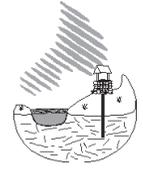


# SUPPLY LINES WITH THE SOURCE



Newsletter of the NHDES Drinking Water & Groundwater Bureau  
on the web at [www.des.nh.gov](http://www.des.nh.gov)

Winter 2015

## In Belmont, Meter Replacement Tops List of Improvements

*K. Jeanne Beaudin, Town Administrator*

The Belmont Water Department serves approximately 1,600 people and relies on three wells, a pump house and a storage tank.

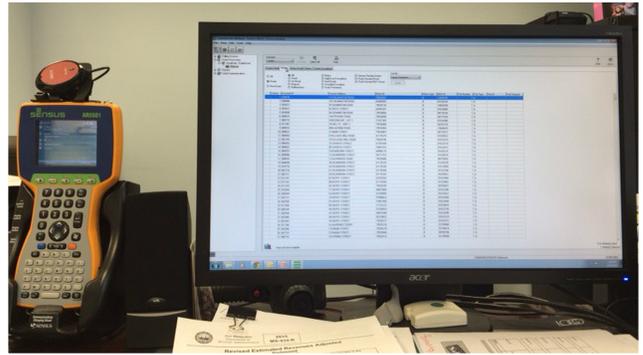
In 2010 the Town decided to revitalize its village center. It was during this time that the issues we were facing with the water system really came to the forefront: we knew that we were going to be reconstructing the village and that it would be the best opportunity to improve the water system infrastructure. We worked closely with the Community Development Block Grant Program to secure a grant for our waterline replacement. In addition, funding was secured through the State Revolving Fund. This was just the beginning. During the entire process we received continued encouragement from the staff at NHDES. They notified us of funding resources to conduct an Asset Management Program for the Water Department and helped in securing funding for a Water Meter Replacement Project. Belmont has always been unique in its belief that water and sewer infrastructure should be paid for through user fees, so finding the best “bang” for our buck was very important to obtaining a “yes” vote at Town Meeting to support these initiatives.

Since 2011, the Town of Belmont has completed the following actions:

- Replaced over 3,500 feet of water main.
- Implemented an asset management plan.
- Upgraded old meters, insured proper backflow devices, and installed radio-read system on all services utilizing a DWSRF loan.
- Upgraded billing software system to streamline meter reading and billing.

Our story is ongoing; we learned a great deal about multi-tasking during the past three years as we had several water system projects underway at one time. If I had to highlight the most important project, from my

perspective as Town Administrator, I would have to say the water meter replacement project, which included the installation of radio-read devices and upgrades to our reading and billing software. The staff time spent reading meters and data entry averaged about 40 hours per quarter; today it takes 2.5 hours to read meters and 1 hour to merge the readings and generate a commitment for billing. The system is still relatively new and we have just completed our first full quarter reading and billing cycle so the impact on consumer costs is still difficult to gauge; we anticipate that we will see an increase in revenues as we believe the old system did not capture usage properly. Our hope is that increased meter and billing accuracy will result in increased conservation. 💧



*Sensus automatic meter reader (AMR) and software program*

## Small Storage Tank Inspection Grants

Tank inspections are common for community water systems (CWSs) with tanks greater than 20,000 gallons, but much less so for systems with smaller tanks. Many small CWSs are 30 years old or more and their atmospheric or hydropneumatic tanks have never been inspected, let alone taken out of service and cleaned. The reasons are many, notably: the tank is buried and the location of the access hatch is unknown or inaccessible; the tanks are essential to

(Grants, continued from pg 1)

preserving water pressure; the system never budgeted for that; the system didn't know they had to clean and inspect their tanks.

Atmospheric and hydropneumatic tanks are vital components of a small water system and need to be properly maintained. To evaluate the condition of a tank and its remaining life expectancy, it needs to be inspected internally, and if accessible, externally too. NHDES offers small water systems a 50 percent matching grant of up to \$4,000 per tank of 20,000 gallons or less to perform tank inspections. NHDES will award a maximum of \$10,000 for each water system (enough for three tanks) to perform those long-neglected inspections in 2016. NHDES will accept applications until Friday, January 15, 2016.

For more information or to obtain an application, please contact Luis Adorno at (603) 271-2472 or [luis.adorno@des.nh.gov](mailto:luis.adorno@des.nh.gov). ♦

## Dartmouth College and NHDES Complete Two-Year Project to Increase Private Well Testing and Treatment

Forty-two percent of New Hampshire's residents use a private well as their primary source of drinking water, yet many private well users do not regularly test their well water or install treatment. Through a two-year U.S. Centers for Disease Control and Prevention grant, the Drinking Water and Groundwater Bureau partnered with the Toxic Metals Superfund Research Program at Dartmouth College to assess the barriers to private well testing and treatment, estimate potential cancer cases resulting from exposure to arsenic in well water, and develop strategies and resources to increase testing and treatment.

In 2014, Dartmouth surveyed 5,800 private well owners across the state to determine, among other things, who private well owners talk with first about well issues; whether they have ever tested their well water; if they tested, what prompted them to do so; and what treatment they may now have to remove contaminants. Dartmouth's survey found:

- Four out of five respondents drink their tap water "always" or "frequently."
- Over 70 percent of respondents who did not test their well responded they either didn't know how to go about having it tested or meant to have it tested but never got around to it.
- One in four did not initially understand their water test results, while one in three did not understand what actions to take based on their test results.

