News Leaks
SPRING 2017
Vermont Rural Water Association
Vermont Rural Water Association....Supporting Water and Wastewater Systems since 1982

## An Interesting Start of 2017

Shaun Fielder, Executive Director

I noted in the last issue of News Leaks, VRWA and all other rural water affiliates were gearing up for the NRWA rally in DC. VRWA President Ed Savage and Vice President Rod Lamothe gave time from their busy schedules to join me and it was an interesting time to be in Washington. Even with the contentious political situation at hand, rural water associations made progress to garner support for rural water funding with Congressional delegates.

Soon after the NRWA Rally event President Trump released his proposed budget for FY2018, aka skinny budget. Unfortunately cuts are outlined in many areas and would be very detrimental to rural citizens, business, and could directly affect our operations.

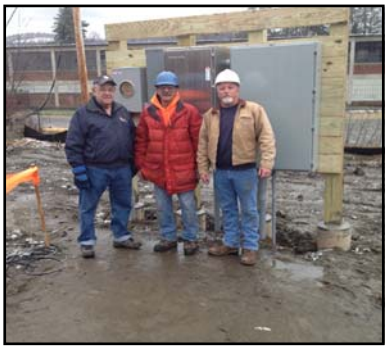
The White House budget proposal would eliminate the USDA water and wastewater loan and grant program. This would take a primary loan and grant option off the table for public water and wastewater systems. Of as much importance for VRWA, as with all other affiliates, the USDA loan and grant program is the source of funding for our water and wastewater circuit rider programs. Make no mistake about it these are

*(Continued on page 9)*

# A Team Effort in Long Term Sustainability

Wayne Graham, Wastewater Specialist

The community of Gilman, Vermont has suffered the same fate as a lot of paper mill towns in northern New England. About 10 years ago, the paper mill that employed hundreds—and for a short time even made treasury paper for the U.S. Treasury—was shut down. Over the last 10 years this has resulted in a double blow to the Gilman water and wastewater systems. The first, loss of water/sewer revenue from the shuttered mill and second, the loss of good paying jobs and resulting down turn in the local economy started the disturbing trend of people abandoning their homes, an empty house means a lost customer. The loss in this revenue left the water and wastewater departments in a very tough spot.



(l to r) Donald Hallee, Buddy Ball, Wayne Graham

The Lunenburg Fire District 2 manages and operates the water and wastewater systems in Gilman. Board chairman Don Hallee and operations specialist Bill Dixon approached the Vermont Rural Water Association 5 years ago concerning long term sustainability of the water and wastewater district given the economic issues facing the community.

VRWA's water and wastewater circuit riders Brent Desranleau and Wayne Graham assisted the district in setting up proper budgets and walked them through several much needed rate increases. VRWA staff for years have been helping communities such as Gilman achieve long term sustainability, whether it's Brent assisting in leak detection and water audits or Wayne identifying inflow/infiltration in the collection system. The district also hired Gail Ball to collect delinquent water and sewer accounts. She was able to collect approximately $70,000. She also assists customers in setting up payment plans to help them get back on track. This money helped the district get into a much more stable state.

On the wastewater side the 38 year old treatment plant/pump station and even older collection system started to show their age. During a very cold winter 4 years ago the pump station force main (which pumps 100% of the wastewater to the plant) had 4 breaks, this cost the district thousands of dollars in repairs.

*(Continued on page 9)*

## Who We Are

Since 1982, Vermont Rural Water Association has supported water and wastewater systems across the state. We provide many services, including training, source water protection planning, and onsite assistance.

## Board of Directors



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News Leaks is the official publication of VRWA. It is published quarterly for distribution to operators, owners, managers and board members of water and wastewater systems in Vermont, as well as to association members, water and wastewater service providers, regulators, and other friends. Opinions expressed in the newsletter do not necessarily reflect the views and policies of VRWA.

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Vermont Rural Water Association

# Letters

The Hiland Hall School

November 8, 2016

Shaun Fielder, Executive Director
Vermont Rural Water Association
20 Susie Wilson Road, Suite B
Essex Junction, VT 05452-2827

Dear Mr. Fielder,

Hiland Hall School is very thankful for the advice and expertise offered to us on October 27, 2016 by Water Systems Specialist, Liz Royer.

Liz worked with me, our certified water operator and operator in training to find a mutually convenient meeting date, arrived promptly and led us through questions and an inspection of the site that will help us to develop an updated Site Protection Plan.

As a small independent school, this kind of help is invaluable. Our thanks and appreciation to the Vermont Rural Water Association for giving us this much needed support in meeting regulatory requirements.

