Supply Lines with The Source

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

Spring 2020

Risk Assessments & Emergency Plans: An Update on Federal and State Requirements

On October 23, 2018, America's Water Infrastructure Act (AWIA) was signed into law. For those of you who have been at your water system long enough to remember the Bioterrorism Act in 2002, water systems were required to conduct vulnerability assessments and develop emergency plans. AWIA provides an update to that requirement. AWIA Section 2013 requires community water systems serving more than 3,300 people to develop or update risk assessments and emergency response plans (ERPs). The law specifies the components that the risk assessments and ERPs must address and establishes deadlines. Systems are not required to send either of those documents to EPA. You will only need to certify that they were completed and meet the requirements. EPA requires review and recertification every five years.

Fact sheets, deadlines, guidance documents and certification instructions are all available on the EPA AWIA Risk Assessment and Emergency Planning website.

Even though AWIA is only applicable to systems serving more than 3,300 people, all community systems, regardless of the size, have to meet New Hampshire's requirement (per Env-Dw 503.21) of submitting their updated emergency plan to DWGB every six years. Updated copies of your emergency plan need to be submitted to DWGB by March 31, 2021. The deadlines for the federal and state requirements do overlap so please take note of the deadlines in the chart below.

Stephanie Nistico has been hired to assist with the emergency planning efforts in DWGB. She will be conducting outreach efforts, tracking submittals, and reviewing plans to support improving resiliency at community water systems. Additional communications will be sent out directly to CWSs over the next year. The DWGB Water System Emergency Planning page has been updated with resources to assist systems with these requirements, so dust off those plans and make sure that they are useful in an emergency. For questions, contact Stephanie Nistico at (603) 271-0867 or stephanie.nistico@des.nh.gov.

AWIA and Env-Dw 503.21 Deadlines

CWS Population Served	Risk Assessment Certification Due to EPA	Emergency Plan Certification to EPA	Emergency Plan Submittal to DES
100,000+ people	3/31/2020	9/30/2020	3/31/2021
50,000 – 99,999	12/31/2020	6/30/2021	3/31/2021
3,301 – 49,999	6/30/2021	12/30/2021	3/31/2021
3,300 or less	n/a	n/a	3/31/2021

Start-up Procedures for Seasonal Systems

Seasonal public water systems that are not exempt must perform start-up procedures before opening and certify to NHDES that procedures have been completed per Env-Dw 506, Seasonal Public Water Systems. Start-up procedures include inspecting the sanitary protective area (SPA) and all components of the distribution system, correcting any open sanitary defects and disinfecting and flushing all distribution lines.

Inspection:

1. Wellhead cap/cover – Must be secure, seals intact and have a screened vent.
2. SPA – Ensure at least 75 to 200 feet around the well is maintained clear of fuels, septic system components, animal manure, fertilizers, etc.
3. Pump house – Maintain proper sanitary and safety conditions, keep locked, no water leaks or exposed electrical wires.
4. Treatment facilities – Verify whether fully operational, with proper chemical storage and air gap on backwash discharge.
5. Storage tank – Check tank integrity, ensure hatch is sealed, and vent and overflow are screened.
6. Distribution piping, valves and service lines – Reconnect all the plumbing and pressurize the system. Exercise valves and blow-offs. Repair leaks.
7. Dump station cross connection control – Testable Reduced Pressure Zone (RPZ) or sustained air gap must be in place.
8. Sample locations – Should be clean, labeled, accessible, 12 inches above floor.

Disinfection: Follow the instructions in fact sheet DWGB-4-11 Disinfecting a Drinking Water Well.

Monitoring: Collection of general system evaluation bacteria samples after disinfection and prior to monthly bacteria testing is recommended.

The start-up certification form must be submitted to NHDES within 30 days after starting up for the season. Failure to complete start-up procedures or submit certification will result in a Notice of Violation and a requirement for public notice. A start-up checklist is available, along with the certification form, on NHDES OneStop or at the Revised Total Coliform Rule & Implementation sites. For more information or to determine whether your seasonal public water system is exempt, please contact Amy Rousseau at (603) 271-0893 or amy.rousseau@des.nh.gov.

Helpful Information on the Novel Coronavirus and Drinking Water

Health and water supply experts are in agreement that there is very low risk of transmisison of the virus that causes COVID-19 through drinking water. The virus is fragile and has a short survival time in groundwater, which is the source of drinking water for nearly half of the state's population, including many small public water systems and private wells. Further, conventional methods for disinfection used by public water systems inactivate the virus.

