



Volunteer Monitoring News

A news update for – and by – the volunteer monitoring community



Issue 1
January 2012

About this Newsletter

Welcome to *Volunteer Monitoring News*, a new electronic newsletter written for – and by – the volunteer monitoring community. This newsletter will be constantly evolving (and hopefully improving) as it attempts to meet the networking and information exchange needs of volunteer monitoring programs from coast to coast. It will only succeed if you, the reader, submit calendar entries, articles and ideas for articles, highlights from your program activities, photos, and anything else you would like to share with your colleagues in the field.

We are not attempting to fill the shoes of *The Volunteer Monitor* newsletter, which for 20 years has been the pre-eminent voice for volunteer monitors nationwide. Due to a loss of grant funding from the U.S. Environmental Protection Agency, the Spring 2010 issue of *The Volunteer Monitor* unfortunately marked the last installment of this remarkable journal.

Volunteer Monitoring News is intended to be something entirely different: comparatively brief, news-oriented, and issued electronically, on a quarterly basis via a listserv notice, with direct input solicited from your newsletters, websites, or Facebook pages – whatever you use to get the word out about your program. We are looking for stories with national applicability, with topics as varied as monitoring successes, new lab or field methods, new partnerships, improved approaches to sustaining your program, scientific findings or tips on improving quality assurance.

Currently, our editors are former members of *The Volunteer Monitor's* editorial board, but we are looking to establish a new editorial board. If you have the time to search for, write, edit, or review new articles or track down events for our calendar, let us know. Contact Alice Mayo at mayio.alice@epa.gov or Barb Horn at Barb.Horn@state.co.us to express your interest in serving on the editorial board, or to submit articles, photos or calendar entries for the next newsletter.

Last, if you'd like to unsubscribe from *Volunteer Monitoring News*, please send an email to mayio.alice@epa.gov.

The contents of this document do not necessarily reflect the views and policies of the editors, nor does mention of trade names of commercial products constitute endorsement or recommendation of use.

Eleanor Ely, longtime editor of *The Volunteer Monitor* newsletter, passed away on January 26, 2012. She was the driving force behind *The Volunteer Monitor* – the voice of volunteer monitoring -- from 1990 to 2010, researching and writing many of the articles herself. Ellie's persistence, patience, and unique editorial insight ensured that her publication was an invaluable resource for the entire monitoring community. She was always eager to share her knowledge, experience, and connections with others, and to help forward the cause of volunteer environmental monitoring. She will be deeply missed. A tribute to Ellie is posted at <http://www.usawaterquality.org/volunteer/Special/RememberingEllie.html>.

Special Topic: Monitoring Snapshots

Wabash River (IN) Monitoring Blitz

At a time when state water monitoring agencies are looking for ways to collect more watershed-scale data with fewer resources, local volunteers offer an inexpensive way to make state ends meet. Volunteers are a natural resource for watershed-scale monitoring projects given their local residence and vested interest in the water quality condition of local waterbodies.

In western Indiana, the Wabash River Enhancement Corporation and Purdue University have demonstrated one approach to using volunteers to identify water quality problems by implementing the Wabash Sampling Blitz. The idea behind the event is to collect data at a large number of sites, providing a “snapshot” of water quality conditions at a given time. The idea for the sampling blitz emerged from the concerns of watershed stakeholders that water quality was poor within the Wabash River and its tributaries, and that monitoring was needed to identify specific problem “hotspots” within the 475 square mile watershed. While this snapshot approach is not designed to show how conditions vary temporally, it can provide a basis for comparing waterbodies spatially given that all streams are sampled concurrently. Once problem areas are identified, the data can then be used as a baseline against which more intensive, targeted sampling data may be compared.



Volunteers filter and analyze samples at a staging location for the Wabash Sampling Blitz.

The initial blitz occurred within a two-hour period on September 18, 2009, when samples were collected at 210 sites; volunteers then analyzed samples for temperature, pH, orthophosphate, nitrate and nitrite nitrogen, and copper. Volunteers also filtered water samples for lab analysis of ammonia, nitrate-nitrite, orthophosphate, and organic carbon. In addition, *E. coli* was sampled at a subset of sites. The blitz has since been repeated on April 9 and September 17, 2010 and April 15, 2011, and now includes analysis of turbidity (using turbidity tubes) and fish community assessment at a subset of stream sample sites.

