratory at Gettysburg College, and am an Environmental Interpreter at the Eisenhower National Historic Site. These part time jobs keep me from washing through the watershed without becoming part of it.

Wayne has been an active volunteer for the Rock Creek Assessment Project. He collects

and tests a water sample each month from Rock Creek at Solomon Road. He also likes to take stream walks all the while collecting valuable habitat data for this current Rock Creek Assessment as well as for past projects. Kayaking also keeps him close to Adams County streams and he looks for any excuse to do it.

~Vy

Message from the President

WORKING TOGETHER

It is often the case that the whole is greater than the sum of its parts—certainly true when basic ingredients are combined to make a delicious casserole or cake. There are many groups in Adams County whose purpose is to preserve and protect our farms, forests, water, wildlife, scenic vistas, historic places and general quality of life. Each makes its own special contribution, but when they join together to accomplish projects the joint effort can produce better results than if each acted alone.

Last March WAAC partnered with the local chapter of Trout Unlimited to present the first annual Fishing and Outdoor Expo that raised funds for both organizations. The Expo gave fishing enthusiasts and those

interested in the outdoors, interests that involve protecting water quality, a chance to learn, shop and have fun. The joint effort produced a successful Expo, which we plan to repeat.

In October WAAC joined with the Adams County Office of Planning and Development to present a program for municipal Officials, WAAC members and others to learn about the PA Dept. of Environmental Protection (DEP) rules and procedures for issuing permits for private and public water supply systems. The session was well attended and the DEP speaker made a thorough presentation. But with many large developments being proposed in the County, the participants had many questions about how local water supplies can be protected.

The answers pointed out some shortcomings in the process, such as DEP relying on water availability data submitted by the permit applicant without doing any independent verification. And as the DEP official acknowledged, determining the adequacy of ground water "is not an exact science". Water permitting is a subject that deserves continuing attention by WAAC and local officials.

During the year, WAAC initiated a discussion with the Land Conservancy, South Mountain Audubon Society and Trout Unlimited about how the groups could work together with the conservation district to protect riparian buffers for Adams County streams. These wooded and vegetated stream borders serve as

living filters that reduce pollutants; shade from trees cools the water and provides good habitat for fish, birds and wildlife; roots stabilize stream banks and the vegetation slows storm runoff, thus allowing more water to infiltrate and recharge underground aquifers which supply our water. This project is in its formative stages but it appears there is solid interest in working together.

I believe that WAAC should continue to work with groups that are interested in protecting our land, our water, our wildlife, our scenic heritage and our quality of life. If we work together, the group results can be greater than the sum of its parts. That is something to work toward in the year ahead.

Charles Skopic

2nd Annual Adams County Fishing & Outdoor Expo

Last March, WAAC teamed up with Adams County Trout Unlimited to bring the 1st Annual Adams County Fishing & Outdoor Expo to life. Members of WAAC & TU thought that it was a natural fit to join together to raise funds for both of our organizations since we have such similar environmental concerns. We had high hopes for the event and we were pleased with the outcome. Throughout the weekend, over

500 people attended the Expo. We heard positive feedback from vendors and visitors alike and everyone had a smile on their face!

Work has begun on the 2nd Annual Fishing & Outdoor Expo which will be held on **March 4 & 5, 2006. Hours for the event are: Saturday 8 am to 5 pm and Sunday 9 am to 4 pm.** The Expo will once again be held at the Buchanan Valley Fire Company

located at 1180 Buchanan Valley Rd. (Rt. 234), Orrtanna, PA. There is plenty of free parking. The fire company will have refreshments available for purchase all day both days.

Volunteers are always appreciated, so if you are interested in planning or working at the Expo, please contact Michelle Kirk at 677-4628 or by email at mkirk@adamswatersheds.org. Vendor spaces are also available

for the event at a cost of \$20 per 10' space with a table. We are also planning to have a raffle and door prizes once again this year. If you are interested in donating an item for either, please contact Michelle.

We hope to have another successful year, with your help and support we can do so!