Sincerely,

Meg Cottam
Director

# News on Tap

## Brent Desranleau

A fond farewell to Brent Desranleau. After 17 years of service with us, Brent wrapped up work the end of January. Brent excelled at working quietly behind the scenes and was considered a close friend and our "other operator," by many systems he worked with over the years. All of us at VRWA wish him the best on his future endeavors. We are pleased to announce Paul Sestito has moved into this circuit rider position effective March 1. As of press time we are in the process of hiring a full timer for the position Paul moved from.

## VRWA 2017 Annual Conference and Trade Show

Mark your calendars and be sure to save the date for our 2017 conference and trade show event. We are looking forward to returning to the Lake Morey Resort on May 3 & 4, 2017. More information on registration for our associate contacts as well as individuals can be found on our web site.

## Reminder To Operators From VRWA Training Specialist Matt Guerino

Remember, Class 2 and Class 4 renew this year. DWGWP would like applications and completed TCHs into the Division by May 31 (per the VT Water Supply Rule). All Class 2 & 4 certifications end date is June 30, 2017! See you all in classes.

Quality On Tap!
Our Commitment Our Profession

## Donations

Please consider making a donation to VRWA to help us further our mission. With your support, we work to promote public health and protect the local environment by providing support to water and wastewater systems.

VRWA is a 501(c)(3) charitable organization. Your contribution is tax deductible to the extent allowed by law. All donors will receive a receipt for tax purposes. Please visit our web site using the link below for more information.

http://vtruralwater.org/about/donations.php

# Report from the International Forum on Integrated Water Management Conference

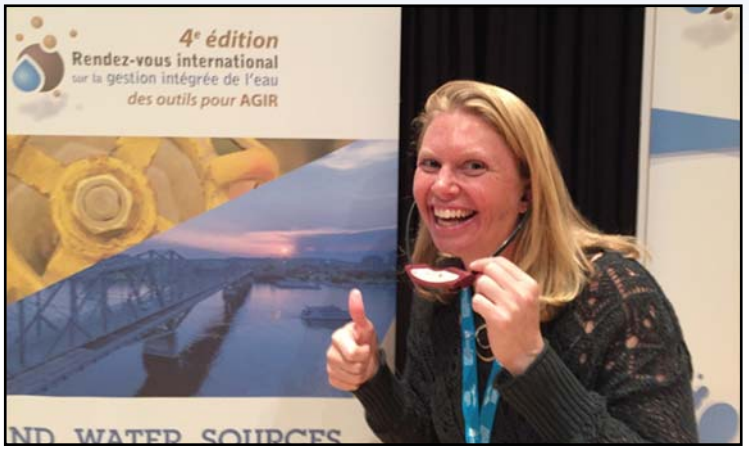
by Liz Royer, Source Protection Specialist

Last November, I was invited to speak at LAND. WATER. SOURCES. - An International Conference on Source Water Protection. This conference is held biannually as a program of the International Forum on Integrated Water Management. Several hundred participants came to Laval University in Quebec City from around the globe. Workshop and session speakers represented Canada, Germany, Slovenia, Peru, France, Martinique, and Mexico. While I was the only session presenter from the United States, keynote speakers included Dr. Lawrence Susskind from MIT and Paul Rush from the NYC Bureau of Water Supply. A unique aspect of the conference was that approximately half of the talks were in English and half in French. Headsets were available with translators doing their best to interpret the technical language during each presentation.

The conference kicked off with several inspirational speakers, in particular, Dr. Susskind's talk on water diplomacy and consensus building for environmental issues. Informative sessions continued for the next two days, with topics including source water protection approaches around the globe, groundwater and climate change, citizen involvement, and governance and land use strategies. In addition, I attended a half day workshop put on by the Ontario Source Protection team – including provincial government officials, risk management inspectors, and local farmers who serve on source protection committees. Source protection is required, funded, and enforceable as a result of the E. coli contamination incident in Walkerton in 2000.

Since 2006, local source protection committees across the province of Ontario have been tasked with creating source protection plans for their areas with the goal of public health protection.

My presentation, given on the morning of the third day, was titled "Source Water Protection and Land Use Planning: Partnering for Successful Implementation." Attendees from around the world were surprised to learn that Vermont faces challenges with implementing source protection for public water systems, especially since plans are required. Question posed by audience members focused on lessons learned, planning for the future, and working with federal, state, and local entities. Here is the abstract for my talk:




Signaling that my translation headset was working.

Since 1992, the State of Vermont has required most public drinking water systems to draft and implement source water protection plans. Vermont is one of the few states with this requirement and is working to have these plans gain recognition from municipal and regional planning entities. Zoning and development regulations, town and regional plans, and local emergency response strategies could all be integrated with source protection plans.

