



RAIN

MATTERS

News and Views for RAIN Members

A Quarterly Newsletter

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Top Story

- *Focus on Funding: Peoples Natural Gas Grants in Action*

Page 1

RAIN Drops - Updates on new initiatives for RAIN Members

- *Partnership Updates*

Page 2

Focus Feature - Greg Shellito

- *Bringing a West Virginia perspective to RAIN*

Pages 3-4

News Notes

- *RAIN's Social Media Initiative*
- *Come on Board as a new member of RAIN's Board*
- *Morgantown Utility Board voted WV's Best Tasting Water for 2016*

Page 5

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

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

FOCUS ON FUNDING : Putting the Peoples Natural Gas Grants to Work

Two significant grants from Peoples Natural Gas are helping RAIN increase its communications reporting capability throughout the region and its presence in the community.

Communications Reporting Will Increase Thanks to \$15,000 Grant from Peoples

A substantial \$15,000 grant was earmarked as a matching grant for a targeted capital campaign that has already raised an additional \$5,600 in contributions from RAIN members. These funds are being used to increase RAIN's communications reporting throughout the region via the use of Welbeck Secure Solutions communication boxes.

"Welbeck provides an affordable and secure means of communicating sensitive information," said RAIN's Program Manager Bryce Aaronson, "so purchasing and prioritizing the location of communication is RAIN's top priority. We're grateful to Peoples Natural Gas and our members' support for this key step."

RAIN is now set to begin working with high-priority water systems to coordinate installation of the new communication boxes. The purchases are expected to increase RAIN's ability to support real-time data reporting from up to 10 additional sites in the region.

Peoples' grant of \$5,000 earmarked for Science Center exhibit

The majority of the second Peoples' grant of \$5,000 is being used to help spotlight RAIN's monitoring capabilities at the H2Oh! exhibit at the Carnegie Science Center in Pittsburgh. The grant was used for the purchase of a HACH source

water monitoring panel that will be installed in the exhibit. The panel will serve as a model to show how RAIN's early warning spill detection system monitors real-time river water quality.

"Water is an under-appreciated resource, most people do not realize how much they rely on clean water," said Aaronson. "With the new exhibit at the Science Center RAIN will be able to emphasize this importance and the efforts occurring behind the scenes to 500,000 visitors every year," he said.

RAIN's exhibit at the Science Center will allow visitors to the H2Oh! Gallery an opportunity to learn more about real-time water quality across the Upper Ohio River Basin. The exhibit will highlight real-time water temperature, conductivity and pH, as well as other selected parameters.

The remainder of funds from the second grant will be used to modify the online interactive map for exhibit visitors to appeal to both adults and children. The launch of the exhibit is scheduled for the end of March.



This HACH source water monitoring panel sits quietly at the Science Center, awaiting its installation in the H2Oh! exhibit. The display will show how data is collected in real time.



RAIN Drops- Updates on new initiatives for RAIN members

New Partnership on the Drawing Board

RAIN is working to establish its newest regional source water protection partnership, to be known as the Upper Allegheny River Regional Partnership. The partnership will bring together water systems that have yet to develop a source water protection plan as well as those that have already developed a DEP-approved plan. The project is partially funded by the Pennsylvania Department of Environmental Protection’s Source Water Protection Technical Assistance Program (SWPTAP) which provides professional technical services in the development of a SWP plan.

Three systems have applied for SWPTAP services for the project: the Municipal Authority of Buffalo Township-Freeport; Kittanning Suburban Joint Water Authority; and Parker Area Authority. They will be joined by three systems which already have DEP-approved SWP plans: PA-American Water Company-Kittanning; PA American Water Company-Butler; and PA American Water Company-Clarion. In addition, another system participating as a partner will be Aqua PA-Emlenton, which is planning to develop its own in-house SWP plan.

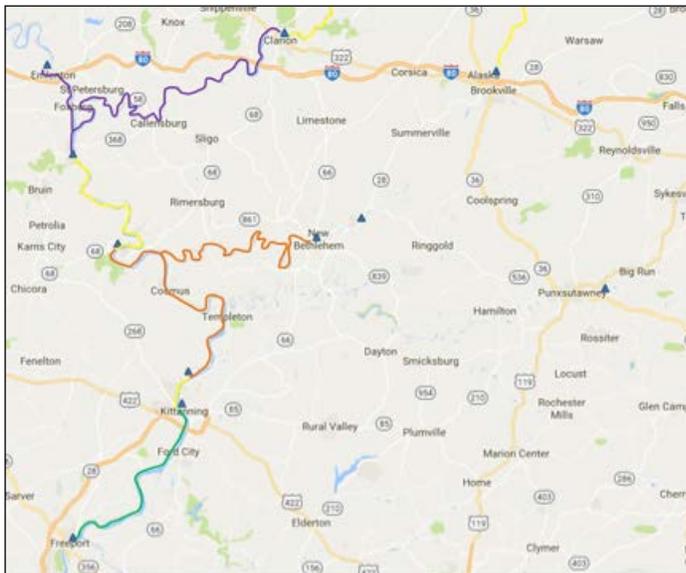
This new partnership seeks to connect the source water protection efforts of these systems by offering SWPTAP technical services to create a continuous path of source water protection planning along a stretch of the Allegheny from Freeport to Clarion. In addition, the SWP area will extend upstream to the Aqua PA -Emlenton intake.

