During my travels to water systems around southern Vermont, I have been frequently asked questions related to Vermont’s Lead in Consumer Product law, Act 193. The part of this new law that is relevant to Vermont water systems is in effect for any parts you buy or install after January 1, 2010 which must “be limited to a lead weighted average of 0.25 percent for fixtures and 0.20 percent for solder of flux for plumbing.” This only applies to “fixtures used to convey or dispense water for human consumption.” Human consumption as defined by the Vermont Attorney General’s Office means “drinking and/or cooking.” This is an important distinction because it means that the parts and pipes you have on your shelves can be used, for instance, in many wastewater applications. It also means that fire hydrants and sprinkler systems are not affected by this new law.

So what are systems doing with their unused stock? Well, there are a variety of answers. Some systems are starting by shifting whatever possible to other departments. Fire, wastewater, and even recreational departments have many water pipe applications.

Get the Lead Out!
By Aaron Perez, VRWA Circuit Rider

Busy Industry Times
By Shaun Fielder, Executive Director

We have been relaying information on ARRA stimulus funding opportunities in previous issues and many systems are taking advantage of this funding. One deadline of note for ARRA state stimulus funding is February 17, 2010. As of this date 100% of the state allocation has to be committed for given water and wastewater projects. Based on information available as we go to press, Vermont is on target to hit 100% of its allocation. Any unused amounts will be forfeited; a use it or lose it scenario. In addition to the state ARRA funding, Vermont USDA Rural Development ARRA funding options are still available and many systems are accessing this funding. The RD deadline for project commitment is September 30. www.rurdev.usda.gov/vt

Currently some ARRA projects are underway and many are kicking off this spring. Jobs will be created with this next phase, definitely a need given a national unemployment rate at 10%. While some are into construction phase, there are many systems needing to approve bonding to get to this point. A continuing recession and significant state budget deficit have turned up the financial pressure cooker for all of us and it will be interesting to see the results of individual bond votes.

In regards to the “regular” drinking water SRF funding, the Water Supply Division FY 09 draft intended use plan is out. Details can be found at the following link:

www.vermontdrinkingwater.org/grants.htm

In current form, funding from administrative set-aside for a future third party technical assistance contract will be reduced.

Many have commented directly to the division on the value and need for continuation of this SRF technical assistance at full funding levels and this is appreciated. VRWA has been the winning bidder on this contract since 1998. The division is still considering options as it finalizes the intended use plan. We do know at this point that our current SRF Technical Assistance contract will end February 28, 2010.

This will bring some changes in position assignments here at VRWA. On March 1st Ian Schrauf (program manager SRF TA since 9/03) will move to our southern VT ARRA circuit rider position. He will be moving into the position currently held by Randy Antonarelli. Randy has served in a temporary assignment with us since October. We appreciate Randy’s efforts these past couple months and wish him best of luck on future endeavors.

We are looking forward to our annual conference event at the Lake Morey Resort in Fairlee on May 5 and 6, 2010. Please note that given the tight economy, our registration prices were held at 2009 levels. Our golf event kicks off on the afternoon of the 5th and the vendor show with a number of training sessions will be held on May 6. We are pleased to announce ANR Secretary Wood has agreed to speak at our business luncheon. The vendor display area will be very busy and as always, there will be some great training taking place. We look forward to seeing you at our conference event.
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.

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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.

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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Welcome new members!
- Grand Isle Consolidated Water District, Grand Isle, VT
- Grand Summit Hotel, W Dover, VT
- Hideaway Campground Association, Ludlow, VT
- Aloha Foundation, Fairlee, VT
- Northbound Moose Campground, Greensboro Bend, VT
- Mendon Mountain Orchards, Mendon, VT
- Eastern Analytical, Concord, NH
- BCR Environmental, Jacksonville, FL

2010 Vermont Drinking Water Week

Vermont Drinking Water Week (DWW) is May 2 - May 8, 2010. This year's theme is "Nurture Nature - Clean Water for All." Join us for the drinking water fair May 7th at our new location: the Vermont Institute of Natural Science (VINS) in Quechee Gorge.

What Can You Do For Drinking Water Week?
- Offer a tour of your facilities to your town or school
- Participate in the annual Water Tasting Contest: water systems vie for bragging rights to the "Best Tasting Water in the State" and a chance to go on to the national competition
- Promote Drinking Water Week activities to your local school
- Volunteer to help at the Water Fair on Friday May 7, 2010 at VINS
- Sponsor our event!