The Vermont Rural Water Association (VRWA) is a non-profit organization that provides training and technical assistance to public water systems. Specific to source protection, VRWA partners with local, state, and federal agencies to help public water systems with planning, management, and implementation activities. Over the past year, VRWA has been targeting outreach on source water protection to land use planning professionals. Discussion topics at a series of workshops included water quantity and development issues, new mapping tools for future town supplies, aquifer recharge, local hazard mitigation planning, and water supply contamination.

As a result of these workshops, partnerships with state and federal agencies have been strengthened and the planning community has been engaged in multiple topics related to drinking water. VRWA will continue outreach to municipal officials, watershed organizations, land trusts, and other entities that could benefit from a collaborative approach to source water protection.

# Emerging Contaminants PFOA and PFOS

Submitted by Steven LaRosa, Hydrogeologist (Weston & Sampson, Waterbury, VT)

A great deal of recent news coverage has been dedicated to the emerging contaminants per- and polyfluoroalkyl substances (PFASs), identified in public drinking water sources in Vermont, New York, and New Hampshire among other states across the country. These compounds have been utilized in many industrial and commercial products including non-stick cookware, non-stain fabrics, water repellant coatings, fast-food packaging, pesticides and fire-fighting foams. They consist of carbon chains of various lengths (3 to 12 carbon atoms long) with some or all bonding sites attached to fluorine atoms. An example of PFAS chemical structure that is fully fluorinated is shown below:


PFOA (Perfluorooctanoic acid)

On May 19, 2016, the United States Environmental Protection Agency (USEPA) provided a Lifetime Health Advisory standard for two PFASs, PFOS (perfluorooctanesulfonic acid) and PFOA (perfluorooctanoic acid). Combined or individually this standard is 70 nanograms per liter [parts per trillion (ppt)]. The State of Vermont Department of Health (VT DOH) has established a PFASs health level of 20 ppt combined PFOA and PFOS based on potential toxicity to infants.

Formal adoption of the VTDOH health advisory as a Groundwater Enforcement Standard by the Vermont Department of Environmental Conservation recently occurred. In addition, PFOA or PFOS are now classified as hazardous materials in Vermont.

So just how small a quantity is one ppt? One part PFASs in 1,000,000,000,000 parts water is equivalent to a release of 6.8 gallons in Lake Champlain and uniformly distributed into the 6.8 trillion gallons of water contained within the lake.

The toxicological data on PFAS are limited, but PFASs have been shown to bioaccumulate. A correlation, but unknown causal effect, between levels of PFASs in the blood and various health effects has been identified. These health effects include high blood pressure, decreased birth weight, some immune system effects, thyroid disease, kidney cancer and testicular cancer. To date, studies and data are limited but expanded research is in progress to develop or improve safe PFASs exposure levels in soil, surface water, and drinking water.

In North Bennington and Bennington, over 500 drinking water supplies were tested for PFASs and point-of-entry treatment systems [granular activated carbon (GAC)] were installed at over 200 homes with levels above the groundwater enforcement standard. There are ongoing efforts to extend the municipal water distribution systems to the affected areas that can be feasibly reached.

At the Pease Tradeport in Portsmouth, NH, impacted groundwater from two production wells is being treated at a flow of 500 gallons per minute using multiple large GAC vessels under a long-term demonstration project for the City of Portsmouth and United States Air Force. The PFASs source was associated with multiple releases from the former Pease Air Force Base.

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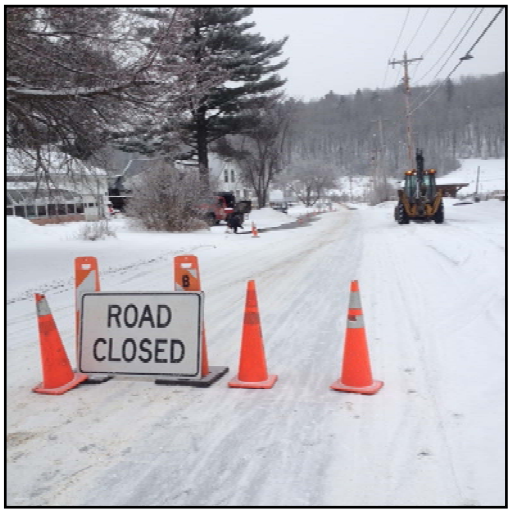
In summary, PFASs are a widespread group of environmental pollutants with effective remedial technologies readily available for treating drinking water. Currently GAC is the best available treatment technology for most applications whether they are small point-of-entry residential/commercial systems or large-scale municipal supply wells. Unfortunately, treatment methods for soils and groundwater "in situ" are limited and usually extremely expensive.