NHDES is committed to supporting public drinking water operators and systems, and has posted COVID-19 related emails, information and resources on the NHDES COVID website at https://www.des.nh.gov/covid19/index.htm. Of particular note is a FAQ document that is updated on a weekly basis. We are also holding periodic calls with drinking water operators. For more information about operating a water system during this pandemic, please call (603) 271-2513 and leave a short message. Staff will get back to you promptly.

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DWGB Calendar of Events & Deadlines: May – October 2020

Various dates: May-October	Risk assessment and emergency planning deadlines, reference the AWIA article (cover) or see EPA's America's Water Infrastructure Act: Risk Assessments and Emergency Response Plans website
June 15	DWSRF pre-applications due, contact Johnna McKenna at johnna.mckenna@des.nh.gov or (603) 271-7017
June 26	DWGTF Source Water Protection (land conservation) Eligibility Application due, contact Sandy Crystall at sandra.crystall@des.nh.gov or (603) 271-2862. Check DWG Trust Fund SWP grant website for updates.
June 30	Permit to Operate applications and fees are due, contact Jane Murray at jane.murray@des.nh.gov or (603) 271-3544
July 1	Consumer Confidence Report due; submit completed CCR to dwmonitoring@des.nh.gov. Contact Debra McDonnell at (603) 271-2972 with questions.
July 10	Consumer Confidence Report Certification due; submit completed CCR certification to dwmonitoring@des.nh.gov. Contact Debra McDonnell at (603) 271-2972 with questions.
July 31	2021 Leak Detection Survey Grant applications due, contact Stacey Herbold at stacey.herbold@des.nh.gov or (603) 271-6685
September 10	DWGTF Source Water Protection Funding Application due, contact Sandy Crystall at sandra.crystall@des.nh.gov or (603) 271-2862. Check DWG Trust Fund SWP grant website for updates.
September 10	DWGTF Annual Drinking Water Infrastructure Funding application due, contact Erin Holmes at erin.holmes@des.nh.gov or (603) 271-8321. Check DWG Trust Fund construction projects website for updates.
September 30	Certification for Emergency Response Plans for Community Water Systems serving more than 3,000 people due to EPA, contact Stephanie Nistico at stephanie.nistico@des.nh.gov or (603) 271-0867
Anytime	Cyanobacteria Monitoring and Training grant applications accepted, contact Pierce Rigrod at pierce.rigrod@des.nh.gov or (603) 271-2950
Anytime	Tank Inspection grant applications accepted, contact Luis Adorno at luis.adorno@des.nh.gov or (603) 271-2472

To see event calendars for additional opportunities, please visit:
Granite State Rural Water Association
New Hampshire Water Works Association
New England Water Works Association

RCAP Solutions

Established in 1969, Resources for Communities and People (RCAP Solutions) is an integrated community development organization serving the rural northeast and Caribbean. Its mission is to foster personal and public self-reliance and improve the quality of life for individuals and families, and the communities in which they live.

RCAP Solutions of New Hampshire is led by Erick Toledo and Martin Mistretta. This "small but mighty" team brings over 50 years of experience working in water, wastewater and solid waste management; hazardous waste site remediation; environmental monitoring and data collection.

Recently, the team has implemented projects with several water utilities included in the New Hampshire Drinking

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(RCAP, continued from pg 3)

Water SRF Priority List. Most recently, RCAP completed Income Surveys for low income communities and associations, which are extremely beneficial as they assist communities in qualifying for federal and state funding through grants or loans. From a financial perspective, RCAP Solutions recently helped to secure an $8,000 grant for a tank inspection at a mobile home park, a $350,000 loan for a main improvement project and $900,000+ combination of loan and grant for a system upgrade at a mobile home community.

In addition, the team is currently working on a variety of projects, including Rate Analysis, Asset, and Business Management Plans, SRF and other funding applications, and completing Risk Assessments and Emergency Response Plans.

Erick Toledo leading a RCAP workshop

The RCAP team has been busy performing assessments on private wells to help New Hampshire homeowners identify potential threats to their drinking water. "Martin did an outstanding job of explaining things to me," a homeowner in New London reported. "I had the cap replaced and had the water tested with fine results. I certainly would refer him to anyone who asked me about well inspection."