This project is supported with a Section 319 grant and is designed to provide education and outreach to local citizens and other stakeholders. There are many benefits to cultivating

awareness at the local level through direct participation in this type of project. IDEM's Betty Ratcliff states: "My view is that the project promotes volunteers getting involved in their watershed. It helps with decisions on targeting Best Management Practice installations, and it helps in convincing farmers to participate in changing their farming practices." The data will be submitted to IDEM during its water quality review, thus providing the agency with a unique spatial dataset that is difficult for even a large state agency to collect.

The Wabash Sampling Blitz is a great example of how local citizens can be meaningfully involved in local watershed planning and protection efforts. For its efforts WREC has been nominated for recognition as an EPA Region 5 Volunteer Monitoring Success Story. For more information, visit the WREC website at www.wabashriver.net/wabash-sampling-blitz or contact Sara Peel, Coordinator of Watershed Projects, at speel@lafayette.in.gov.

Source: USEPA Region 5 Water Quality Monitoring Newsletter, March 2011

A Day in the Life of the Hudson River

Each fall, environmental education centers and school classes along the Hudson River team up to create a "day in the life" picture of the river from the Troy Dam to New York Harbor. The event is designed to celebrate the Hudson River Estuary and educate participants on the uniqueness of the estuary as part of National Estuaries Week. The event is coordinated by the Hudson River Estuary Program of the New York State Department of Environmental Conservation and the Lamont-Doherty Earth Observatory.

The Hudson River Day in the Life project began in 2003 with 300 or so student participants; in October 2011, approximately 70 schools with over 3000 students, teachers and education partners participated at 65 sites.

The Hudson River Estuary experiences dramatic changes in salinity, circulation patterns, tidal ranges, river width, water depth, fish species, macroinvertebrate communities, and plant communities. These dynamic features are what organizers hope to capture in the annual snapshot event in order to put together an image that best reflects the river itself. Through their participation in this event, students discover as many new questions as they answer, thereby creating a lifelong learning relationship with the river.



Young volunteers with the 2011 Hudson River Day in the Life Snapshot.

A website containing information on workshops, resources for students and teachers, lesson plans, and data from past events is available at <http://www.ldeo.columbia.edu/edu/k12/snapshotday/>.

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## What's New in Lab and Field

### San Diego Coastkeeper Incorporates Toxicity Testing into Volunteer Monitoring Program

San Diego Coastkeeper, the region's largest environmental organization protecting San Diego's inland and coastal waters, has completed a year of monthly water quality testing with a new toxicity test method that significantly expands the scope of data available to volunteer monitoring groups. Toxicity testing involves exposing a live organism to a water sample and measuring the impact on the organism's life processes, giving key insight into the health of the overall ecosystem. Toxicity testing has long been an integral part of National Pollution Discharge Elimination System (NPDES) permit testing, but due to cost and complexity has been mostly out of reach for volunteer-based water monitoring.

Coastkeeper was able to incorporate toxicity testing thanks to a new test method using a bioluminescent dinoflagellate, *Pyrocystis lunula*. This sensitive, single-celled organism emits light (bioluminescence) when physically agitated. The amount of light produced is reduced when the organisms are exposed to biologically harmful levels of contaminants. San Diego Coastkeeper used a small bench-top instrument from Assure Controls that is designed to quantify this light output after exposure to the waters collected throughout the County of San Diego. The availability of this method has made toxicity detection an affordable and achievable technique for Coastkeeper volunteers, providing the capability to confirm or update existing information and perform critical contaminant screening of water bodies.

For more information, contact Travis Pritchard, [travis@sdcoastkeeper.org](mailto:travis@sdcoastkeeper.org) or Shane Mudd, Assure Controls [smudd@assurecontrols.com](mailto:smudd@assurecontrols.com). See also the spring 2009 edition of *The Volunteer Monitor*, p. 21. "QwikLite: A New Toxicity Testing Method."

