A Hair-Raising Experience

by Erik Peterson, VRWA

Earlier this summer, Tom Anderson and the crew of the Windsor Water Department began the excavation of a leaking water service line. Tom called VRWA in June to assist in verifying the location of a suspected leak.

One leak on the line was pinpointed, and it was believed there might be another. It was a simple job; like most water departments, Windsor had done this sort of thing hundreds of times.

Having called Dig Safe and alerted the neighbors of a possible interruption in water service, Windsor excavated the area of the leaking pipe. With the leak located and the hole dug and secured, the first cut of the pipe was made.

Mike Reynolds, another of Windsor's operators, began cleaning the cut end of the homeowner's service and setting a compression fitting to the line. While tightening the set screws in the compression fitting, Mike began to notice a little sparking on the metal. When Mike began the second cut in the line, he noticed sparks coming from the saw.

At this point Mike, feeling unsafe, extricated himself from the hole. Meanwhile, Tom was able to attach the homeowner's side of the service line to the new copper splice. Tom had felt static charges in water lines before and hadn't thought the sparking Mike reported to be anything greater than that.

Once Tom finished the second cut of the leaking line, however, the homeowner came outside to report that his lights were flickering and that he had lost half of the power in his house.

Now a little wary of the situation, Tom donned a pair of gloves in order to finish securing half of the last compression fitting and was able to do so without incident.

Nearly finished with the repair, Tom removed one of his gloves in order to bend the new copper splice to the original line. When Tom then grasped both lines he reports, "I got bit hard and felt it all the way through my elbow."

Tom then put his gloves back on and set the lines together with his foot. Once the lines were joined, the homeowner

VRWA has MOVED!

Our administrative office is now at:

20 Susie Wilson Road, Suite B
Essex Junction, VT 05452-2827

All of our phone numbers and email addresses have remained the same. See page 2 for the complete list. Our fax number is now the same as our main phone number:

802-660-4988

Our new location has a training room and we hope to see all of our members at one of our upcoming training sessions. We will, of course, continue to host training at locations around the state.

A final note on contacting our staff: all VRWA email addresses end with “@vturalwater.org”. If you are still using “@neruralwater.org”, we ask that you update your records.

And the Winner Is...

Bob Briggs of Lyndonville was the lucky winner of our raffle and will receive a Lifetime Hunting & Fishing Combined License from the State of Vermont. Bob is the owner of B&B Septic in Danville.

Many thanks to everyone who participated and helped us raise money for the VRWA Equipment Fund.
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

Gilles Blais, International Water Company
Ed Savage, Town of West Rutland
Richard Desautels, Colchester FD#2
Rod Lamothe, Castleton Meadows
Joe Voci, Town of Randolph

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Essex Junction, Vermont 05452-2827
802-660-4988 voice & fax
vrwa@vtruralwater.org; www.vtruralwater.org

Contact Our Staff

For onsite assistance and training, contact our technical staff at 800-556-3792 (extensions below):

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Sarah MacMillan, Melissa Green and Katie Maurizi.

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.

For advertising rates and submission criteria, please call 800-556-3792. We reserve the right to reject advertising deemed unsuitable. Acceptance of advertising does not constitute endorsement of the advertiser’s products and services, nor do we make any claims or guarantees as to the accuracy or validity of the advertiser’s offer.

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Letters

This is just a quick note from the Trustees of the Village of Derby Line thanking Brent Desranleau for his assistance on May 2 in locating and repairing a leak in a newly installed replacement water line.

We are sure that your assistance saved the Village from any further wasted time and money. Again, we cannot express enough our appreciation for your assistance.

Trustees of the Village of Derby Line
Susan Best, Chair
W. Perry Hunt
Andre Geoffrey

I want to take this opportunity to let you know how much I appreciate the job Liz Royer did on our source protection plan. I realize that this is part of her job; however, I feel she did an excellent job contacting and meeting with the towns involved. Some of these meetings were in the evenings and involved late hours.

She knew her material and presented it well. Questions were answered and the public left with an understanding of our objectives. The finished product was done in a professional manner and I am very happy with it as was the State. I feel she is a credit to your organization.

Sincerely,

Brent Palmer, Chief Water Plant Operator
City of St. Albans

VRWA Staff

Front row: Shaun Fielder, Brent Desranleau, Elizabeth Walker, Wayne Graham, Melissa Green.


Missing from photo: Eric Hanson.

