

NewsLEAKS

 Vermont
Rural Water Association

Summer 2020

Vermont's Water Utilities Respond to COVID-19 p. 3



Summer Training Calendar p. 6

The Vermont Rural Water Association provides training and support to drinking water and wastewater systems to promote healthy communities, rivers, and lakes across Vermont.

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Table of Contents

- 3 From the Executive Director
- 4 PFAS Treatment
- 5 The Water Cooler
- 6 Training Calendar
- 8-9 NPDES Permits
- 10 Water Quiz
- 11 Coloring Page

Letter from the Editor



by Katherine Boyk
Program Assistant

You could say this issue of *NewsLeaks* is about change. The changes we've all experienced, to work and to life, during the COVID-19 pandemic. And changing rules and regulations, from PFAS treatment to NPDES permits.

But at least one of these changes is exciting: the new design of this newsletter. After at least 20 years of looking the same, it was time for *NewsLeaks* to get a fresh look. We're excited to bring you a modern style and color photographs.

I'd love to hear your thoughts about these changes. Feel free to email me at kboyk@vtruralwater.org and let me know what you think! 💧

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Adjusting to a New Normal



by Liz Royer
Executive Director

During the COVID-19 pandemic, the Vermont Rural Water Association has been working hard to make sure that operators and systems have the support they need during these difficult times.

After the state of emergency declaration in mid-March, our first step was to quickly switch many of our training classes to online webinars. We then proceeded to offer much of our technical assistance over video, phone or email to reduce contact with utility employees.

In terms of communications, we worked with several partners to create an emergency preparedness guide, ensure that water and wastewater are considered essential services in Vermont, and share information from the State. These resources are available at [VTTruralwater.org/covid-19](http://VTruralwater.org/covid-19)

In early April, we partnered with the National Rural Water Association and the Vermont Department of Environmental Conservation to develop a survey that would help guide our COVID-19 response efforts. Over 140 water and wastewater systems were contacted to answer questions related to finances, staffing, water production, and issues obtaining supplies. Many systems did not know the financial effects of the pandemic at that point due to billing cycles. We plan a follow-up survey to help better gauge the ongoing economic impact on Vermont utilities.

We have also helped to re-activate the Vermont Water/Wastewater Agency Response Network (VT WARN). This network allows systems to receive rapid mutual aid and assistance from other utilities if they are impaired by unforeseen staff absences, materials shortages, or equipment failures. See the new website at www.vtwarn.org

Most recently, VT WARN received a shipment of 15,500 reusable cloth masks from FEMA

and EPA. Our staff has been distributing the face coverings to water and wastewater systems around the state.

Finally, we've been promoting our industry through new features such as our "Vermont's Water Heroes" blog series and "Zoom-a-Water-Scientist" sessions for students, both of which are posted on our website.

While we are slowly transitioning back to our regular on-site technical assistance, we have to adjust to the new normal of wearing masks and social distancing during our time at water and wastewater facilities. Trainings will remain online for the time being. Vermont may be slowly "opening the spigot," but our industry will be adjusting to the new normal for many years to come. Vermont Rural Water will be here to help at every step along the way. 💧

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UVM Students Research PFAS Treatment



by Tim Russo
Water Systems Specialist

On Earth Day, I attended (online, of course) a presentation by UVM Environmental Engineering students. Two teams of seniors had developed PFAS treatment plans, in cooperation with personnel at both Bristol Water Department and Vergennes-Panton Water District (**VRWA System Member**). These systems were chosen shortly before the first PFAS testing data were available, and while neither system's results show any detectable levels of contamination, the solid work by these students offers a glimpse at how a typical system would likely treat for PFAS contamination.

"The UVM kids were great to work with," said Jon Deming, chief operator at Vergennes-Panton. "They asked a lot of questions."

The students determined that Granular Activated Carbon (GAC) would be the ideal treatment for both Bristol and Vergennes-Panton. Working with water system staff and using plant drawings, they figured out how a GAC system would be installed at each plant.