“This would be another partnership recognizing the potential and credibility of RAIN because there is such value in our work,” RAIN Program Manager Bryce Aaronson said. “We are now in the preliminary process of getting the water systems to buy in.” A timeframe for officially launching the new partnership has not been set.

The map at right shows the path of the source water protection areas along the Allegheny for each water system. The yellow lines represent SWP areas with currently existing SWP plans.

SWPTAP services will extend upstream so as to include the SWP area for Parker Area Authority, outlined in purple.

Information and map provided by Tom McCaffrey, RAIN Agency Partner, PA DEP Source Water Protection Section.



Partnership Update - Lower Mon Partners Meet in Charleroi

The members of the Lower Monongahela Regional Partnership met on December 7 in Charleroi for the group’s annual source water protection partnership meeting. Representatives from The Guttman Group, which operates a large holding facility in close proximity to the Charleroi intake, were on hand to share their concerns about source water protection with the water systems. The meeting provided an opportunity for representatives from the water systems and industry to meet each other, opening up a valuable line of communication.

“Clean water is everyone’s goal and there are ways to achieve this,” said RAIN’s Program Manager Bryce Aaronson.

Members of the Mon Partnership include Belle Vernon Borough Municipal Authority; Brownsville/PA American Water; Authority of the Borough of Charleroi; Newell Water Authority; and the Washington Township Municipal Authority. The Guttman Group Companies include Guttman Oil, Guttman Energy, Source One Transportation and Bulk Terminal Storage, which have a combined focus on the storage and transportation of energy.

The Authority of the Borough of Charleroi hosted the December 7 Mon Partners meeting



Greg Shellito: Bringing West Virginia's Perspective Downstream to RAIN

Listening to Greg Shellito describe his background is a little like listening to someone list the ingredients in a recipe for a source water protection 'cocktail': one part biology, one part chemistry, a dash of limnology, a large scoop of ecology and a generous helping of civil engineering. Blend it all together and you get the career of the current Manager of Treatment and Production at the Morgantown Utility Board (MUB) in Morgantown, West Virginia. Shellito also happens to be the point person between MUB and RAIN. *(For those who may not be familiar with the term, limnology is the study of the biology, chemistry and physical features of lakes and other bodies of fresh water.)*

Shellito's background, a mix of both science and engineering, has allowed him to look at problems in a different way than some others in the water world. Graduating with degrees in biology and chemistry, with an area of interest in ecology, Shellito said his original career track was geared toward pre-med. He later decided that path wasn't for him, so he turned his attentions to environmental studies and went to West Virginia University to do graduate work in limnology. Though he graduated with a master's degree in biology from WVU, he found there weren't a lot of good paying jobs for biologists with master's degrees at the time and he went back to WVU to study civil engineering.

"I had a great background in biology and chemistry. The physical stuff came into the mix with the study of civil engineering. Stats and math also blended in nicely. In the wastewater and water fields, if you look at other professionals' credentials, my skill set is rather unique," Shellito said.

Calling on his unique skill set, Shellito has developed an approach that has led to successful solutions in rebooting operations in both the wastewater and water treatment areas during his 30 years at MUB. In addition to his regular duties, Shellito currently is charged with oversight of an \$80 million construction project to overhaul MUB's existing wastewater plant; groundbreaking for the project was held in early February.

"There is (still) a lot of original equipment that was put in when the plant was built in the 1960s, original GE switchgear that's so old that when I needed a part for it I had to go to an electrical salvage yard in Georgia," Shellito quipped.

If this project weren't enough, Shellito has become one of the primary contacts for RAIN in West Virginia. Shellito answered the call when RAIN partner Craig Cobb, from the West Virginia Department of Health and Human Resources, reached out to water systems in the state to garner support for monitoring the waters immediately

south of western Pennsylvania. Both Cobb and his boss William Toomey, also a RAIN partner, have been instrumental in helping to get RAIN's message for source water monitoring ramped up in West Virginia.



Greg Shellito

"It made sense that MUB was one of the first ones (to be contacted for the monitoring) because we're the last water system before the water from the Monongahela River flows into Pennsylvania, so it makes sense to expand the RAIN network starting with us," Shellito said. The Monongahela is one of only a few rivers in the United States that run north; the river starts in West Virginia and flows north to Pittsburgh, where it joins the Allegheny River and the two become the Ohio River.

