



RAIN MATTERS

News and Views for RAIN Members

A Quarterly Newsletter

ISSUE No. 6 - Late Fall 2016

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RAIN *MATTERS* is published quarterly for member organizations.

RAIN's Program Manager is Bryce Aaronson, bryce.rainmatters@gmail.com

RAIN *MATTERS* Editor & Writer is Lynda Ginsparg, lyndaginsparg@yahoo.com

Uniting Together for Source Water Protection - Highlights of RAIN's Second Annual Conference

“What is the value of our rivers?”

Since 2007, the River Alert Information Network has been working to answer this question through its early warning systems that track water quality in the Allegheny, Monongahela, Beaver and Youghiogheny Rivers. Accurate, real-time data collection is sent to RAIN members, alerting them to threats to their water systems before pollutants move downstream. The data collected is uploaded in real-time onto rainmatters.org for water professionals and the general public to use. In fact, more than two million people living in the region count on this system to work, and most of them don't even know about it.

Ron Bargiel, RAIN's current chair, gave an overview of the water monitoring process during the opening session at the Second Annual RAIN Conference earlier this fall. Bargiel's presentation was one of six sessions at the conference, along with sessions on DWMAPS and Environmental Preparedness, Harmful Algal Blooms, and the Grassroots of Source Water Protection.

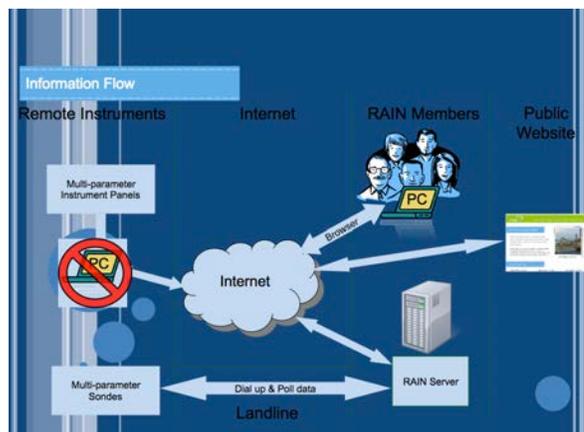
Bargiel gave conference attendees a virtual 'taste' of RAIN through a powerpoint presentation that included a look at the equipment being used to monitor the water, the parameters currently being monitored and a glimpse into the network that data must travel once it's acquired from the monitoring equipment before it gets to the public website. In fact, Bargiel noted in his presentation that the network is the

message, as outlined in several graphics he presented to conference attendees.

Bargiel summed-up his presentation by characterizing RAIN's Early Warning Systems this way: "These systems make the investment in public water worthwhile for residents in the Upper Ohio River Basin."

With 23 monitoring sites and 51 participating water suppliers, RAIN has plans to expand its monitoring capabilities to test for more variables in the water, and that makes the water good for everyone.

Highlights from the 2016 RAIN Conference continue on pages 3-5.



This graphic from Bargiel's conference presentation shows the information flow from data collected by monitoring equipment as it is processed through the internet and ultimately onto the RAIN website for members and the general public to use.

RAIN Drops- News notes for RAIN members

Peoples Natural Gas Steps Up to Support RAIN

Peoples Natural Gas of Pittsburgh has thrown its support behind RAIN, in the form of two generous gifts:

◆RAIN has received a generous donation of \$15,000 from Peoples Natural Gas that will be used as a matching grant for a capital campaign that is projected to generate between \$30,000-\$40,000. The funds will allow RAIN to substantially increase the reporting capabilities of the network by increasing the number of Welbeck boxes and reporting sites from six to between 14-20. This will match the Hach recording boxes and allow for information that is being collected to be sent to the RAIN website.

"We're currently soliciting funds from our membership, the water suppliers who rely on the rivers throughout the region, to contribute just \$800 apiece," said RAIN's Program Manager Bryce Aaronson. "This will then be matched up to \$15,000 from Peoples," he said.

RAIN members, come on board!

◆RAIN also recently received \$5,000 from Peoples Natural Gas to support a real-time water quality exhibit at the Carnegie Science Center. This exhibit will incorporate the RAIN Early Warning Detection System into the Science Center's larger H2Oh! exhibit.