While historic PFASs releases will continue to require evaluation and potential remediation, the on-going phase-out and chemical modifications to less toxic compounds in commercial and industrial products will hopefully reduce future environmental impacts.

# Leak Detection In Barton

By Paul Sestito, Water Systems Specialist

In February, I received a call from Andy Sicard from the Village of Barton and was notified that there was a significant water leak in the village. It was suspected that the cause of the leak was possibly due to the rapid closing of a fire hydrant following an early morning response to a house fire. Andy told me where the leak was and, having started my water and wastewater career in Barton, I knew exactly the area he was talking about. He was confident he had the area narrowed down and he just wanted to confirm the location to avoid the time, expense, and inconvenience to residents that chasing a leak often causes.

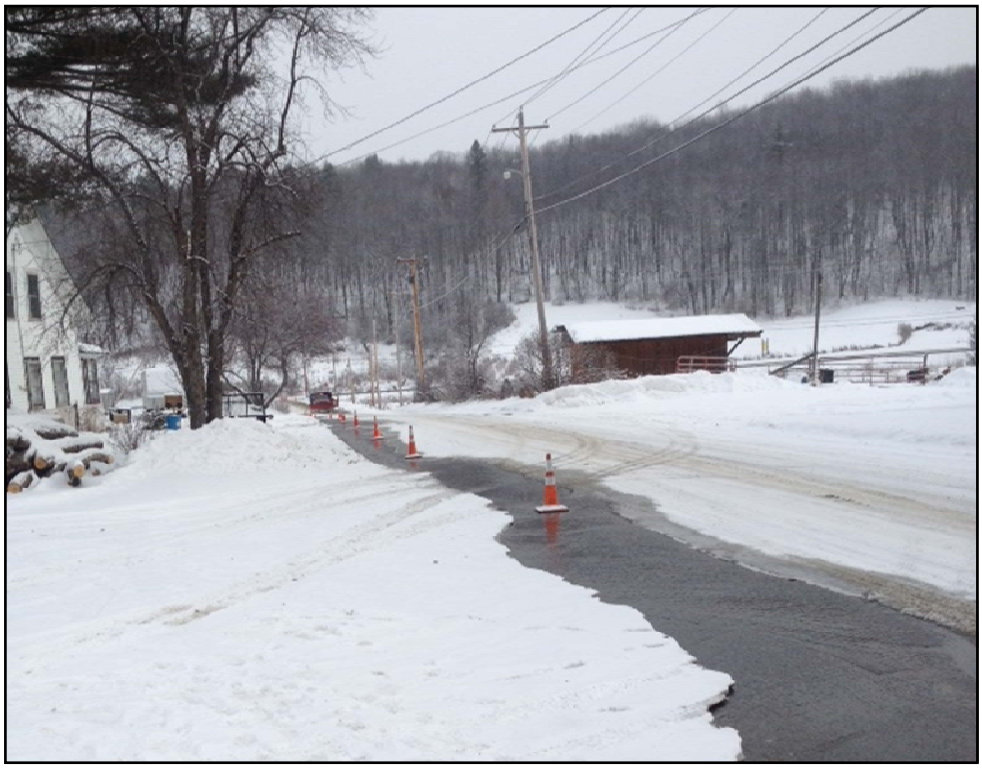



I was already headed in the opposite direction that morning, on my way to assist Mike Howe, who does a great job operating a number of systems in Hartland, VT, with a sampling plan. I explained what was going on in Barton to Mike and, understanding the severity, he stated that his sampling plan could absolutely wait. So, I changed directions, gathered my leak detection equipment, and headed north.

When I arrived in Barton, the leak was obvious. A large volume of water was surfacing and running down the road. I noticed a couple of important things when I first arrived however. The Village of Barton crew had the road shut down and other measures in place to create a safe work zone, had equipment in place, and had made the necessary contacts so that repair of the leak could begin as soon as possible. A contractor was contacted as well and was on the way. The location of the water line was known and everything was in order.

I was quickly able to pinpoint the leak location using a ground microphone and, by that time the contractor had arrived on site. In a matter of hours, the leak was repaired and everything was back in order. Before heading out of town, I checked in with Jefferson Tolman and Kelly Davison of Utility Partners, who manage the village water and wastewater plants to check in on how things were operating, and all seemed to be going well. All in all, everything went as well as we all could have hoped.