"You always want to know what your source water is looking like. To know what it looks like before it gets to your facility is a great help," Shellito said. As with other RAIN member systems using source water monitors, MUB uses the Hach SC1000 monitor to continuously test the water's ph, temperature and conductivity. In addition to uploading the information to the RAIN server for other water systems to see, MUB utilizes the data itself to monitor the river's water in its own system. Currently, there are monitors being utilized in five water plants upstream from MUB that are actively collecting this data. MUB's monitor is located at the intake of the Morgantown Water Treatment Plant along the Monongahela River.

"When you're looking at source water you do want to go in reverse," Shellito said. "You want to look a mile upstream; you might want to know what's 10 miles upstream." In the case of the Monongahela, 'upstream' is looking further south into the other waters in West Virginia.

What has changed, if anything, since he became involved with RAIN? The biggest change, Shellito said, has come during the past three-to-five years with the expansion of the RAIN network. "The sooner you know things are changing the more choices you have before you have to work with (potential problems)," he said.

RAIN is on the leading edge, Shellito offered. The ability to know the quality of the water coming down to you is a tremendous advantage, he said. Expansion of the RAIN network benefits the Pennsylvania water systems, but it also gives the West Virginia systems that same benefit.

continued on page 4

Shellito: Bringing West Virginia's Perspective Downstream to RAIN

continued from page 3

“(The RAIN network) acts as a very good early warning system if something did change; if something upstream coming to us changes, it gives us a chance to react and look at our options before the water gets to the plant.” How long of a time period does he have to weigh these options? It depends on several factors, Shellito said, including where and when the problem originates and how fast the river is flowing. Under normal flow conditions he might have a day and a half to react, or as little as 18 hours. With this lead time and using the data collected by the monitors, MUB and other water systems in West Virginia benefit from being part of the RAIN network, allowing them to be more proactive, rather than reactive to a potential contamination incident.

Is RAIN’s mission well-understood in West Virginia? Shellito said RAIN’s most important role in the state is to serve as the downstream impetus for encouraging monitoring by water systems upstream in the south.

Source water protection is at the heart of RAIN’s mission, and MUB shares this same commitment to providing safe, reliable drinking water to 55,000 direct consumers and resellers. The utility board adopted a lengthy, 209-page source water protection plan in the summer of 2016. This was the first source water protection plan approved by the state of West Virginia under WV Senate Bill 373, outlining specific protections of water resources in the state, including review and update of source water protection plans.

“The Mon is a great source for water, but it does have characteristics that are not desirable,” Shellito said. To help ease the burden on the main water supply, MUB is looking to build another reservoir on its alternate source, Cobun Creek, which draws from a watershed that drains into the Monongahela. “We’re looking to build a 350 million gallon reservoir up in the Creek’s watershed that would be an alternate source for water treatment, a back-up if the Mon River quality wasn’t what we wanted. Take this water, blend with some from the Mon, treat it and it would be ready for consumers,” Shellito said. Another recipe for success.

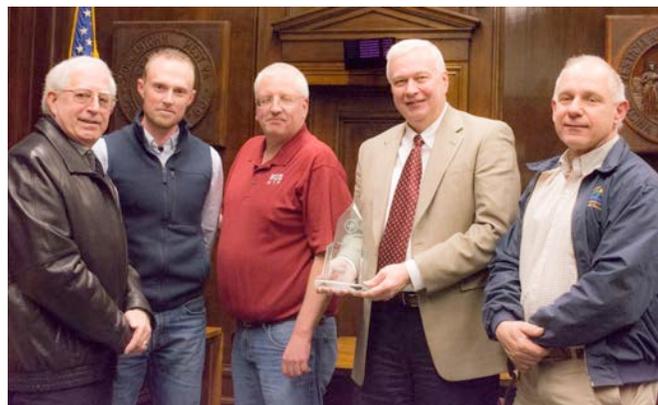
Calling upon his expertise in coming up with his list of RAIN’s priorities, Shellito can circle back to the reasons for his longevity at MUB: his broad-based training and experience have made him valuable in helping to take the long look at problems and help to figure out how to get things running right. Originally hired to work at the sanitary plant, Shellito was one of few employees who survived the merging of the sanitary board and the water company in 1986, which created the Morgantown Utility Board. The move restructured the operations of both plants. Even Shellito could not have predicted that when

he was brought on board to look at problems with sanitary plant upgrades that he would be heading treatment and production operations at both the wastewater and water plants 30 years later.

“I started in 1986, but I kept on getting more things to do. When I started (at the sanitary plant) they brought me on because they had problems with plant upgrades from ’83-’84. I was brought on to take a look at the problems and figure out why (the plant) wasn’t running right; it couldn’t run right, but I stuck around,” Shellito recalls. Many years later, and after a series of upgrades, the plant is now equipped to handle 12 million gallons per day for the activated sludge process. The utility board originally oversaw wastewater operations, but after it merged with the water plant Shellito was pulled in to run the water plant, despite having a background that was slanted toward wastewater operations.