Included in the exhibit will be a display panel that will demonstrate the processes used by water systems to monitor and detect potential contaminants in the river water. In addition to the panel, RAIN's map and educational materials will be redesigned to be more user-friendly for a general museum audience. The exhibit is expected to be installed at the end of February 2017.

Currently, two screens at the Science Center's H2Oh! exhibit display USGS data from locks and dams throughout the region. In the future, RAIN anticipates this data to be further developed and enhanced with the inclusion of more sites along with EWDS. As RAIN continues its focus on funding it is likely to include data for 35-50 water systems along the rivers in the Upper Ohio River Basin, RAIN's area of focus.



A Carnegie Science Center employee demonstrates the touch screen showing data currently collected by the USGS.

You Can Help RAIN Grow!

RAIN appreciates the great group of water professionals who were able to attend this year's conference! Even if you were not able to attend, there are still ways to get more involved and help RAIN in your community and beyond.

We now look to many of you to help grow and support our organization. We're looking for members to join the following committees:

- Technical Committee
- Education Committee
- Financial Committee
- Source Water Environmental Education Team (SWEET)

Share your expertise! If you are interested in joining one of these committees, or would like to learn more, contact Bryce Aaronson at bryce.rainmatters@gmail.com

Internship Opportunity --

RAIN is looking for an intern to work 10-20 hours per week to assist in updating and implementing a source water protection education curriculum. The ideal candidate is one who is working toward an undergraduate or graduate degree in public policy, communications/journalism, international development, environmental science or similar degree. The position may also include grant writing, website development and outreach. This is a volunteer position available for class credit. The candidate can work remotely but must be based in or around the city of Pittsburgh. For details contact Bryce Aaronson at bryce.rainmatters@gmail.com

Experts Focus on Detecting Threats and Providing Solutions to Protect Our Waterways

RAIN's second annual conference featured a wide range of water professional experts with expertise in local, state and national water protection organizations. This year's panels focused on a diverse range of topics all tying back to the threats effecting source water protection. Pages 3 and 4 include synopses of those panel presentations. Complete powerpoint presentations with detailed information and links are at the RAIN website www.rainmatters.org/rain-2016-conference-materials/

Launching of the Ohio River Regional Source Water Protection Plan - Panelists: *Brandy Braun, West View Water Authority; Joe Alvarez, Municipal Authority of the Township of Robinson and RAIN Board member; Ned Mitrovich and Bill DiCioccio, Center Township Water Authority; John Riley, Moon Township Municipal Authority; Gina Cyprych, Pittsburgh Water and Sewer Authority and RAIN Board member; and Lyn O'Hare, SSM Group.*

Panelists represented the member systems of RAIN's newest Source Water Protection Partnership. They made the case for establishment of a source water protection plan, using historical information and graphics outlining the impact of several water emergencies throughout the country during the past two years. Information highlighted included a comparison of the cost savings for prevention as opposed to response to a contamination event. Panelists reviewed the five-step process to creating a Source Water Protection Plan that includes identification of potential sources of contamination and protection strategies. Panelists also emphasized the importance of establishing community and municipal partnerships in the effort to build awareness in order to collectively develop strategies to protect area source water.



Brandy Braun, center, makes the case for establishment of a source water protection plan during a panel discussion about the launch of the newest RAIN partnership. Panelists included Joe Alvarez, left, and Gina Cyprych, right.



DWMAPS and Environmental Preparedness - Panelists: *Catherine Magliocchetti and Patti Kay Wisniewski, US EPA Region 3.*

Representatives from the EPA's Region 3 office discussed the agency's online mapping tool designed to help water systems collect data critical for drinking water source protection. The Clean Water Act Analysis Tool takes a detailed look at contaminants in the waterways and where they occur, not just in Pennsylvania, but nationwide. The EPA makes DWMAPS available through its online User Guide to Drinking Water Mapping Application to Protect Source Waters. The guide helps water professionals identify watersheds that are important to drinking water supply and public water suppliers for specified areas; outlines potential sources of contamination; and shows how water systems can take advantage of local, county and interstate collaboratives to plan and follow through with watershed projects in their areas.