The team also organizes complimentary workshops for water operators and volunteer boards, providing CEUs for participants and providing opportunities for collaboration while guiding participants to fully engage on the topic. Erick is considered "An energized trainer, who brings his audience on board giving them a meaningful and memorable experience."

For more information about RCAP Solutions and our services, please visit the RCAP website.

Arsenic Standard Going Down to 5 ppb

Effective July 1, 2021, if adopted as proposed, the new arsenic maximum contaminant level (MCL) in New Hampshire will be 5 ppb (parts per billion – equivalent to micrograms per liter).

The new standard, which implements House Bill 261, enacted in July 2019, will apply to community and non-transient, non-community public water systems. HB 261 directs NHDES to change both the MCL and the ambient groundwater quality standard (AGQS) for arsenic to "a value not to exceed 5 micrograms per liter." The change will make New Hampshire the second state to adopt an arsenic MCL lower than the federal level of 10 ppb. New Jersey has been enforcing its 5 ppb standard since 2006.

HB 261 followed from HB 1592, enacted in 2018, which directed NHDES to review the 10 ppb AGQS (and effectively the MCL) to determine whether it should be lowered, considering the extent of occurrence, the ability to detect it in water, the ability to remove it from water, impact on public health, and the costs and benefits of establishing a lower standard.

When EPA set the limit at 10 ppb in 2001, it was already known that a 10ppb limit would present a health risk that was orders of magnitude higher than what was allowed for other cancer-causing drinking water contaminants. The agency's cost-benefit analysis indicated that at a level below 10 ppb the costs of treatment would be greater than the willingness

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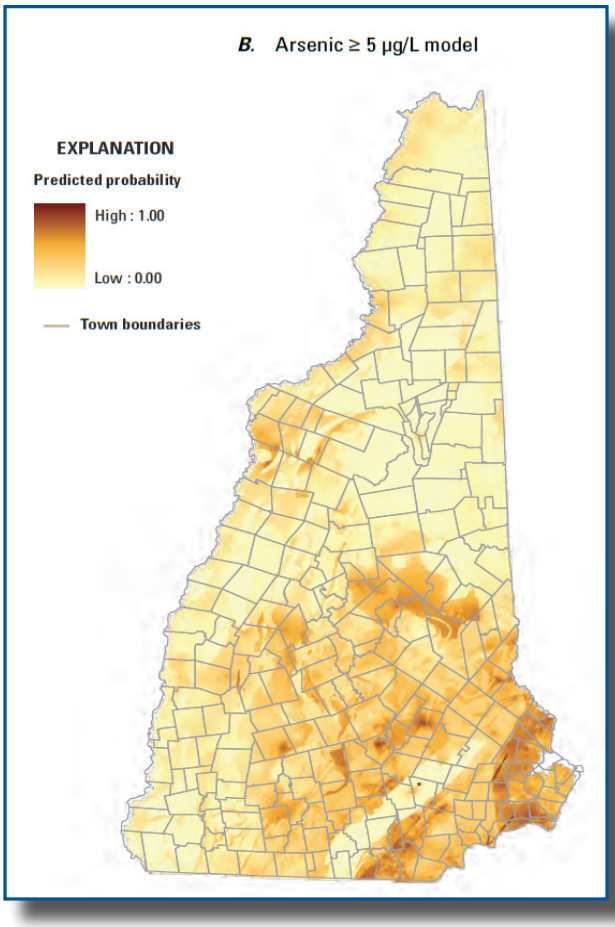
(Arsenic, continued from pg 4)

Probability of Arsenic Concentrations in Groundwater



Arsenic concentraton of 5 microgams per liter
Source: US Geological Survey, Scientific Investigations Report 2012-5156

of water customers to pay for the reduction in the known risk of bladder and lung cancers. NHDES' review found that more recent research into the health risks associated with low levels of arsenic indicated additional harmful effects including adverse pregnancy outcomes, increased illnesses during infancy, increased risk of death from cardiovascular disease, and neurocognitive effects, including potentially reduced childhood IQ.

NHDES has started contacting water systems that are likely to be affected by the lower MCL. For the vast majority of water systems currently in the 5-10 ppb range, compliance will involve adding adsorption treatment or replacing existing adsorbers more frequently, although some systems may choose iron-arsenic co-precipitation either with naturally occurring iron or addition of an iron salt. Point-of-use arsenic adsorption cartridges are also a good treatment strategy, especially for daycares and small businesses. For more information on treatment options, contact Cindy Klevens at cynthia.klevens@des.nh.gov or (603) 271-3108.