A Warm Welcome to Our Newest Members

Bow and Arrow Point Park
Castleton Meadows
City of Burlington
East Dorset Fire District #1
Grandview Acres Water System
Newmont Slate Co., Inc.
Pristine Mountain Springs of Vermont
Thetford Water Coop

Town of Rochester
Vermont Pure
Atlantic Pump & Engineering, Inc.
Bannon Engineering
Ford Meter Box Company, Inc.
Leggette, Brashears & Graham, Inc.
Ohaus Corporation
Powers Generator Service, LLC
Fielder Named Executive Director

The VRWA Board of Directors is pleased to announce that Shaun Fielder of Middlesex has been named our new Executive Director. Shaun has held a number of positions within VRWA during the past eight years and most recently served as the Program Coordinator.

Shaun, a Vermont native, received his MA in physical geography from the University of Minnesota in 1993 and his BA in physical geography from the University of Vermont in 1988. He is a certified operator of both water and wastewater systems and has been heavily involved in coordinating operator training in Vermont for many years.

In 2001, EPA New England presented him with an Environmental Educator Award for his outstanding contributions to Vermont’s training programs for drinking water system operators.

VRWA’s Directors are confident that Shaun will move the organization forward as we strive to promote public health and a clean environment by supporting Vermont’s water and wastewater systems.

Save the Date

VRWA will hold its 2007 Annual Conference on Thursday, April 26, 2007 at the Lake Morey Resort in Fairlee, VT. Join us for our annual get-together and enjoy a day of training, networking, and industry exhibits in a beautiful lakeside setting.

On the day before our main conference, VRWA’s board will host a BBQ cook-out and a golf tournament at Lake Morey Resort. We hope to see all of you there!

A New Arrival

Congratulations to Jesse and Jen Wilkesman of Waterbury on the birth of their daughter Kate on July 18. Kate was 9 lbs., 4 oz. and 21” long. Proud father Jesse is a wastewater operator for the town of Stowe.
Hair-raising Experience, continued from page 1.

returned to report that his lights had come back.

Local electricians from Allen Electric and CVPS were called to the site. The electricians recognized that the water line was hot, though it wasn’t immediately apparent whether the utility had dropped a neutral line or if something else had happened.

Meanwhile, the Windsor Water Department restored the water service only to find that there was in fact a second leak near the corporation. The power utility then disconnected the homeowner’s meter entirely so that the second repair could be made safely.

As it turns out, the neutral line in the homeowner’s breaker panel had either come loose or had never been properly installed. Rather than returning to the utility, the power was going to ground through the water line. The service line measured 7 amps when tested.

Moreover, the homeowner lost his electric range in the incident. It is thought that this might have happened as Tom joined the new splice to the old line and was shocked.

During a subsequent interview, electrician Doug Allen offered that had the hole Tom was working in been saturated with water, Tom might well have been killed.

When questioned as to how an operator could test a water line to ensure their safety, Allen said that “pencil testers” may not give a good reading and should not be considered reliable in this application. Similarly, even a meter with an independent ground could prove a suspect method of testing the water line for power.

Allen says that the only reliable way to check the safety of the water line is to test the neutral line in the home with a current measuring device, thus ascertaining whether the power is indeed returning to the utility or grounding to the water line.

As operators, we don’t always have access to the homeowner’s power in order to test it, nor are we necessarily qualified to do so. Likewise, it is unreasonable to call an electrician for every service line repair we make.

In an ideal Vermont, every house would have an electrical ground independent of the water line. Yet, more often than not, this is not the case. So, just as we ought to bypass any meter we remove with a jumper cable in order to prevent electrical shock, so too should we jump any water line splices we make with a jumper cable.

While slightly burdensome, this little extra step—and a cheap one at that—will protect the operator from an unlikely but very possible electrical shock hazard. More importantly, as the electrician advised, any sort of tingling or sparking on the water line should alert the operator to stop repairs and call an electrician immediately.

The Windsor Water Department and Tom Anderson have been very gracious in sharing their story with VRWA and the community of operators. It is our hope that this story will serve to warn and protect other operators from future injury.

Tom is a very experienced operator and has been serving the water industry for years. Nonetheless, his experience, as vast as it is, was not enough to prepare him for this experience. So, please heed this advice, take an extra step to be cautious, and help this one close call prevent a more serious accident.

Water & Wastewater Rates: A Good Deal?

by Shaun Fielder, VRWA

At a recent training, I was asked by an attendee if $300/year was a good price for water service. “Is the cost of water or wastewater service at our system a good deal?” is not an uncommon question for us at VRWA.