Harmful Algal Blooms - Panelists: *Rose Reilly, US Army Corps of Engineers/Pittsburgh District; Dr. Stanley States, Water Quality expert; Tom Stehle, Stehle Consulting LLC; and Barb Lubberger, Ohio EPA. Panel moderated by Gina Cyprych, Pittsburgh Water and Sewer Authority.*

Panelists addressed the rise of the toxin that is choking off waters for both consumption and recreational uses. Just how widespread is the problem? Reilly, a biologist in the water management division of the Corps, shared slides showing documented HABs from the Allegheny Reservoir down to the Ohio River locks and dam, noting the vast cell count of the algae in those waters. Reilly also noted the Corps' response plan, which includes a mix of weekly sampling and monitoring, along with posting signs warning the public of the health risks associated with exposure to HABs in the water.

Sharing a perspective from the Ohio EPA, which began sampling for cyanotoxins in 2010, Lubberger said the state developed strategies for responding to the threat beginning the next year. Her presentation noted several HAB emergencies, including threats to the City of Toledo, which was under a 'Do Not Drink' advisory as recent as 2014; and Lake Erie, which experienced its largest bloom on record in 2015. Ohio EPA has been instrumental in working with Ohio lawmakers to adopt stricter drinking water provisions, and has undertaken weekly sampling and monitoring to track unsafe levels of microcystins in the water and provide public safety advisories.



The EPA's Cathy Magliocchetti addresses the benefits of using DWMAPS to compile an information base to create a customized water analysis tool for water systems.



Dr. Stanley States shared his expertise during a panel discussion on harmful algal blooms. States' segment of the panel presentation concentrated on the biology of the cyanotoxins.

RAIN Conference Experts Focus on the Grassroots of Source Water Protection

Grassroots of Source Water Protection - Panelists: *John Schombert, 3 Rivers Wet Weather; Rebecca Zeyzus, Allegheny Watershed Alliance; Rob Walters, 3 Rivers Waterkeeper; and Melissa O'Neal, West Virginia University/Water Research Institute. Panel moderated by Jan Lauer, Allegheny County Conservation District*

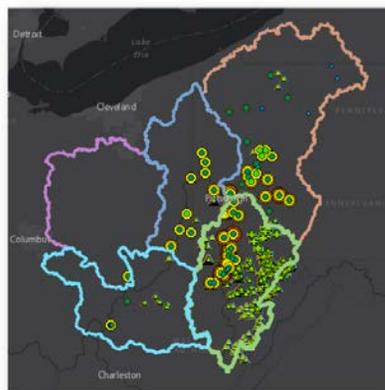
Panelists got right to the heart of the matter in providing an overview of organizations that are dedicated to protecting the Allegheny, Monongahela and Ohio Rivers to keep them safe to drink, swim, navigate and enjoy. Walters, along with support from interns and board members, patrols the Three Rivers in his Waterkeeper Boat, monitoring water quality and evaluating and responding to pollution incidents. The group focuses on monitoring industrial pollution, habitat protection and transportation of dangerous materials via rail and barge. "The presence of our Waterkeeper boat and kayaks on the three rivers is critical to improve the water quality through visible monitoring and patrols in areas where the threat to water quality is greatest," Walters said. The group also oversees community education programs and is developing a volunteer monitoring training program focusing on visual assessment, record-keeping and reporting.

West Virginia University, through its Three Rivers Quest program, is tracking and monitoring incidences of TDS and AMD discharges in the three rivers. Utilizing volunteer monitoring, data loggers are stationed at 50 sites and measurements are being taken at another 300 sites to collect samples to test for TDS chemistry (see graphic at right). O'Neal's presentation was heavy on data and also included a look at articles backing-up testing and research by the WV Water Research Institute. The testing concluded that discharge into Tenmile Creek resulted in acceptable levels of radium in drinking water and acceptable levels of trihalomethane in drinking water in Washington County, Pennsylvania. Both articles provided data and expert comments from Dr. Paul Ziemkiewicz, director of the WVVRI, who was a guest speaker at RAIN's first conference in 2015.



"Water Protectors" l to r: John Schombert, Rebecca Zeyzus, Melissa O'Neal, Rob Walters and moderator Jan Lauer.

Reaching into the headwaters with volunteer monitoring



>50 data loggers deployed

>300 sites – field measurements; continuous data loggers; and/or grab samples for TDS chemistry

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John Schombert from 3 Rivers Wet Weather weighs in on grassroots source water protection, alongside Rebecca Zeyzus from the Allegheny Watershed Alliance.