Arsenic in well water presents a significant health risk to New Hampshire residents. Using available health risk assessment data from U.S. EPA and a New Hampshire arsenic probability model developed by the United State Geologic Survey, Dartmouth concluded, *"If water from all private wells containing greater than 10 ppb arsenic (the Maximum Contaminant Level) could be treated down to a level of 10 ppb, roughly 451 lifetime cancer cases (bladder, lung, and non-melanoma skin cancer cases) could be avoided among the current NH population."* A variety of other (non-cancer) health effects associated with arsenic exposure are well documented but were not quantified as part of Dartmouth's assessment.

The survey results were then used to develop more effective communications and outreach strategies designed to increase private well testing. Dartmouth then piloted private well outreach events in six municipalities and measured how much the events increased

(Well testing, continued on pg 3)

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(Well testing, continued from pg 2)

private well testing.

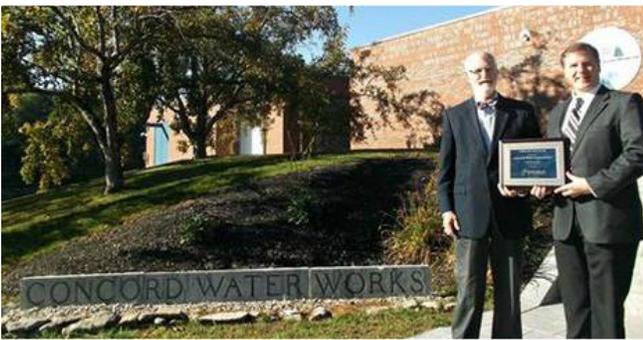
Find Dartmouth's published reports as well as new private well resources including a Community Well Testing Toolkit and NHDES' "Be Well Informed" water treatment web tool at [www.des.nh.gov](http://www.des.nh.gov). Click on "Programs," and then "Private Well Testing Program." ♦

## Concord General Services & City of Franklin Receive NEWWA Awards

Concord General Services and the City of Franklin received awards from the New England Water Works Association (NEWWA) at its Annual Conference in September. Franklin was named Utility of the Year (medium size utility) for its significant improvements to water system infrastructure, customer service, staff training and operations. Concord received NEWWA's Utility Service Award which recognizes utilities that have significantly contributed to supporting NEWWA by participating in committee activities, developing member programs, providing volunteer services, and offering material and financial resources. ♦



L-R: Brian Sullivan, Director of Municipal Services, Franklin, NH & NEWWA President Craig Douglas, P.E., District engineer for Brunswick & Topsham Water District.



L-R: Concord General Services' Water Treatment Superintendent Marco Philippon and Deputy Director Phil Bilodeau

## Job Announcement: Executive Director for NH Water Works Association

Position available April 1, 2016. For a complete job description and contact information visit <http://www.nhwwa.org/job-listings/> ♦

## NHDES Receives EPA WaterSense Award

NHDES has been awarded the U.S. EPA's WaterSense 2015 Excellence Award in Outreach and Education thanks to the efforts of Stacey Herbold, Supervisor of the Water Use Registration and Reporting and Water Conservation Program. Herbold spearheaded initiatives to promote the WaterSense label, effectively encourage water efficiency best practices through Fix a Leak Week and the Shower Better campaign, acquire new WaterSense partners, and collaborate with stakeholders. ♦



L-R: Ellen Gilinski, Senior Policy Advisor, EPA and Stacey Herbold

## 2016 Seasonal System Start-up Procedures

Starting in 2016, seasonal public water systems must perform start-up procedures prior to opening and certify to NHDES that the procedures have been followed per Env-Dw 506.

A Start up Guidance for Seasonal Public Water Systems checklist is now available at <http://des.nh.gov/organization/divisions/water/dwgb/coliform-rule.htm>. A separate Certification of Start-up Procedures form must be submitted to NHDES within 30 days of starting up for the season. This form will be posted to the NHDES website in December 2015.

If you have questions about start-up procedures and certification, please contact Amy Rousseau at (603) 271-0893 or [amy.rousseau@des.nh.gov](mailto:amy.rousseau@des.nh.gov). ♦

# DWGB Staff Receive U.S. EPA's 2015 Environmental Merit Award

Brandon Kernan and Stephen Roy of NHDES' Drinking Water and Groundwater Bureau (DWGB) have been recognized by the U.S. EPA for their innovative work to ensure safe drinking water in New Hampshire. They compiled years of research data to glean trends in drinking water and groundwater contamination that were not otherwise apparent. Kernan's and Roy's scientific work has led to new practices and policies that help protect our water. Outcomes of their work include:

- Development of new siting criteria for wastewater disposal systems at facilities expected to have high loads of pharmaceuticals and personal care products (PPCPs) in their effluent, based a study of more than 100 PPCPs in wastewater discharges and groundwater in coordination with federal and state partners. This work also informed the drafting of new legislation that enables police to collect unused medicine at events and drop boxes across the state.
- Improved understanding of the occurrence and distribution of the solvent-related contaminant 1,4-Dioxane in treated wastewater and private and public water supplies. The knowledge gained through this ongoing work continues to inform both the Water and Waste Management Divisions at NHDES as to where to best focus available resources to address this contaminant and reduce its impact on public health and the environment.
- Evidence that low concentrations of metals can leach off of geothermal heat pumps and impact drinking water provided to homes with open-loop geothermal wells used for the dual purpose of heating and cooling and supplying the home with drinking water. Further work is being done now on rules that will establish practices to reduce potential health risks posed by the use of these wells.



*Brandon Kernan and Stephen Roy*

For more information on this year's Environmental Merit Award winners, visit <http://www.epa.gov/region1/ra/ema/2015recipients.htm>. ♦