

# WHAT LIES BENEATH?

## Stream Waders find answers

by Dan Boward

### Calling all citizen scientists

Have you ever stood by a babbling brook or sluggish, coastal creek and marveled at its natural beauty? Have you wondered what creatures lurk beneath those submerged rocks, roots and logs? Have you pondered what effects pollution might have on our streams and what you can do to determine if a stream is healthy or sick? Now's your chance to take your interest to the next level! You, your family, friends and neighbors are invited to join Maryland Stream Waders – the Department of Natural Resources (DNR) statewide volunteer stream sampling program and the volunteer arm of the Maryland Biological Stream Survey (MBSS). The MBSS is Maryland's first probability-based or random design stream sampling program intended to provide unbiased estimates of stream conditions.

### Stream Waders work to...

- Increase the density of sampling sites for use in stream quality assessments.
- Educate the local community about the relationship between land use and stream quality.
- Provide quality assured information on stream quality to state, local, and federal agencies, environmental organizations, and others.
- Improve stream stewardship ethics and encourage local action to improve watershed management.

### Successful Effort

The Stream Waders program has helped DNR learn a lot about the health of our streams, largely due to the efforts of an active pool of citizens concerned about environmental health and the condition of local streams.

Since 2000, Stream Waders volunteers have slogged through more than 5,500

streams around the State sampling aquatic invertebrates that speak volumes about the health of their aqueous homes.

More than 1,000 committed volunteers have donned waders and braved the crisp, springtime winds, logging more than 30,000 hours to sample benthic

listed by the Environmental Protection Agency (EPA) as impaired according to the Clean Water Act for its excess nutrients, sediment, and loss of living resources.

Bick, an unofficial Stream Wader for over 20 years, participates because of her zeal for the Chesapeake Bay.



Young Stream Waders from Washington College spend an afternoon sampling for aquatic invertebrates.

macroinvertebrates (bugs) in wadeable streams statewide. These critters spend most of their lives under water and they are excellent indicators of stream health since they integrate effects of both upstream pollution and damage to their immediate habitats.

### The Wader Experience

Bonnie Bick of Southern Maryland has always been passionate about the State's natural resources. She worked tirelessly to save the forests around Mattawoman Creek in Charles County when then-Governor Parris Glendening began the smart growth initiative. Today Mattawoman Creek is

"It is a spiritual experience for me," she says of her volunteer work. "It's one of the best things, being connected to the Earth and being able to stream wade and monitor anadromous fish that live in the ocean and come back to the forested streams of the Mattawoman creek to spawn."

### How It Works

Each year, DNR recruits about 200 volunteers who complete a one-day training session before teaming up with old or new friends to sample about a dozen stream sites during March and April. DNR provides all the needed equipment, paperwork, GPS units, maps and waders.

All you'll need to do is find a suitable and safe sampling site and collect the critters according to standard methods. Samples are preserved and delivered to the DNR "bug lab" for identification.

Rupert Rossetti, a Stream Wader from Port Deposit, says he enjoys recruiting others to help with the program's mission. "When taking someone with me to do it the first time, seeing them get excited is great. When they scoop up that first net full they say, 'can I do this again?'"

### Survey says...

How are Stream Waders data used? Local governments in several counties use Stream Waders data to characterize stream conditions for watershed health profiles. The results help direct restoration money toward waterway improvements likely to have the greatest impact.

Organizations such as the Jones Falls Watershed Association in Baltimore, the Magothy River Association in Anne Arundel County, and the Port Tobacco Conservancy in Charles County use Stream Waders results to develop watershed management plans.

Data are also used by the Maryland Department of the Environment to help identify impaired streams that show a high potential for recovery after restoration projects are implemented.

Lastly, since Stream Waders may choose sampling sites close to or on their property, the volunteers themselves may also make use of the data.

### Volunteer

To learn additional information about Stream Waders, including registering for a training session, visit [www.dnr.state.md.us/streams/streamwaders](http://www.dnr.state.md.us/streams/streamwaders)

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