Shellito found “there were a lot of things that needed to be fixed and changed in the water plant. I had been doing strictly wastewater, and it was a bit out of my comfort zone,” he said. And that was Shellito’s introduction to water plant operations. He now oversees 18 pumping systems and 76 waste lift stations, as well as operations in the Cheat Lake system.

Once again, the ‘cocktail’ of biology, chemistry and civil engineering experience has proved to be invaluable as Shellito continues to help solve problems for the Morgantown Utility Board. The blend also works well for this RAIN partner, as he works upstream to ensure that the waters of the Monongahela River flowing from West Virginia into Pennsylvania are problem free. **RM**



The Morgantown Utility Board received a prestigious Area-wide Optimization Program (AWOP) award in January, 2017 from the West Virginia Department of Health and the US EPA. The award is given to water plants meeting key criteria during a five-year period. Benchmarks include plant performance and how well it treats the water. MUB received the award in a new category for membrane plants. Pictured above representing MUB, l to r: Greg Shellito, Jake Fishel, Mike Anderson, Tim Ball, holding the award, and Mike Hawranick from the WV Department of Health and Human Resources.

News Notes - -

RAIN's SOCIAL MEDIA INITIATIVE -- SPREADING THE MESSAGE IN REAL TIME!

RAIN encourages our readers to take a look at our Facebook page (RAIN Matters) and Twitter (@RAINmatters) for updates on our latest source water protection initiatives. This article, written by our Communications Intern Sarah Poliski, is a brief history of the Monongahela River. Check out Sarah's posts on Twitter, #GetToKnowOurRiver, to read other posts about our region and RAIN.

Formed nearly 20 million years ago, the Monongahela is a 130-mile long river flowing through north-central West Virginia until it joins the Allegheny River to form the Ohio River at the Pittsburgh confluence. Named by Native Americans, *Monongahela* means "river with the crumbling banks."

In its natural state, the river is quite shallow, and was known to dry up in some places during the summer. The Monongahela River has played a major role in shaping the United States, serving as a channel for pioneers heading west of the Appalachian Mountains. After a series of locks and dams were established in the mid 1800s, the river was deeper and could be used as a means of transportation of coal in western Pennsylvania starting in the industrial revolution and continuing today.

The Monongahela has had some bad luck in the past; one notable incident was the Ashland Oil Spill of 1988. In 2010, the Monongahela was ranked ninth on the U.S.'s endangered river list due to the high levels of toxic materials found in its waters. Since then, the Monongahela has been making a comeback, and RAIN is committed to the fight. Establishing monitoring sites along the river aids in this revitalization project. Changing the health of the Monongahela will allow plants to flourish and wildlife to thrive. Not only that, the Monongahela will be able to better support recreational activities such as kayaking and fishing. The Monongahela River is a rich part of our ecosystem, and RAIN is working to protect that.



Photo by Bryce Aaronson

The Monongahela River makes a beautiful silhouette against a sunrise, seen from Grandview Avenue on Mount Washington.

Come on Board - -

The RAIN Board is expanding. We're looking for new members to help broaden RAIN's presence among water systems that already have source water protection plans in place and to help encourage participation by others who are not currently in source water protection partnerships.

The backbone of our network is our volunteer board of directors. We're now reaching out to all employees of water treatment facilities (current or recently retired) to come on board and play a leading role in the development of RAIN - a regional leader in source water protection. For more information about how you can join our efforts, contact RAIN Board Chair Ron Bargiel at ron.bargiel@amwater.com.

Did You Know . . .

The Morgantown Utility Board's drinking water was named **Best Tasting Water in West Virginia for 2016**. MUB earned the designation in a blind taste test from a competition at the American Water Works Association state conference last year. The judges considered clarity, odor, degree of chlorination and other subtle differences.



"So many factors go into taste," said MUB's Greg Shellito. "People have different sensory capabilities. Some people have very sensitive taste buds and sensitivities to how things taste."

The award-winning water may have been thanks to a \$40 million upgrade to MUB's water treatment facility that began in 2009, when it added a 16-million gallons per day micro-filtration plant to the existing water plant. The result is ultra-filtered drinking water, Shellito said. This is a fairly high-tech treatment, he added, and not a lot of water plants have it, though it is becoming more common. The upgraded plant went online in 2011.

"It is most costly, but you get a very good grade of water out of the process," he added.

Read more about Greg and MUB's connection to RAIN in our feature story beginning on page 3.

RAIN Board & Partners:

- Ron Bargiel, RAIN Chair, Pennsylvania American Water
- 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 Resources

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