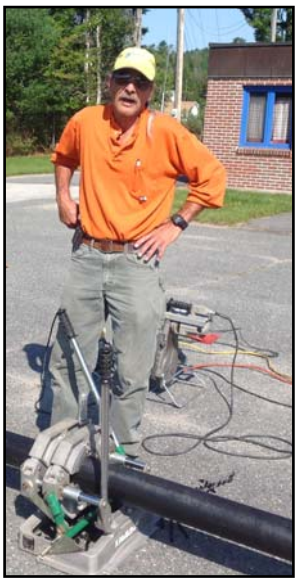
So, thanks to Mike Howe understanding the importance of the situation, and the diligence of the operators and personnel in Barton, this particular operation went as smoothly as possible. More importantly, it illustrates the type of dedicated professionals we are fortunate to have working in our treatment facilities and our water and wastewater systems.



**"Not only has the WWTF benefited given the major operational upgrade but will also see the benefits of a more efficient aeration system leading to a reduced electrical expense. "**

*"A Team Effort in Long Term Sustainability" continued from cover*

By this time VRWA and the district had already approached funding agencies and an engineer about a pump station/force main replacement. The unexpected force main breaks forced the district to move ahead with the upgrade and replacement project. Wayne and the district had many conversations and meetings with VT USDA officials and finally received a much appreciated and needed 75% grant offer. Along with the great folks from USDA assuring a great funding package, the District was also fortunate in hiring Aldrich & Elliott Engineers, who oversaw a seamless project with no surprises or cost overruns. As of this date the force main and pump station have been have been replaced and are now operating. The system will see reduced electrical usage as the new pump station is much more efficient and a larger force main will mean a lower pumping head and restriction providing even more electrical savings and shorter pump run times.



Buddy Ball, Lunenburg Fire District 2 Water/ Wastewater Superintendent

Another bright spot in the future of the district is the aeration system project completed last fall at the wastewater facility. This all started 6 years ago when Wayne was able to get another wastewater system to donate an entire lagoon aeration system to Gilman. The donor system had undergone an upgrade and had no use for the almost new fine bubble lagoon aeration system. This system included 40 aerators, hundreds of feet of high density polyethylene piping and dozens of valve/standpipe assemblies. Once the financial situation improved in the district there was finally enough money to install the aeration equipment.

This is where Lunenburg Fire District 2 superintendent Buddy Ball stepped up and made it happen. Buddy and Wayne designed the aeration system layout, and with the help of operations specialist Richard Dresser installed the aerators, headers, valves and piping in two of the three lagoons. Thanks to Buddy's good old Vermont ingenuity the cost of installation was less than $1000. He mixed a lot of concrete by hand, attained hundreds of feet of galvanized pipe for free and provided lots of labor at no cost to the district.

Truly a team effort with Vermont Rural Water Association and the Lunenburg Fire District # 2 stretching the limits of both organizations but the outcome was well worth it! In one lagoon a failing 25 year old aeration was replaced and the other lagoon a completely failed 38 year old system was replaced. Not only has the WWTF benefited given the major operational upgrade but will also see the benefits of a more efficient aeration system leading to reduced electrical expenses. The third lagoon will be upgraded in 2017, competing the aeration system project. It is estimated with the donated aeration equipment, donated materials and time by system officials and key support provided by VRWA an overall savings of $125,000 was achieved for this particular project assistance.

The lesson in this system achieving long term sustainability is that it takes a team and can be a long process. But the Gilman water and wastewater departments will be enjoying the benefits for years to come, as will the residents of this small community.

*"An Interesting Start of 2017" continued from cover*

instrumental programs run by VRWA team members and as you know, helping you and your system on operations and regulatory issues frequently.

Many of you know we have been requesting letters of support given the current budget discussions. These letters from the grassroots level illustrate the importance, need, and value of rural water appropriations and particularly in regards to funding of VRWA operations. To those of you who have sent me a support item showing how valuable VRWA support is to your system and community, thank you. We are sharing these with Vermont's delegation and NRWA. Please recognize what is proposed from the White House is just that, a proposal. It goes without saying there is a continued need for your voice to be heard on the importance of FY2018 rural water appropriations so keep sending letters of support to my attention.

One other point on overall budget discussions, the needle is now moving toward maintaining USDA loan and grant and associated FY2018 rural water appropriations. From my perspective that is because the funding is a very good return on investment and is good for business. These alone are sound reasons to sustain noted allocations and recognized by Congress.

Looking back to the Rally, Ed, Rod and I did get some face time with Senator Leahy and Congressman Welch. Senator Sanders had another commitment but as was the case with all three offices their key staff folks met with us and they all continue to advocate for rural water appropriations.

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