The cost estimates included permitting, construction of facilities to accommodate the treatment equipment, the GAC units themselves, and more. Additionally, students projected maintenance costs (significantly, carbon media replacement) based on factors such as expected contaminant levels, flow rates, and back-

washing. One team also included notes on the PFAS disposal/destruction process and factored in the re-use of around 30% of the GAC once regenerated (by heating to 1,300°F in an oxygen-free environment).

The cost estimates were—predictably—high from the perspective of a small system. Still, it was all very helpful to me as I come to understand the full impact of PFAS contamination to the systems we serve.

But my biggest takeaway was how impressed I was the thoroughness of the students' research and the way they developed these plans as a team. Great job, students! 💧

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the Water Cooler

get to know Vermont's operators



by Diana Butler
Source Protection Specialist

Alison Buhler oversees eight separate ground-water systems at Okemo Mountain (**VRWA System Member**). She holds a Class 3 drinking water operator certification and a Class 2 wastewater license. Even so, she seems to prefer water in its frozen form: snow.

A native of Killington, Vermont, Alison has an intense passion for skiing. "I try to ski every possible day," she said.

She graduated from Rensselaer Polytechnic Institute in Troy, New York, where she studied materials engineering. Early in her professional career she worked in the engineering field, but found the indoor desk time to be a strain on her creativity.

Her Vermont spirit pulled her outdoors and back onto the mountains. Naturally, Alison's introduction to water utilities began at a ski resort.

Like many operators, she finds the variation in daily tasks challenging, but rewarding. Also like many operators, she is not terribly excited about those middle-of-the-night system alarms.

Alison recalls that early in her operating career she had a system that went out with every storm. "I would just wait for the call as inevitably something would happen," she said. But she admits that those emergency calls add a layer of excitement to the job.

Being a water operator on a ski resort mountain also presents unique challenges. Usage fluctuates



Alison Buhler skis at Killington in February.

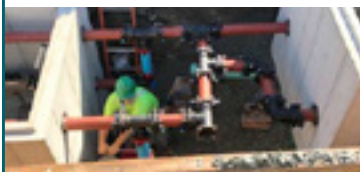
greatly depending on season, with spikes on weekends and holidays. And access to treatment plants is limited when summer work roads turn into winter ski trails.

Alison has found that the complex duties of water operations while living and working in the ski world are an ideal combination for her. In her current position she finds that she is always learning something new and she enjoys this.

"I've developed an even greater appreciation for the importance of clean drinking water," she said, "but especially now during a public health crisis!"

Alison's talents, skills, and abilities are essential to our field, but it is her personality, work ethic, and dedication that make her stand out as an individual! 💧

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Training Calendar

Summer 2020

Note on Trainings

Due to the uncertainty of the COVID-19 pandemic, we are not publishing our normal 3-month training calendar. Instead, we are scheduling trainings one month at a time based on current guidelines regarding gatherings and social distancing from the Vermont Department of Health.

Below are the classes we have scheduled for June. Please check VTruralwater.org/training or sign up for our email list to be alerted when new classes are scheduled.

At this time, we are holding classes as online webinars so you can continue to get your TCHs while staying safe. Find information about using Zoom on our website.

DWGPD and OPR are accepting online trainings for TCHs right now. Renewing water and wastewater operators may request an extension to complete continuing education requirements. Water renewal applications are still due as scheduled. Operator certification exams have been postponed.

Registration

Register online at VTruralwater.org/training. You can pay by credit card, debit card, PayPal, or check. Members receive a 50% discount for all employees. Contact info@vtruralwater.org prior to class to request accommodations.

Cancellations/Refunds

If you are unable to attend a class, you must contact our office at least 24 hours in advance in order to receive a refund. No-shows will be charged the full course fee.