### "First Responders" Defend Maine's Lakes from Aquatic Invaders

Maine's Volunteer Lake Monitoring Program (VLMP) has instituted an Invasive Plant Patrol Rapid Response Survey team of trained volunteers who are willing to be on call should a new infestation be identified anywhere in the state. This mobile, ready-to-go team is able to move confidently and swiftly when the need arises. The Rapid Response Team is one of several VLMP invasive species initiatives designed to train and engage volunteers in conducting inventories and surveys, build leadership opportunities, and develop program efficiency and sustainability. For more information on the VLMP's invasive species program, including its interactive field guide, visit <http://www.mainevlmp.org/wp/>



## Science Corner

### Bacteria in Streambed Sediment

Did you know that almost any species of bacteria found in the water column can also be found in streambed sediments? After a high-flow event, bacteria that have entered the water column eventually settle down on the surface of the streambed. There, they become attached to small sediment particles and can survive for up to three months (survival depends on such things as stream bottom composition, nutrient supply, UV radiation exposure, temperature, and predation). Bacteria can become re-suspended in the water column when the stream bottom is disturbed.

*(excerpt from an article in Aqua Vitae, the Colorado River Watch Network's volunteer newsletter, Fall 2010, by Dave Bass)*



## Sustainable Programs

### Tracking Your Volunteers

Are you having trouble keeping track of the everyday business of your volunteer monitoring program? Travis Pritchard of the San Diego Coastkeeper recently asked the volmonitor listserve what tools volunteer programs used to track their volunteers. He was looking for a database that can house information such as volunteer contact data, interests, and sites visited, and that could link to other volunteer efforts carried out by the Coastkeeper such as beach cleanups, advocacy events, and so forth. The program's numerous excel spreadsheets, as he put it, "are no longer cutting it."

Some of the suggested options include using an Access database that could incorporate the Excel spreadsheets; Watergrass, LeadGreen.org's member/donor database developed for watershed and river groups (<http://www.leadgreen.org/wgfeatures.shtml>); and CiviCRM, an open source (e.g., free) contact relationship management system (<http://civicrm.org/>)

*If you have suggestions for a versatile, easy-to-use, inexpensive database that can be used for these purposes, let us know. Please send a brief description to [mayio.alice@epa.gov](mailto:mayio.alice@epa.gov). \*

### Um, What's a Blue Avocado?

Blue Avocado ([www.blueavocado.org](http://www.blueavocado.org)) is an online magazine for community nonprofits. On its website, it identifies itself as "practical, provocative, and fun food-for-thought for nonprofits." Blue Avocado publishes monthly through an HTML newsletter delivered free to more than

50,000 subscribers. Topics include nonprofit insurance, strategic planning, outsourcing your bookkeeping, and much more. As an example of the topics it covers, the site includes an article on why you should track your volunteers' time (see [www.blueavocado.org/node/330](http://www.blueavocado.org/node/330).)

### **Blue Water Baltimore: Five Watershed Groups Become One**

On September 7, 2010, five watershed groups in the Baltimore area became one: Blue Water Baltimore. The merger was a fascinating, unprecedented, complex process that began in 2004 and had its share of ups and downs.

The five groups that merged into Blue Water Baltimore were long-established grassroots groups: the Baltimore Harbor Watershed Association; Baltimore Harbor WATERKEEPER; the Gwynns Falls Association; the Herring Run Watershed Association; and the Jones Falls Watershed Association. The groups were different in finances, staff size, organizational age, board dynamics, and workplace arrangements, but shared the goals and challenges of improving the urban waters of the Baltimore area.



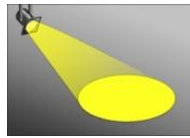
In the past, the five groups had partnered on projects and had spent time talking about the possibility of a merger. They knew they had sound reasons for merging, including a larger “platform” for influencing policy and improved financial efficiency. However, it wasn’t until grant makers’ support to the individual organizations decreased with the economic downturn that it was clear the time was ripe for the merger to occur.

The merger required the services of funders and consultants who had experience with mergers; third party facilitators and lawyers; significant board, staff and steering committee time; funding; and flexibility. Challenges included how to merge different program roles (for example, the Baltimore Harbor WATERKEEPER is a member of the International Waterkeeper Alliance and must adhere to its standards); how to manage the debts and assets of the individual groups; and how to handle the loss of identity that was bound to occur when local groups became part of a larger entity.

To learn more, visit the organization’s website at [www.bluewaterbaltimore.org](http://www.bluewaterbaltimore.org), or read their factsheet *Merger: the Story of Five Baltimore Watershed Organizations that Became One* (at [http://bluewaterbaltimore.org/wpcontent/uploads/2010/12/BaltimoreMerger\\_Final\\_Feb2011.pdf](http://bluewaterbaltimore.org/wpcontent/uploads/2010/12/BaltimoreMerger_Final_Feb2011.pdf))



## Spotlight On...



### Citizen Science: American Eel Research

Volunteers are helping document the abundance and range of the American eel (*Anguilla rostrata*), also known as the glass eel, in a number of tributaries of New York's Hudson River. The species is in decline over much of its range, and multi-year baseline studies of eel migration from the Atlantic into the Hudson River and its tributaries are crucial for its management and protection.