Michelle Kirk

River Commission Names Areas of Concern

The Susquehanna River Basin Commission, a federal interstate compact commission that manages the resources of the Susquehanna River in New York, Pennsylvania, and Maryland, has identified what it calls "potentially stressed" and "water challenged" areas.

Potentially stressed areas may face critical water shortages in the future, and water challenged areas have natural conditions that limit water availability.

In naming the potentially stressed areas, the commission determined that the amount of water withdrawn annually should not exceed the average amount of

water recharged, or water going back into the watershed, an average of once every 10 years (known as a one-in-10-year drought).

The areas in Adams County identified as potentially stressed include the following:

- **Fruit Belt-** which is home to fruit orchards and intensive year-round production facilities and where irrigation is becoming more common. Groundwater is limited, and little that is withdrawn is returned to its source.
- **Hanover Area-** which is rapidly growing and has histori-



Harvest time in an Adams County orchard.

continued on page 4

An Endangered Susquehanna

CHESAPEAKE BAY TRIBUTARY TOPS LIST OF NATION'S THREATENED RIVERS

In an article in *The Washington Post* in April, staff writer Elizabeth Williamson described a report by American Rivers, a national conservation group that called the Susquehanna River "the most endangered river in the United States." The Susquehanna exemplifies "the crisis we're highlighting in this report, that when it rains in America, raw sewage [and animal waste and fertilizer runoff] pours into our rivers and streams in an increasing amount," said American Rivers President Rebecca R. Wodder, problems made worse by population growth and cuts to federal cleanup money.

Pennsylvania's massive Susquehanna – the bay's largest tributary, source of half the Chesapeake Bay's fresh water – is befouled by urban and farm runoff. Uphill and upstream from the bay, thousands of acres of Pennsylvania crop- and pastureland abut the banks of the

river and the creeks and streams that feed it. The farms are so small and far-flung that state environmental agencies struggle to bring all of them into compliance with laws governing pollutant runoff. Fertilizer nutrients and filth from the Susquehanna is a chief cause of the algae blooms and pollution that suck oxygen from the Chesapeake Bay, decimating crab, oyster, fish, and aquatic plant populations. A University of Maryland consultant estimated that the river contributes 40% of the nitrogen and 20% of the phosphorus (two key ingredients in fertilizers) to the bay.

"Pennsylvania is committed to reducing the nutrients and sediments that flow into our local streams and, in doing that, restoring the Chesapeake Bay," said Pennsylvania Department of Environmental Protection spokesman Charlie Young. "But the federal government is talking about reducing the amount of

[water cleanup money] that goes to Pennsylvania by almost \$25 million" next year, he said. Among state-funded cleanup efforts is a \$250 million bond issue last year to pay for sewage treatment plant upgrades.

Wodder of American Rivers said federal cuts to Pennsylvania's cleanup budget reflect the situation nationally. For example, the Bush administration's proposed 2006 budget calls for cutting spending on the federal clean-water fund to \$730 million, from \$1.1 billion last year. "The feds are not contributing their fair share to solving the problem," she said. Benjamin Grumbles, assistant administrator for water at the federal EPA, said the pared-back funding of \$730 million in the president's budget request "is part of a multi-year effort to commit \$6.8 billion through 2011" to the fund, which he said is intended to provide seed money to state-based loan programs to improve sewage treatment

infrastructure. Overall, Grumbles said, the EPA favors more state-based water quality initiatives and "innovative" programs to combat pollution, such as pollution credits, which can be traded among top-polluting industries.

Mark Berg

...Susquehanna – the bay's largest tributary, source of half the Chesapeake Bay's fresh water – is befouled by urban and farm runoff.

Kids Corner

SPLASH EROSION



*Did you know
raindrops fall between
7 and 18 miles per
hour in still air?
Rain can fall faster
when the wind is
blowing!*

When raindrops fall on bare soil, much energy is suspended. Small clods of dirt are broken down by the impact of the falling drops and may be splashed into the air during a rainfall. You can see splashed soil in gardens and schoolyards, on sidewalks, on vegetables and flowers, on basement windows and picket fences. Soil erosion can be a very serious problem for farmers and gardeners.