Please visit us online for more information: http://vtruralwater.org/industry/DrinkingWaterWeek/index.php

Conference Registration

We are looking forward to our annual conference on May 5th and 6th at the Fairlee Resort. Please find the registration form included in this issue and additional information on our website. We hope you are able to join us for this industry-leading event. We have a great golf tournament scheduled, an excellent set of trainings lined up, and our industry partners have already reserved a significant amount of our available booth space. Our business luncheon, annual membership meeting and awards ceremony will take place on the 6th. We hope to see you all there.
For the past two years, I have been traveling the width and breadth of Vermont delivering the message about the Vermont Water and Wastewater Emergency Response Network—VTWARN—believing that it’s important for systems in Vermont to be prepared for future possibilities of disruptions caused by natural or manmade situations. I have recently completed five training sessions at this writing in Rutland, Lyndonville, Swanton, Waterbury and Springfield.

The Steering Committee for VTWARN has been hard at work developing an Operation Plan (which was completed in October), producing a website (which is now up and running at VTWARN.org), and recruiting new members. As of late January we have twenty-four members—the vast majority from community water systems—and we recently had our first non-community system join; Vermont Natural Spring Water in Brattleboro.

So why should we join? Major disasters like earthquakes, hurricanes, and other natural disasters usually skip Vermont. Flooding sometimes gets us, but… usually not on the scale of 1927, and today many of the issues that exacerbated that disaster have been mitigated over time. So, the weather may not be an issue, yes there was an ice storm on January 8, 1998, but…. how often have we seen this severe weather occur, and besides many of us already have a handshake agreement or maybe even a binding agreement with a neighboring community. Besides our systems could survive for a week, or two, maybe even three. It wouldn’t be longer than a couple of weeks in this country before major help from our state and federal government was on the way, but…. Yup, we’re covered: got my community next door, extra chemicals, pipe, and spare pumps. And my community has plenty of money too if our system was damaged. We’d have no problem replacing buildings, equipment, and infrastructure.

I really hope all of our systems in Vermont are prepared for every unforeseen event like our system above. But just incase you aren’t, maybe your system should give VTWARN another look. After all, it’s free, strictly voluntary, you don’t have to aid a member if you can’t, and it just gives you one more layer of protection. And of course if something major did occur, systems will have access to reimbursement for expenses incurred in a federally declared disaster. Just a little more security for your system can’t hurt.

We’re experts with a precious resource.
Your budget.

Water is a vital resource.
But at EJP, we never forget about your bottom line. We’re all about harnessing the power of water in a way that benefits both communities and the municipalities that serve them. That’s why we offer water management solutions, technologies and quality products that assure cost-savings, revenue generation and water conservation. For a complete list of EJP products and services, visit www.ejp Prescott.com.

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The American Water Resources Association (AWRA) 2009 Annual Water Resources Conference was held in Seattle this past November. The American Water Resources Association includes members from multiple disciplines and is dedicated to advancing water resources management, research, and education. During the Annual Conference, over 300 oral presentations provided an overwhelming amount of data and information on a variety of topics ranging from climate change to stormwater management to water supply infrastructure. Several of these presentations are highlighted below:

Unpacking Participation: Social Learning in Multi-Stakeholder Platforms for Drinking Water Source Protection in Ontario, Canada

Following the E. coli contamination incident in Walkerton, Ontario, where seven people died in 2000, legislation was passed that mandated source protection. Source protection committees were formed throughout the province for assessing vulnerability and creating implementation plans. These committees include multiple local stakeholders in a participatory planning process. Since the source protection committees are mandated to meet from 2007-2012, this study is ongoing and focuses on looking at levels of social learning in regard to the scientific and socio-political aspects of source protection.

Bacteria Sourcing in the Central Valley (California)

Knowing the source of bacteria can be beneficial to the prevention of contamination in a water source or supply. This poster highlighted the tracing of bacteria in a water body in an agricultural area by identifying them as poultry, cattle, or human in origin. Each of these produces a unique strain of fecal bacteria in their intestinal environment. Preliminary results have shown that contamination of a California stream is mostly human in origin. This study is now focused on tracing the contamination back to faulty septic systems in the watershed.

Institutional Barriers to the Use of Alternative Water Supplies

The average per capita water use in the United States is about 100 gallons per day. Although approximately 90% of this water is used for non-potable purposes, most American homes provide water from a single, potable source. Increasing concerns about climate change and the consequences of meeting future water supply needs, lead to the promotion of sustainable development practices. These practices emphasize water conservation and promoting water use efficiency through the use of alternative water supplies, specifically reclaimed water, gray water, and rainwater. Significant institutional barriers prevent the widespread use of alternative water supplies, such as plumbing codes and other building regulations.