Register Online: VTruralwater.org/training

Date	Course	TCHs*	Cost (Member/Non)	Location
Tuesday, June 9 9 am — 12:30 pm	Comprehensive Water and Wastewater Chemistry	3 W WW	\$18 / \$36	Zoom Webinar
Wednesday, June 10 9 — 11:30 am	Intro to Surface Water Treatment	2 W	\$12 / \$24	Zoom Webinar
Thursday, June 11 9 am — 1:30 pm	Keep Your Water and Wastewater Systems Sustainable	4 W WW	\$24 / \$48	Zoom Webinar
Tuesday, June 16 9 am — 11:30 pm	Bridging the Revenue Gap from the Pandemic	2 W WW	\$12 / \$24	Zoom Webinar
Wednesday, June 17 9 — 11:30 am	Basic Math for Water and Wastewater Operators	2 W WW	\$12 / \$24	Zoom Webinar
Thursday, June 18 9 am — 11:30 pm	A Brief Education on Lead Notice and Sampling Plans	2 W	\$12 / \$24	Zoom Webinar
Thursday, June 25 9 am — 12:30 pm	How to Handle the Media – In Good Times and Bad	3 W WW	\$18 / \$36	Zoom Webinar
Wednesday, July 22 10 — 11:00 am	Member Training on Emergency Planning	1 W WW	Free for Members	Zoom Webinar
September Dates TBD	Advanced Class 3 & 4 Water Operator Certification Course	45 W	\$205 / \$405 Textbooks sold separately	TBD
September Dates TBD	Distribution Operator Certification Course	30 W	\$135 / \$270 Textbooks sold separately	TBD
October Dates TBD	Small Systems Class 2 Water Operator Certification Course	18 W	\$108 / \$216 Textbook sold separately	TBD
TCH = Training Contact Hours W = Approved for Water Credit WW = Approved for Wastewater Credit				

Conference Cancelled

Due to the COVID-19 pandemic, we have to cancel our Annual Conference and Trade Show, which was originally scheduled for May 6-7 (then rescheduled for July 21-22) at Lake Morey Resort.

Membership Meeting Rescheduled

Our Annual Membership Meeting, which normally happens during the conference luncheon, has been rescheduled for **Wednesday, July 22 at 11 am via Zoom**. This will be right after the free Member Training on Emergency Planning.

All members will be emailed the link to the Membership Meeting on Zoom. Sign up for the free training at VTruralwater.org/training

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New Design for NPDES Permits



by Elizabeth Walker
Wastewater Systems
Specialist

Vermont's National Pollutant Discharge Elimination System (NPDES) permits have gotten a fresh redesign.

Starting this year, new municipal permits will have a different look and layout that makes important information easier to locate. There is not a lot of change to the content, but things like limits for monitoring and compliance dates should now make more sense to operators and managers. It will

also make the permit-writing process more modern and efficient.

The first table in the permit, which has always had Effluent Limits, now also contains information about Monitoring Requirements, which previously was located several pages in to the document. (See the example on the following page.)

The fine print that was found below these tables in the old permits is now listed in a larger font below the new table. This is labeled as Discharge Special Conditions and can be lengthy depending on the system. As always it is imperative that these special conditions be reviewed carefully.

Following the Discharge Special Conditions are other permit requirements with written descriptions, similar to existing permits. Now, at the end of the written description there is a table listing the requirement with compliance dates. (See the second example table.) This is easier to spot when quickly reviewing your permit.

Vermont Rural Water will be working with the DEC Wastewater Management Program to provide trainings about all aspects of permits and inspection. Stay tuned—we are looking to schedule these trainings in September, though whether they will be in-person classes or Zoom webinars will depend on COVID-19 protocols. 💧

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Examples of
tables in the
redesigned
NPDES permit.