NHDES Leak Detection Survey Program Goes the Distance

The NHDES Leak Detection Grant Program turns ten this year and has reached a milestone. The program has funded the surveying of over 5,500 miles of water main or as the crow flies, the distance from Concord, New Hampshire to San Francisco, California and back. Each year, community water systems across the state have an opportunity to apply to the NHDES Leak Detection Grant Program to receive an acoustic leak detection survey conducted by a professional leak detection consultant. The surveys are conducted between May and November and take one day to two weeks per system depending on the size. The consultant identifies leaks using specialized equipment to listen on the ground above the water mains and at contact points, such as hydrants and curb stops. To date, approximately 700 leaks have been discovered, flowing at a total of 6,500 gpm – that's equal to running 2,600 showerheads non-stop.

What are the benefits of receiving a leak detection survey through the Leak Detection Grant Program?

- Identifying leaks early can minimize water outages, reduce repair costs, and prevent revenue losses associated with pumping and treating wasted water.

(Leak, continued on pg 6)

Drought Management and RSA 41:11-d

State law (RSA 41:11-d) enables municipalities, including village districts, to adopt regulations to restrict the use of water from private wells or public water systems for lawn watering at residences, institutions and commercial facilities when the state or federal government declares a drought condition for that region of the state. Public water systems have even broader authority (per RSA 38:26) to limit customer water use. See NHDES' Drought Management webpage for more information and model regulations.

Recently Approved DWGB Rules

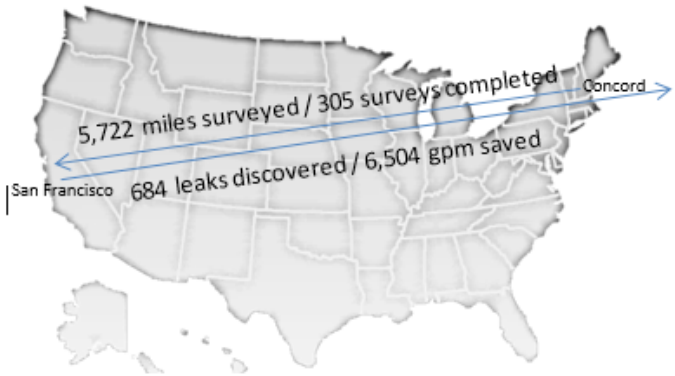
Rulemaking is underway to lower the standard of Arsenic in drinking water to 0.0050 mg/L. The change was initiated based on HB 261, approved on July 12, 2019, requiring NHDES to lower the standard to take effect no later than July 1, 2021.

The rule is scheduled for review by the Joint Legislative Committee on Administrative Rules (JLCAR) at its meeting scheduled on May 15, 2020. If approved, the rule would become effective shortly thereafter, and shared with all water system owners and operators.

The NHDES Drinking Water and Groundwater Bureau coordinates the Drinking Water & Related Rules in Env-Dw 100-1000, and the Water Quality/Quantity Rules in Env-Wq 300-2200. If you are interested in receiving emails when rulemaking is initiated for a DWGB rule, please email Holly Green at holly.green@des.nh.gov.

(Leak, continued from pg 5)

- System staff who choose to accompany the consultant during the survey often learn new leak detection survey techniques and details about the distribution system.
- The system will receive daily leak reports and a final summary report. The final report will include a summary of leaks and general analysis of the types and sizes of the leaks, which can be used to base future system management decisions.



NHDES Leak Detection Program Results: 2010-2019

To contact a leak detection consultant, see a list of Firms Offering Leak Detection Services to Public Water Systems in New Hampshire. The opening of the Leak Detection Grant application period begins on June 15. Please visit the Water Conservation webpage to access the application.

NHDES' 2020 Annual Source Water Protection Conference Postponed

Due to the current COVID-19 virus pandemic, the Annual Source Water Protection Conference originally scheduled for May 14, 2020 at the Grappone Center has been rescheduled for December 15, 2020. Please look for details on this event from NHDES or the American Ground Water Trust beginning in the fall.

DWGB Staff News

The Drinking Water and Groundwater Bureau welcomes four new employees!

Mitchell Dezak joined DWGB as the new Planning Analyst with the Information Management Section. Mitchell comes to us from the health care industry where he led the integration of patient information data exchange systems. Mitchell fills the position Carrie Greenough vacated. He is excited to learn about New Hampshire's public water systems and work to help improve our communities.