The costs and fees associated with providing water and wastewater service are as varied as the systems across our state. The variation in pricing is based on a number of factors. These include but are not limited to: the number of connections served, the complexity of the system (including treatment and the distribution network), capital improvement needs, and connection costs.

At the system level, you need to ensure that the income from rates (and connection fees as well) will cover expenses for a given time period. If they do cover all expenses, then the rates are likely set correctly. Excess income is not the goal, but it is necessary to have some reserve and to plan for future capital improvements.

As an aside, the money dedicated to future improvements is sometimes referred to as a sinking fund. I suggest not using this term due to its negative connotations. This is sometimes understood as money that is put aside for a project that is sinking, which is not the best way to promote a needed future improvement for your system.

In this time of tight budgets and significant cost increases across the board, all of us need to do a much better job promoting the value of the commodity and services that we provide.

One simple, effective approach is to compare our price for monthly service with that of other utilities. I know that $25/month is a very good price for a commodity you can’t do without!

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Hair-raising Experience, continued from page 1.

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What Water Systems Need to Know About New (and Old) Agriculture Acronyms - Part 2

by Liz Royer, VRWA

CREP & CRP
Conservation Reserve
Enhancement Program &
Conservation Reserve Program

The Vermont Conservation Reserve Enhancement Program (CREP) is a voluntary, incentive-based program that aims to improve water quality by installing buffers along streams on agricultural land. These streamside or “riparian” buffers filter runoff from adjacent fields, help to stabilize streambanks, and improve in-stream and terrestrial wildlife habitat.

Since this riparian land is often very productive, the program provides compensation to landowners who are willing to take land out of production and convert it to grass or trees for a period of at least 15 years.

CREP is an enhanced version of the federal Conservation Reserve Program (CRP). Under CREP, the soil rental rate is doubled and an additional incentive payment is provided by the state. The payments in the program are meant to cover the loss of production from land that is enrolled and varies depending on the land use and soil types.

The eligibility requirements for CREP & CRP are the same; however, the implementation varies because CRP is a nationwide program, whereas CREP is tailored by individual states. The types of practices that can be installed in CRP are much broader than what is permitted under CREP in Vermont, mainly because VT CREP has focused on riparian areas. Therefore, certain practices like “field windbreak establishment” were not chosen as eligible practices for CREP although they are eligible for CRP. Additionally, CRP can protect land within designated public wellhead protection areas while CREP does not.

When someone enrolls in CREP, they receive up-front payments from the USDA and the Vermont Agency of Agriculture, along with an annual payment comprised of the soil rental rate and a maintenance payment. Vermont’s Soil Rental Rates, which reflect the agricultural value of each soil type in the state, have recently been revised through a collaborative effort of federal and state agencies, farmers, and FSA County Committee representatives.

The overall CREP program incentives can be viewed as a per-acre payment of up to $388 per acre per year for the best cropland in the state. This amount would be paid for land under a 15-year contract in which trees were planted along the stream and no other practices were installed.

While under contract, the land cannot be used for agricultural purposes, but activities such as light vehicular traffic, recreation, and mowing are allowed, so long as the effectiveness of the buffer is not compromised and the harvested material is not used as food or fiber.

EQIP
Environmental Quality Incentives Program

The Natural Resource Conservation Service (NRCS) of the USDA annually administers a statewide Environmental Quality Incentives Program (EQIP). EQIP offers one to ten year contracts which provide incentive payments and cost share payments for approved conservation practice implementation.

NRCS divides EQIP applications and available funds into two categories: (1) water quality problems associated with animal wastes and/or leachate and (2) other applications addressing nutrient, pathogens, and/or sediment loading.

EQIP cost share rates vary greatly from 35% to 100% for specific practices. These practices include:

- Installation of fences, compost facilities, or manure pits.
- Implementation of strip cropping, buffer strips, or nutrient management.
- Installation of stream crossings, livestock water ponds, or monitoring wells.

NMP
Nutrient Management Plan

Nutrient management is an important tool used to protect water quality and improve the financial viability of agriculture. Nutrient Management Planning (NMP) utilizes proper nutrient distribution and farm management techniques to closely match crop needs and limit nutrients entering water resources.

Nitrogen and phosphorus, found in animal waste and fertilizers, are two nutrients of particular concern. Both of these nutrients are required for plant life and pose specific threats when moved off fields and into water.