EFFLUENT LIMITS AND MONITORING REQUIREMENTS						
Discharge Point S/N XXXX: During the term of this permit, the Permittee is authorized to discharge from outfall S/N 001 of the XXXXX WWTF to the XXXX River, an effluent for which the characteristics shall not exceed the values listed below:						
FLOW						
Constituent; Sampling Point; Sample Type	Season, Sampling Frequency	Quantity Limit 1	Quantity Limit 2	Conc. Limit 1	Conc. Limit 2	Conc. Limit 3
Flow Effluent; Continuous	Year-round, Daily	0.XXX mgd Annual Avg				
CONVENTIONAL POLLUTANTS						
Constituent; Sampling Point; Sample Type	Season, Sampling Frequency	Quantity Limit 1	Quantity Limit 2	Conc. Limit 1	Conc. Limit 2	Conc. Limit 3
BOD, 5-Day; Effluent; 8 Hour Comp	Year-round, Monthly	XX.X lbs/day Monthly Avg	XX.X lbs/day Weekly Avg	XX.X mg/L Monthly Avg	XX.X mg/L Weekly Avg	XX.X mg/L Daily Max
BOD, 5-Day; Influent; 8 Hour Comp	Year-round, Monthly			XX.X mg/L Monthly Avg		
NON-CONVENTIONAL AND TOXIC POLLUTANTS						
Constituent; Sampling Point; Sample Type	Season, Sampling Frequency	Quantity Limit 1	Quantity Limit 2	Conc. Limit 1	Conc. Limit 2	Conc. Limit 3
BOD, 5-Day (%R); Percent Removal; Calculated	Year-round, Monthly			XX% Monthly Minimum		
Nitrite Plus Nitrate Total 1 Det.; Effluent; 8 Hour Comp	04/01 – 06/30, Quarterly					XX.X mg/L Daily Max

DUE DATE	EVENT DESCRIPTION
12/31/2021	The Permittee shall submit annual proficiency test results.
12/31/2022	The Permittee shall submit annual proficiency test results.
12/31/2023	The Permittee shall submit annual proficiency test results.
12/31/2024	The Permittee shall submit an engineering evaluation prepared by a professional engineer.



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Are you a Water Wizard?



by Paul Sestito
Water Systems Specialist

Remember to be safe out there and know that we at Vermont Rural Water appreciate all you do!

With all of our lives being affected by the COVID-19 crisis, I thought it might be nice to take our minds off of it for a little while. So, I have prepared a little quiz to test your water knowledge. Are you up for the challenge?

To make it more interesting, email your answers to me at psestito@vtruralwater.org by noon on June 30, 2020. Anyone scoring 100% will be entered into a random drawing to receive some swag from the Vermont Rural Water prize closet. Also, we will post the winner on our website and acknowledge all who participated. Please make sure to include your name and a mailing address in case you are the lucky winner. 💧

- Which agency sets standards on the concentration levels of harmful contaminants in drinking water?
 - NIOSH
 - OSHA
 - EPA
 - SDWA
- How is the required number of monthly bacteriological samples determined?
 - By population served
 - Using the formula $\frac{(C1 \times V1) + (C2 \times V2)}{\text{population}}$
 - By number of service connections
 - By median age of population served
- What is the best method to prevent backflow?
 - Double check valve
 - Air gap
 - Reduced pressure zone backflow preventer (RPZ)
 - Vacuum breaker
- The term "schmutzdecke" is associated with which type of filter system?
 - Chemical storage room air-handling unit filtration system
 - Slow sand filtration
 - Point-of-use carbon filtration
 - Membrane filtration
- _____ can be used as a good opportunity to improve and foster communications and to build good will with customers.
 - Leak repairs
 - Facility tours
 - Meter readings
 - Every customer contact
- In Vermont, a Class 4B Operator needs ___ TCHs to renew their certification.
 - 3
 - 10
 - 20
 - 30
- What is the volume of water in a storage tank that is 15 feet tall, 40 feet long, and 20 feet wide if the tank is 80% full?
 - 100,080 gallons
 - 89,760 gallons
 - 12,000 gallons
 - 71,808 gallons
- _____ is/are responsible for maintaining safe working conditions.
 - Upper management
 - Operations personnel
 - Supervisors
 - All utility personnel
- A _____ valve is designed to allow flow in only one direction.
 - Check
 - Gate
 - Globe
 - Diaphragm
- Which of the following is a threat that can disrupt water service?
 - Vandalism
 - Natural disaster
 - System aging
 - All of the above

Bonus! Name as many cartoon characters as you can who live in water.



Water Heroes



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