We are also pleased to welcome Stephanie Nistico who is providing assistance with the emergency planning and resiliency efforts in the Bureau. Stephanie formerly worked

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Operator Profiles: Tom Caughey

Tom Caughey is a NH-certified treatment grade 2 and distribution grade 2 water works operator and a NEWWA-certified backflow prevention device tester.

Please tell us about your water system: The Lower Bartlett Water Precinct has about 1,300 service connections in its precinct and franchise areas. Our customers are very diverse, with everything from homes and businesses, to a large theme park and aquarium. We experience a lot of variation in daily demand due to the seasons and tourism. Approximately 60% of our system is a PUC franchise area. Our precinct charter dates back to 1915 when a logging company built a penstock in the East Branch of the Saco River. This was used until the 1970s when our first well and storage tank were built. Today, we have two gravel pack wells in an excellent aquifer that are permitted for 2.16 million gallons per day (MGD). We have 1.25 million gallons of storage in three tanks, 250 fire hydrants and about 40 miles of water main. We treat by adding caustic soda and sodium hypochlorite. We also operate five booster pumping stations, and six pressure reducing valves to deal with the varied elevations of our system.

Tom Caughey

What was your first ever job? In my summer before entering high school, I approached a local business owner about mowing the lawn at his building. He said he didn't need lawn care help, but offered me a position for the summer at his company, which happened to operate around 50 small water systems and do a variety of other water, wastewater and mechanical work. They sent me around with a wagon to paint fire hydrants on the side streets before I got my drivers license that first summer. I got a lot of great experience there working on many different systems and mechanical jobs.

How long have you been in the profession? I worked for that company during the summers through high school, and started there full time in 2007. I got to work on lots of small systems, some larger systems, public and private wells and wastewater upgrade contracts. I was able to continue my education and training, which allowed me to accept my current position as field operations supervisor at the Lower Bartlett Water Precinct in 2012.

What is your favorite part about being a water works operator? My favorite part of the profession is being able to give people confidence in the water that we deliver to them. I like to pass along information about the level of care that goes into the safety of our tap water. I enjoy what a well rounded career it is being a water system operator.

What have you learned that you wish you'd known when you first started in the industry? I fell into an industry job and ran with it, but I have come to realize that waterworks is an excellent career path. There are so many places that this career can take you.

What advice do you have for new operators? Write everything down and take lots of pictures! Record keeping is one of the most important functions of a system operator. It may take a little extra time out of the day, but you will create resources that you and others can draw valuable information from time after time.

PROTECT YOUR TAP

10 minute lead test

EPA and NHDES created the Protect Your Tap: 10-minute lead test, an online guide that walks homeowners through a series of steps to see if they have lead pipes bringing water into their home, how to reduce their exposure to lead and how to get their water tested. If you would like to share the guide with your community, please contact Amy Rousseau at (603) 271-0893 or amy.rousseau@des.nh.gov for more information. Check out the Protect Your Tap website.

(DWGB Staff, continued from pg 6)

in NHDES' MtBE Remediation Bureau as a senior drinking water sampler taking samples at locations across the state. In the DWGB Financial Assistance and Sustainability Section, Stephanie is helping community water systems meet their emergency planning requirements and improve their resiliency during emergency events. Stephanie has two cats, likes to do Bikram yoga and is learning to fly! Her excellent customer service and organizational skills and interest in helping people learn make her a great fit for the DWGB.

Bess Morrison recently joined the Planning, Protection and Assistance (PP&A) section from Eastern Analytical, Inc. and comes to NHDES with over 15 years of chemical analytical testing experience. She is currently managing the Local Source Water Protection Grants Program and is temporarily overseeing the Chemical Monitoring Waiver Program. Bess graduated from the University of Alaska Fairbanks with a B.S. in Biological Sciences and a minor in the Russian language.

Liz Pelonzi also recently joined the PP&A in January and was previously employed by the New Hampshire State Police for 15 years as a forensic scientist and lab manager. Liz is working to address cyanobacteria blooms involving drinking water supplies, and managing the Best Management Practices (BMPs) for Groundwater Protection Program along with initiatives to prevent and respond to hazardous spills near water supplies. Liz has a B.S. in Marine and Freshwater Biology from UNH and worked as a scientist doing whale and dolphin research and rescue at UNH.

Mitchell Dezazk, Stephanie Nistico, Bess Morison and Liz Pelonzi

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