In a citizen science project organized and sponsored by the NY State Department of Environmental Conservation, the Hudson River Estuary Program, the Hudson River National Estuarine Research Reserve and other partners, high school and college students, teachers, nature center visitors and watershed groups are using a consistent methodology at all sites to catch, count, weigh and release the juvenile fish while also recording basic environmental conditions at each site. Eels are caught in fyke nets, large hoop nets that act as funnels to trap swimming fish. At several sites, herring surveys are also conducted.



Tiny "glass eels" are born in the Atlantic and migrate into the Hudson River.

In spring 2011, about 275 citizen scientists (teams of students and community volunteers) were involved at ten different sites from Westchester to Greene counties. Over 7,500 juvenile eels were caught and released upstream; in many cases, these eels were passed above dams or other barriers, giving them access to more habitat. Numbers caught were down somewhat from last year, possibly because of more rainfall and higher streamflow.

For more information on the American Eel Research, visit <http://www.dec.ny.gov/lands/49580.html> or contact Chris Bowser of the NYS Department of Environmental Conservation at [chbowser@gw.dec.state.ny.us](mailto:chbowser@gw.dec.state.ny.us).



## Publications/Videos/Web Tools/New Releases

### Identifying Bankfull Stage

The U.S. Forest Service's Stream Systems Technology Center has produced several videos on identifying bankfull stage in streams in both the eastern and western U.S. Hosted by pre-eminent scientists, these videos are valuable field guides for those interested in evaluating this important measure of the flow patterns of rivers and streams. The videos can be viewed online or ordered on DVD. See the videos at <http://www.stream.fs.fed.us/publications/videos.html>.

## Water Action Volunteers (Wisconsin) Training Videos

Volunteer groups throughout Wisconsin are using Water Action Volunteers' sampling protocols to monitor the health of their local streams and rivers. A set of excellent training videos for monitoring dissolved oxygen, habitat, macroinvertebrates, stream flow, temperature and transparency using the WAV methods was developed by the University of Wisconsin Cooperative Extension and is available at <http://watermonitoring.uwex.edu/wav/monitoring/video.html>.

## Oil Spill Toolkit for Citizens Monitoring Emergencies

When a catastrophic spill happens, citizen monitors can play a role in responding to and documenting the spill. Trained volunteers can help identify when and where protective measures and/or cleanup are needed. They can also monitor and document the progress of cleanup efforts from the onset to the weeks and months that follow. Information provided by trained volunteers will not only enhance the success of the cleanup response, but can provide an independent, objective source of information.

Delaware Riverkeeper Network, NJ Watershed Watch Network and the NJ Department of Environmental Protection have jointly developed a toolkit to deal with the potentially disastrous consequences of oil spills. The toolkit includes a description of the National Response System that goes into place when an oil spill occurs; a tip sheet for the volunteer monitoring coordinator's role during a spill; tip sheets to help volunteers conduct initial assessments and residual assessments two or more months after the spill; field sheets for oil spill assessments, shoreline assessments and oiled wildlife; and much more. The oil spill toolkit is available at

[http://www.delawariverkeeper.org/river-action/Dr.\\_SWAT\\_Oil\\_Spill\\_Toolkit.pdf](http://www.delawariverkeeper.org/river-action/Dr._SWAT_Oil_Spill_Toolkit.pdf)

## Rivanna River Basin Healthy Waters Project Report



**VCU scientists conduct a fish survey in a stream in the Rivanna watershed.**

The Rivanna River Basin Commission (RRBC) is the regional organization tasked with recommending programs for the enhancement of the water and natural resources of the Rivanna River (Virginia) and its watershed. The RRBC has just completed a Rivanna Healthy Waters Pilot project, an initiative that embraces the principles of EPA's Healthy Watersheds Initiative (see <http://water.epa.gov/polwaste/nps/watershed/index.cfm>).

From July 2009 to September 2010, the RRBC undertook a study to identify the Rivanna's healthy waters and promote their protection through land use planning in the Rivanna watershed. Virginia Commonwealth University (VCU) scientists worked with the



Rivanna River watershed's community-based biological monitoring program, StreamWatch, to identify the Rivanna's "healthy waters" using the ecological integrity assessment protocol INSTAR.