Impacts of Salmon Carcass Decomposition on Reservoir Eutrophication and Drinking Water Quality in Seattle, Washington

Historically, salmon used the waters upstream of the Landsburg Diversion Dam, constructed in 1901 as part of the municipal water supply system for the City of Seattle. In 2003, a fish ladder was constructed with passage above the dam initially limited to approximately 5,000 adult salmon per year to prevent water quality impacts primarily associated with increased phosphorus loading and eutrophication. A phosphorus loading model predicted that the initial salmon carcass limit would contribute less than 0.5 percent of the annual phosphorus load. In contrast, an estimated 20 percent of the annual phosphorus load originates from fluoridation of the water before it enters the reservoir.

Contact VRWA Source Protection Specialist Liz Royer at 802-660-4988 ext. 336 or lroyer@vtruralwater.org
Ground-penetrating radar (GPR) is a geophysical method that uses radar pulses to image the subsurface. This non-destructive method uses electromagnetic radiation in the microwave band (UHF/VHF frequencies) of the radio spectrum, and detects the reflected signals from subsurface structures. GPR can be used in a variety of media, including rock, soil, ice, fresh water, pavements and structures. It can detect objects, changes in material, and voids and cracks.

Ground-penetrating radar antennas are generally in contact with the ground for the strongest signal strength; however, GPR air launched antennas can be used above the ground.

Cross borehole GPR has developed within the field of hydrogeophysics to be a valuable means of assessing the presence and amount of soil water.

Applications
GPR has many applications in a number of fields. In the Earth sciences it is used to study bedrock, soils, groundwater, and ice. Engineering applications include non-destructive testing (NDT) of structures and pavements, locating buried structures and utility lines, and studying soils and bedrock. In environmental remediation, GPR is used to define landfills, contaminant plumes, and other remediation sites, while in archaeology it is used for mapping archaeological features and cemeteries.

GPR is used in law enforcement for locating clandestine graves and buried evidence. Military uses include detection of mines, unexploded ordnance, and tunnels.

Borehole radars utilizing GPR are used to map the structures from a borehole in underground mining applications. Modern directional borehole radar systems are able to produce three-dimensional images from measurements in a single borehole.

Limitations
The most significant performance limitation of GPR is in high-conductivity materials such as clay soils and soils that are salt contaminated. Performance is also limited by signal scattering in heterogeneous conditions (e.g. rocky soils).

Other disadvantages of currently available GPR systems include:

- Interpretation of radargrams is generally non-intuitive to the novice
- Considerable expertise is necessary to effectively design, conduct, and interpret GPR surveys
- Relatively high energy consumption can be problematic for extensive field surveys
- Liquids in the soil

Recent advances in GPR hardware and software have done much to ameliorate these disadvantages, and further improvement can be expected with ongoing development.
Recovery Zone Economic Development Bonds

The Vermont Municipal Bond Bank (VMBB) has received authority from the State of Vermont to issue up to **$90.0 million** in Recovery Zone Economic Bonds (REZDBs) in 2010. The authority to issue the REZDBs expires on December 31, 2010.

REZDBs are a category of Build America Bonds (BABs), used to fund public infrastructure, facilities and equipment in “recovery zones”. The entire State of Vermont has been declared a “recovery zone”. REZDBs are sometimes known as “super BABs”. Regular BABs are taxable bonds with a 35% tax credit feature. REZDBs have a 45% interest refund subsidy that makes them between 15% and 20% cheaper than 20-year tax-exempt municipal bonds.

Eligible REZDB borrowers include: counties; cities; towns; villages; and state recognized districts – the same definition as those able to borrow on a tax-exempt basis through the VMBB.

REZDBs can be used for the following:

- New money capital expenditures for real and personal property
- Public infrastructure or facilities
- Expenditures for job training and education programs

Federal Davis-Bacon prevailing wage rules apply to projects financed with Recovery Zone Economic Development Bonds. “Buy American” provisions DO NOT apply to REZDBs.

The VMDBB expects to issue a REZDB pool this summer and use the bond proceeds to make loans to pool participants. REZDB loans will be general obligation debt of the participating municipalities.

The REZDBs will be issued under the VMDBB’s credit rating (AA2/Moody’s and AAA/Fitch). If there is enough demand, a second pool will be issued this fall.

The same application process as that used for tax-exempt bonds will apply. See VMDBB’s website for further details – [www.vtbondagency.org](http://www.vtbondagency.org).

For more information on Recovery Zone Economic Development Bonds contact:

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