When supplied in excess concentrations to aquatic ecosystems, phosphorus...
Who’s Behind the Faucet?
A Celebration of Vermont’s Drinking Water Week

by Ashley Lucht, DEC Water Supply Div.

Every year Vermont celebrates National Drinking Water Week and this year was no exception. During the week of May 7th, students throughout Vermont celebrated with performances by the National Theatre for Children and the annual Drinking Water Fair on the state house lawn in Montpelier.

Approximately 4,000 students enjoyed the performance of “Men in Plaid” by the National Theatre for Children, which focused on water conservation and protecting drinking water sources.

The Water Fair also included an awards ceremony for the poster contest. Students in grades 4-6 were asked to submit artwork based on the year’s theme. Winners (see table at right) are recognized and 1st and 2nd place winners receive a savings bond. First place posters are printed.

At this year’s fair, the rain held off just long enough for over 150 kids to enjoy drinking water-related games, performances by the National Theatre for Children, the band Resolution, the WaterCycle, the American Society of Dowsers, goodies from Morse Farm Maple Kettle Corn, and a reading of the Drinking Water Week Proclamation by DEC Commissioner Jeffrey Wennberg.

Returning this year was the Drinking Water Tasting contest. Applicants were placed in three categories: Surface Water Public Community, Groundwater Public Community, and Non-Transient, Non-Community.

Competition was tough, and the Best Tasting Water Awards went to:

- Surface Water: Waterbury Village, operated by William Woodruff.
- Groundwater: Georgia Station, operated by Rocco Graziano and Claude Chevalier.
- NTNC: Flood Brook Union High School, operated by John Morse.

And of course, all of this would not be possible without the support of and contributions from our sponsors:


Finally, a special thanks goes out to the many volunteers! If you wish to help plan next year’s events, please contact Elizabeth Walker at 800-556-3792 x 321.

2006 Poster Contest Winners

<table>
<thead>
<tr>
<th>Grade</th>
<th>Place</th>
<th>Name</th>
<th>School</th>
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<tbody>
<tr>
<td>4th</td>
<td>1st</td>
<td>Olivia Scribner</td>
<td>Rumney Memorial School</td>
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<tr>
<td>2nd</td>
<td>Madeleine Ruth Miller</td>
<td>Rumney Memorial School</td>
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<tr>
<td>3rd</td>
<td>Kursten King</td>
<td>Rumney Memorial School</td>
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</tr>
<tr>
<td>5th</td>
<td>1st</td>
<td>Morgan Blanchard</td>
<td>Irasburg Village School</td>
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<tr>
<td>2nd</td>
<td>Paige Pratt</td>
<td>Irasburg Village School</td>
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<tr>
<td>3rd</td>
<td>Zach Fielder</td>
<td>Rumney Memorial School</td>
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<tr>
<td>6th</td>
<td>1st</td>
<td>Cedrick Zeno</td>
<td>Rumney Memorial School</td>
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Surface Water: Waterbury Village, operated by William Woodruff.

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causes harm by accelerating algae growth and lowering dissolved oxygen content. Nitrogen, on the other hand, poses a threat to human health when present as high concentrations of nitrate in drinking water.

Site-specific farm management techniques can reduce erosion and lower the threat of nutrients entering surface water. Management techniques include:

• Conservation tillage (plowing in ways that do not produce excess erosion).
• Strip cropping or contour planting (planting an erosion-reducing crop such as hay between a water source and a crop associated with more erosion, such as corn).
• Crop rotation (switching between corn and hay to offer more protection).

While nutrient management techniques can safeguard surface waters, site-specific practices such as nutrient setbacks from wells can reduce nitrogen mobility into groundwater.

Through the implementation of a nutrient management plan, associated site-specific management techniques, and precise calculation of crop nutrient requirements, water resources can be protected and fertilizer costs reduced.

The Vermont Agency of Agriculture is currently offering NMP Incentive Grants for 100% payment of soil and manure/waste testing and $5,000 for three additional years of NMP updates. These grants will help Medium Farm Operations (MFOs) comply with new regulations for obtaining a general permit. The public comment period for the draft general permit for MFOs runs through September 17, 2006. More information can be found at: http://www.vermontagriculture.com/AgriculturalWaterQuality/MFO/MFO.htm.

Information in this article was used with permission from the Vermont Clean and Clear Action Plan and Laura Hanrahan, Statewide CREP Coordinator.
We’ve moved! VRWA is now located at:
Essex Jct., VT 05452-2827