The study showed that, of the 54 streams assessed in the Rivanna basin, 16 streams (29%) meet the criteria of "Healthy Waters," and 4 streams (7%) were "Exceptional." RRBC will continue to work with its member localities in the watershed to provide data and develop tools that will support local decision-making to enhance the protection of -- and help maintain the ecological integrity of -- "healthy streams." The final report of the Rivanna Rivers Healthy Waters Project is available at <http://www.rivannariverbasin.org/dcr-healthy-waters.php>



## Upcoming Events

*If you would like to list your upcoming volunteer monitoring-related event in this newsletter, please provide the date, location, and a brief description to [mayio.alice@epa.gov](mailto:mayio.alice@epa.gov).*

### February

**Urban Wetlands: Wisconsin's Wetlands Association's 17<sup>th</sup> Annual Wetland Conference**, Feb. 22 -23 2012, Lake Geneva, Wisconsin. For more info: <http://wisconsinwetlands.org/2012conference.htm>

### March

**Watershed Congress along the Schuylkill River: Marking 15 Years of Sharing Information, Tools, and Practices on Watershed Protection and Restoration**, March 10, 2012, Montgomery County Community College, West Campus, Pottstown, Pennsylvania. For more info: <http://www.delawariverkeeper.org/about/event.aspx?id=63>

**Confluence 2012**, March 17, 2012, Gwinnett Environmental and Heritage Center, Buford, Georgia. Georgia Adopt-A-Stream annual statewide conference. For more info: <http://georgiaadoptastream.org/db/Confluence2012.asp>

### April

**30th Annual Salmonid Restoration Conference**, April 4-7, 2012, Davis, CA. Sponsored by the Salmonid Restoration Federation. For more info: <http://calsalmon.org/>

**2012 Montana Storm Water Conference: Weathering the Storm - Strategies and Solutions Managing Storm Water**, April 10-12, 2012, Kalispell, MT. Sponsored by Montana Watercourse. For more info: <http://mtwatercourse.org/events/page.php?eventID=60>

**Clean Water Celebration**, April 22- 23, 2012, Peoria, Illinois. Sponsored by the Sun Foundation for Advancement in the Environmental Sciences and Arts. For more information, visit [http://sunfoundation.org/wordpress/?page\\_id=371](http://sunfoundation.org/wordpress/?page_id=371)

#### **April – May**

**8<sup>th</sup> National Monitoring Conference, Water: One Resource – Shared Effort – Common Future**, April 30 –May 4, 2012, Portland, Oregon. May 4 is an “overlap day” with the River Network’s River Rally. Sponsored by the National Water Quality Monitoring Council. For more info: <http://acwi.gov/monitoring/conference/2012/>

#### **May**

**River Rally 2012**, May 4 – 7, 2012, Portland, Oregon. A joint production of the River Network and the Waterkeeper Alliance. For more info: <http://www.rivernetwork.org/programs/river-rally>

**NY State Federation of Lakes Annual Conference: After the Storm**, May 4-6, Hamilton, NY. For more information, <http://www.nysfola.org/>

**23rd Annual Nonpoint Source Pollution Conference**, May 15 & 16, 2012, in Portsmouth, NH. Coordinated by the New England Interstate Water Pollution Control Commission (NEIWPC), in partnership with its member states. For more info: <http://www.neiwpc.org/npsconference/>

**Volunteer Monitoring News** is a free publication produced on a quarterly basis and distributed electronically. The editorial board currently includes Alice Mayo, USEPA; Barb Horn, Colorado Division of Parks and Wildlife; Danielle Donkersloot, New Jersey Department of Environmental Protection; Linda Green and Elizabeth Herron, U. of Rhode Island Watershed Watch; Kris Stepenuck, Wisconsin Water Action Volunteers; Erick Burres, California Waterboards Clean Water Team; and Julie Vastine, Alliance for Aquatic Resource Monitoring. Contributions of articles, photos, and announcements from volunteer monitoring organizations are encouraged but their inclusion in future editions cannot be guaranteed. All contributions must include contributor’s name, address, affiliation, email, and phone number. Contributions and subscription inquiries should be submitted to [mayio.alice@epa.gov](mailto:mayio.alice@epa.gov).

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