The following is a project that will help you study splash erosion!

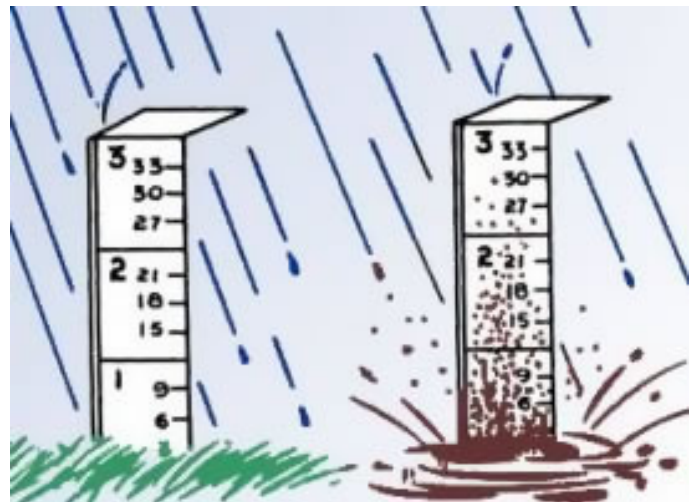
You will need:

- 2 boards – 1 inch thick, 4 inches wide and 3-1/2 feet long
- White paint
- 2 small pieces of tin, 4 inches wide and 8 – 10 inches long
- Marker

Ask an adult to help you assemble

your splashboards. Sharpen the end of each board so they can be pushed into the ground. Paint each of them white. Let them dry for 2 days. Mark lines across each board at 1-inch intervals beginning at the unsharpened end. Attach the tin pieces (shields) to the top of each board. The shield helps to prevent rain from washing the splashed soil off the boards. Locate 2 spots with different

amounts of grass cover: examples are a nearly bare spot in a flower bed and an area in your lawn; or a spot on one side of a farm fence where the grass is heavy and one side that is bare. Push each board into the ground about 6 inches. Check each board after it rains.



<http://www.brookings.com/bswf/experiments/ex6.htm>

AREAS OF CONCERN continued from page 3

cally relied on surface water reservoirs for its water supply. Only one area in the region has good potential as a groundwater resource.

The commission has also identified two “water challenged” areas, or places where natural conditions limit water availability. These are:

- **Diabase Areas-** specifically in the lower Susquehanna region, where massive, poorly fractured igneous rock occurs in bands of one to three mile wide and more than ten miles long. These areas have thin soils and abundant boulder fields, wetlands, springs, and small streams. Nearly all of the permeable material is within 30-50 feet of the sur-

face. These areas are coming under substantial development pressure.

- **Bonneauville Shale Belt-** where silty shale causes extremely low well yields.

Stream base flows are very low, while storm flows are very high.

There may be other “potentially stressed” or “water challenged”

areas in the fast developing southwestern half of Adams County that drains to the Potomac River. That area is not managed by the Susquehanna River Basin Commission, and therefore not included in its analysis. The Interstate Commission on the Potomac River Basin has not issued any similar analysis for its area.



Devil's Den, a diabase rock formation in the GNMP in Adams County.

PORTIONS OF THE ARTICLE EXCERPTED FROM AN ARTICLE IN PA TOWNSHIP NEWS, JULY 2005

Commitment to the Environment

I sometimes question our commitment, as a society, to support critical environmental initiatives. Most initiatives are costly with results that may not be measurable or will not be evident for some time. In the primary elections in May, Pennsylvanians made a significant commitment to our environment by voting for the Growing Greener Bond Question in overwhelming numbers. The bond question was "Do you favor authorizing the Commonwealth to borrow up to \$625,000,000 for the maintenance and protection of the environment, open space and farmland preservation, watershed protection, abandoned mine reclamation, acid mine drainage remediation and other environmental initiatives?". Over 61% of the voters voted "yes" for this \$625,000,000 initiative to address

environmental issues, a very positive indication of the commitment of Pennsylvania's voters to the environment. Locally, 58% of Adams County voters supported Growing Greener, and Franklin and Cumberland Counties also voted strongly in favor. Unfortunately, the voters in York County were less enlightened and voted against. Somewhat surprising to me was the overwhelming support from the large cities and heavily populated suburban counties, which probably won't receive much in direct benefit from Growing Greener (farmland preservation in Philadelphia?). This is a further indication that people are so interested in the environment that they will support environmental initiatives that do not provide local benefit. I do not believe that I overstate when I say that we

are all environmentalists on some level. Pennsylvanians have spoken loud and clear through their actions.