RAIN Board & Partners:

- Ron Bargiel, RAIN Chair, Pennsylvania American Water
- Gina Cyprych, Pittsburgh Water and Sewer Authority
- Jack Ashton, Municipal Authority of Westmoreland County
- Joe Alvarez, Washington Township Water Authority
- Nick Colledge, Brackenridge Water Authority
- Tom McCaffrey, RAIN Agency Partner, PA DEP Source Water Protection Section
- Gary Stokum, Treasurer, Penn's Corner Conservancy Charitable Trust
- Craig Cobb, William Toomey, RAIN Partner, West Virginia Department of Health and Human Services
- Bryce Aaronson, RAIN Program Manager

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Conference Photos & Wrap-Up

With more than 65 attendees and panelists, RAIN's Second Annual Conference has been considered a success, bringing together experts in the field and coalescing support for source water protection. RAIN members have built solid partnerships with water systems, watershed groups, local, county and national agencies all working together to monitor and keep our waters clean.

"Conference attendees hinted that they see RAIN as a clearinghouse" for the gathering and interpretation of water quality data, said RAIN's Program Manager Bryce Aaronson. "We're looking to harness this (interest) and the potential of the RAIN website to present an avenue of distribution of water quality data to anyone concerned about the quality of water in the rivers," he said.

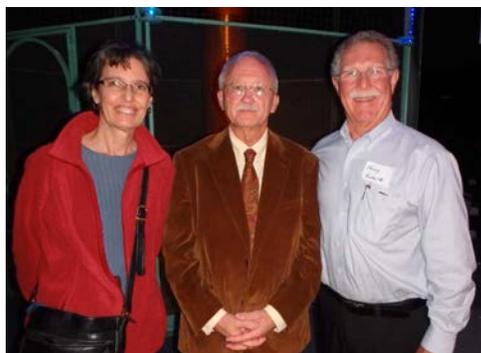
RAIN itself focuses on water systems, but the data is also valuable for those using the rivers for recreational purposes, or anyone in the general public who is concerned with the water quality of the region's rivers. Panel discussions at the conference highlighted this point, Aaronson said, and authenticated the belief that RAIN is positioned to provide this important service. Or, as Ronald Schwartz, Assistant Regional Director of the PA DEP's Southwest Regional Office, noted in his welcome remarks, "An ounce of prevention is worth a pound of treatment."



This year's conference was also the official launch for the recently formed Ohio River Regional Source Water Protection Partnership. Each member gave an opening statement during a panel discussion dedicated to the new partnership, then discussed the steps their water systems are taking to support source water protection in relation to their respective areas along the river. The partners have already completed the several-step process of a source water protection plan. The first step was to pinpoint potential sources of contamination, and then define delineation zones, followed by a collaborative effort to verify the concerns of the member water systems participating in the partnership. This effort included representatives from the water systems, PA DEP, Allegheny County Health Department and RAIN. This process helps to keep an open line of communication among the partners in order to alert those both upstream and downstream about any sources of contamination in their water.



Members of the newest source water protection partnership, the Ohio River Regional Partnership, include l to r Bill Diciocco and Ned Mitrovich from the Center Township Water Authority; and John Riley from the Moon Township Municipal Authority.



Panelists Barb Lubberger, Stanley States, and conference attendee Jerry Schulte during a break in the action at the conference.

"This was a call to action for uniting together for source water protection," Aaronson said of the partnership. The conference was attended by a wide variety of professionals in the water industry: representatives from government agencies such as the US EPA; US Army Corps of Engineers; Ohio EPA, the West Virginia Department of Health and Human Resources and the PADEP. Representatives from the Allegheny County Health Department and Allegheny County Conservation District were on hand as well. The conference was also well-attended by the region's water systems, including Pittsburgh Water and Sewer Authority; PA American Water Co.; Center, Robinson, West View and Moon Townships and the Borough of Midland. In all, about a dozen water systems were represented, along with industry partners Hach, which manufactures monitoring equipment used by many RAIN water plants, and Welbeck Secure Solutions, this year's conference Gold sponsor, which provides the internet capability allowing the data gathered throughout the RAIN system to be shared.

With such a diverse, committed group of partners, RAIN is well-positioned to move to the next phase of bringing even more monitoring systems on board to patrol the waters in western Pennsylvania. Possible theme for next year's RAIN conference: how about "Today and for the Future"? Sounds promising to us!