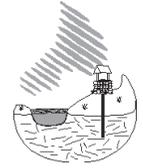




SUPPLY LINES WITH THE SOURCE



Newsletter of the NHDES Drinking Water & Groundwater Bureau
on the web at www.des.nh.gov

Fall 2016



ADMINISTRATOR'S COLUMN

Sarah Pillsbury, Drinking Water and Groundwater Bureau

Water Supply Professionals Are – As Always – Committed to Meeting Today's Challenges

Sadly, it has been a tough year for people's confidence in the safety of public drinking water. As I write this, it seems like there have been few days in the last year when drinking water contamination and infrastructure failures have not been in the news locally or nationally. Here in the northeast, we have old infrastructure and a harsh climate that result in frequent news about streets flooding and sink holes. We've also seen unhealthy levels of perfluorinated compounds (PFCs) in multiple public drinking water supplies at the same time that there has been 24-hour coverage of lead poisoning of children from the public drinking water in Flint, Michigan. While there are many challenges of late, the history of safe drinking water suggests that we will succeed in meeting these most recent challenges, as we have in the past.

America is the envy of the world in terms of the delivery of safe and reliable drinking water through public water systems. Since Jamestown, Virginia in 1610, when Governor Gage ordered that no one should "dare to do the necessities of nature" within a quarter mile of the fort, the story of safe drinking water has been one of understanding emerging issues and contaminants and addressing them. While this has been a particularly active time of trying to understand and solve new and expensive problems, it is important to remember how successful New Hampshire and the country have been, and are determined to be, in protecting public health as it relates to drinking water.

It is also important to remember if you are on public water, the day-in, day-out toil and diligence that is

happening at public water systems throughout our state to bring New Hampshire families safe drinking water. Public water suppliers take their jobs very seriously. Protecting source water; monitoring water quality; keeping pipes, pumps and storage tanks operational and complying with state and federal laws is all in a day's (and sometimes

night's) work for these dedicated individuals. I can't tell you how many conversations I have had recently with water system operators who are deeply concerned with the loss of confidence in drinking water and are doing everything they can to ensure its safety. One recent example was the quick, 100%

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response to a survey NHDES conducted about remaining lead service lines. Another is the willingness to voluntarily sample for unregulated contaminants of concern such as 1,4-dioxane and PFCs. The voluntary commitment of systems to asset management is yet another area where water systems are being proactive and doing what needs to be done to address issues.

If history is any judge, there will always be new and emerging safe drinking water challenges and, more importantly, public health professionals committed to meeting them. 💧

To see the latest on NHDES' response to PFOA, PFOS and other perfluorinated compounds (PFCs) in the environment, visit

<http://des.nh.gov/organization/commissioner/pfoa.htm>

Making Progress on Source Water Protection

Recent headlines underscore how important it is to protect our drinking water resources and how much our lives can be disrupted when we suspect it may not be safe to drink. Whether it is a large chemical release into the Elk River, forcing the closure of Charleston, West Virginia's water treatment plant for nine days (January 2014), or a harmful algae bloom (HAB), like the one that shut down Toledo, Ohio's water plant (August 2014), these events underscore the need for vigilance and a broad understanding of potential water supply threats. Making meaningful progress to minimize threats to source water requires a commitment to work across different government, business, non-profit sectors and political boundaries. Here are a few examples of the progress NHDES and others have made over the past year:

- NHDES and conservation partners committed \$3.6 million to conserve 4,300 acres of land to protect ten public water systems. Funding came from NHDES' Water Supply Land Protection Grant Program, NHDES' Aquatic Resource Mitigation (ARM) Program and the Land and Community Heritage Investment Program (LCHIP).
- NHDES' Drinking Water Source Protection Program supported four systems in purchasing fluorometers to gather real-time data on the presence of phycocyanin, a pigment that is produced only by cyanobacteria. This equipment will be useful in detecting possible cyanobacteria blooms.
- NHDES developed a rapid-response protocol for suspected cyanobacteria blooms in source waters.
- The NHDES Limnology lab invested in equipment to conduct quick-turnaround ELISA tests for cyanotoxins and NHDES supported the Public Health Laboratory in developing the capacity to conduct analyses for specific cyanotoxins in finished water.
- To address large aboveground chemical and petroleum storage tanks (ASTs) near the Merrimack River, NHDES' Waste Division and EPA conducted high priority inspections while Granite State Rural Water Association updated the inventory of AST facilities in the area.
- Geographic Response Plans for the Exeter and Lamprey Rivers, sources for Exeter and Durham, respectively, have established locations for conducting spill response activities and determine equipment needs. 💧

DWGB Promotes Water Testing in Schools and Child Care Centers

From kindergarten through high school, children spend much of their waking hours in school. Prior to reaching school age, children may also spend many hours in a child care setting. Because children are particularly vulnerable to environmental health hazards, and some health and learning problems are linked to pollutant exposure, ensuring a healthy environment in these settings can have a profound impact. Of particular concern to DWGB is the potential for lead in drinking water in these facilities due to the leaching of lead from components of older service connections such as lead service lines, goosenecks and internal plumbing and fixtures, such as faucets, bubblers and coolers. There is no known safe level of lead exposure for children; exposure can impair a



child's ability to learn and cause serious long-term health problems. Effects of lead exposure can be managed, but they cannot be remedied. As such, DWGB recommends taking steps to reduce, or eliminate when practicable, sources that may contribute lead to drinking water. Working with the Department of Education and the Department of Health and Human Services, DWGB provided New Hampshire schools and licensed child care programs with information about the potential occurrence of lead in drinking water, encouraging water testing and removal of high-risk lead components from plumbing networks. For more information, go to <http://des.nh.gov/organization/divisions/water/dwgb/lead-drinking-water.htm>. 💧