For Adams Countians, the Growing Greener program presents a huge opportunity to be good stewards to our natural resources. The Watershed Alliance of Adams County has successfully utilized the previous Growing Greener program to receive \$139,725 in grants to fund numerous environmental projects here in Adams County, and we should be in good position to take advantage of future opportunities resulting from the increased funding. Administering grants takes considerable effort and the Watershed Alliance could always increase our capability with additional volunteers. So if you what to get involved with hands-on stewardship

of our watersheds, please contact me at 334-1142.

The future has many opportunities for those who are prepared.

Pat Naugle

Please take the time to become a member, or renew your existing membership

Member Benefits

- Member Newsletter
- Member events and field trips
- Satisfaction of protecting water resources
- Joy of community service

Name _____

Address _____

Phone Number _____

E-mail address _____

Annual Membership Dues

- \$10 Student
- \$15 Individual
- \$25 Family
- \$50 Organizational
- \$100 Protector*
- \$250 Guardian*
- \$500 Conservator*
- \$1000 Steward*

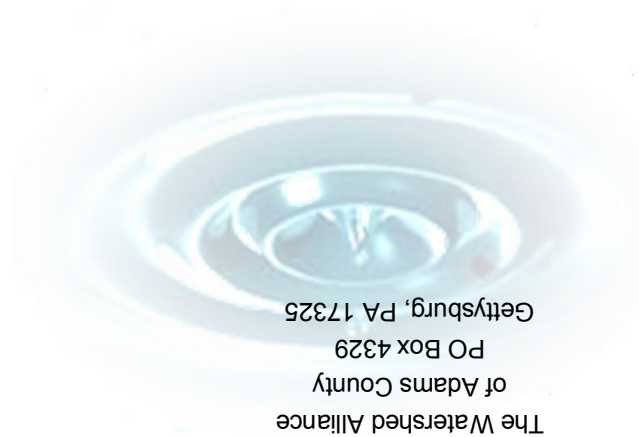
*Includes all membership benefits plus certificate or plaque and other recognition as appropriate

Make tax-deductible check payable to:

**Watershed Alliance of
Adams County, Inc.**

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Calendar of Events

OUR MONTHLY BOARD MEETINGS HAVE BEEN CHANGED TO THE SECOND TUESDAY OF THE MONTH, AT 7PM AT THE AG CENTER

November 30, 2005- WAAC executive committee meeting- noon at Ag Center

December 2, 2005- Rock Creek Assessment Project planning meeting- 10am at the Ag Center

December 2-5, 2005- Rock Creek testing

December 13, 2005- WAAC Board Meeting- 7pm at the Ag Center

December 28, 2005- WAAC executive committee meeting- noon at Ag Center

January 6-9, 2006- Rock Creek testing

January 10, 2006- WAAC Board Meeting-7pm at Ag Center

January 25, 2006- WAAC executive committee meeting- noon at Ag Center

January 30, 2006- Conewago Creek Rivers Conservation Plan steering committee meeting-
8:30am at the East Berlin Community Center

February 3-6, 2006- Rock Creek testing

February 14, 2006- WAAC Board Meeting- 7pm at the Ag Center

February 22, 2006- WAAC executive committee meeting- noon at Ag Center

March 4, 2006- 2nd Annual Fishing and Outdoor Expo- 8am—5pm at the Buchanan Valley Fire Hall

March 5, 2006- 2nd Annual Fishing and Outdoor Expo- 9am—4pm at the Buchanan Valley Fire Hall

CHECK US OUT

WWW.ADAMSWATERSHEDS.ORG

ON THE WEB