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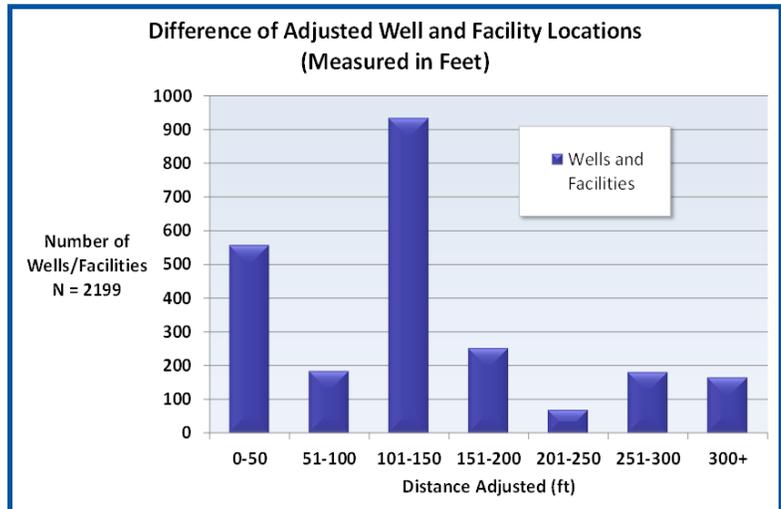
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Location! Location! Location! Multi-Year Project Improves Location Data for Public Water Supply

NHDES recently completed a multi-year project to improve the accuracy of over 2,000 public water supply (PWS) well and facility locations in its geographic information system (GIS). As a result, almost all PWS well point locations in NHDES' GIS are now accurate to within 25 feet. The improved PWS location data are used by applicants for local, state and federal permits and in local resource planning. The chart at right shows the number of improved PWS point locations grouped by how much each location was improved.

Data obtained from EPA regarding PWS well and facility locations when NHDES was building its GIS during the 1990s had considerable positional error due to poor site accessibility, varying collection methods and equipment, and low-quality satellite signals for civilian GPS units.

Access to the data is available to registered users through the NHDES OneStop Data Mapper on the NHDES website, www.des.nh.gov.



DWGB Calendar of Events & Deadlines: September 2016 - February 2017

- September 14-15 Leadership, Decision-Making and Communication for Water Systems workshop, contact Luis Adorno at (603) 271-2472 or luis.adorno@des.nh.gov or see <http://des.nh.gov/organization/divisions/water/dwgb/asset-managment/index.htm>
- September 20, 22, Small Public Water System Operator Grade 1A Training Course, contact contact Wade Pelham at (603) 271-2410 or wade.pelham@des.nh.gov or see http://des.nh.gov/organization/divisions/water/dwgb/op_cert/documents/nhdes-w-03-149.doc
- October 4 Treatment, Distribution & Combined Grade 1A Drinking Water Operator exam, contact Wade Pelham at (603) 271-2410 or wade.pelham@des.nh.gov
- October 20 Local Source Water Protection Grant applications due, contact Amy Hudnor at (603) 271-2950 or amy.hudnor@des.nh.gov or see http://des.nh.gov/organization/divisions/water/dwgb/dwspp/lswp_grants.htm
- November 1 Asset Management: Bridging the Gap workshop, contact Luis Adorno at (603) 271-2472 or luis.adorno@des.nh.gov or see <http://des.nh.gov/organization/divisions/water/dwgb/asset-managment/index.htm>
- December 1 Asset Management Grant applications due, contact Luis Adorno at (603) 271-2472 or luis.adorno@des.nh.gov or see <http://des.nh.gov/organization/divisions/water/dwgb/asset-managment/index.htm>
- December 16 Record Drawing Grant applications accepted <http://des.nh.gov/organization/divisions/water/dwgb/capacity/documents/record-drawing-grant-app.doc>

To see event calendars for additional opportunities please visit:

- Granite State Rural Water Association at <http://www.granitestatewater.org>
- New England Water Works Association at <http://www.newwa.org>
- New Hampshire Water Works Association at <http://www.nhwwa.org>

NH Develops Protocol for Responding to Cyanobacteria Blooms in Water Supplies

NHDES, the state Public Health Laboratories (New Hampshire Department of Health and Human Services) and public water systems (PWS), using surface sources, have developed an interim protocol for responding to suspected cyanobacteria (blue-green algae) blooms in public water supply sources. The protocol involves: 1) visual monitoring, 2) microscopic identification of algae and cyanobacteria, 3) quick ELISA (enzyme-linked immunosorbent assay) screening for cyanotoxins by NHDES' Limnology Center laboratory, 4) follow-up testing for specific cyanotoxins in the Public Health Laboratories (PHL), 5) adjusting treatment processes and 6) notifying water users if cyanotoxins are found in treated (finished) water. The presence of cyanobacteria does not necessarily mean that toxins are present at harmful levels; so testing for toxins is recommended when cyanobacteria are thought to be abundant. When this newsletter went to press, NHDES and the PHL were working on perfecting lab techniques; an announcement about their availability is expected in fall 2016.

Cyanobacteria made national news when a bloom shut down water service to more than 400,000 people in the Toledo, Ohio area in August 2014. Cyanobacteria blooms often result in beach closures in New Hampshire, but as of press time, cyanotoxins have not yet been found in any treated water supply in the state. Several New Hampshire water systems recently started using hand-held fluorometers to monitor source waters for chlorophyll and phycocyanin (a pigment unique to cyanobacteria), which together provide an immediate indication of the relative abundance of cyanobacteria. Financial support for monitoring cyanobacterial pigment and toxins is available through NHDES' Local Source Water Protection Grant Program.

For more information, contact Paul Susca at (603) 271-7061 or paul.susca@des.nh.gov. 💧



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