



SUPPLY LINES WITH THE SOURCE



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

Winter 2021

Defending Against Drought: Water Conservation and Water Loss Control

While drought conditions have drastically improved since the summer and fall of 2020, New Hampshire is not yet out of the woods. According to the U.S. Drought Monitor, currently 12% of the state is categorized as experiencing “moderate drought (D1)”, and 41.5% of the state is experiencing “abnormally dry” conditions. In many parts of the state, groundwater levels have not recovered to normal and yearly precipitation; departures range from 5 to 10 inches, which is significant. On average, New Hampshire receives 4 inches of rain per month. The hope is this winter and spring will bring a thick snow pack and adequate rain showers to replenish groundwater and surface water supplies. However, climate change is putting a wrench in that norm. Climate change has resulted in warmer winters with less snow and heavier yet fewer precipitation events. How this will impact drought conditions now or in the future is not yet fully known, but the best way to manage unknowns is to be prepared.

The cold season is an opportune time to promote indoor water conservation to customers and residents. There are many simple water-saving measures that everyone should be encouraged to take, such as only running full loads of dishes and laundry, turning off running faucets when brushing teeth or shaving, and only turning the faucet to full blast when filling a pot or sink basin. Residents on private residential wells, particularly in areas in extreme and severe drought, should stagger water uses to provide the well time to recharge. They should also limit time spent in the shower and avoid baths if possible, because baths can use up to 40 gallons of water.

While the thought of fixing leaks may seem daunting to

those who do not consider themselves handy, motivation may be sparked by the fact that fixing a running toilet can save hundreds of gallons a day and is an easy DIY project that requires no tools. Another opportunity to save large quantities of water is by replacing old toilets, showerheads and sink aerators with EPA WaterSense certified models. Stringent water efficiency standards for these fixtures went into effect in 1994 as a result of the federal Energy Policy

Act of 1992. The EPA WaterSense Program took water efficiency a step further by providing independent certification for products that use 20% less water and perform as well as or better than regular models. In addition to toilets, washing machines 10 years or older are large water wasters, using up to 30 gallons per load in comparison to EnergyStar certified models, which can use as little as 12 gallons per load.

Utilities can become EPA WaterSense partners. Signing up is free. Several water utilities in New Hampshire are partners and are benefiting from a range of free, customizable outreach materials used to promote water efficiency. For additional wa-

ter savings tips and resources, see [NHDES' Water Conservation webpage](#).

Community water systems also have an obligation to conserve water on the distribution side of the system for numerous reasons, including protecting supplies to meet increasing demands and to be more resilient in emergencies, such as drought. These conservation efforts are mainly accomplished through water loss control programs, including water audits.

Across the country, water systems are using the American Water Works Association (AWWA) water audit methodology, as described in the AWWA M36 manual, to conduct

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yearly water audits to calculate their non-revenue water and water loss volumes. Water losses can be categorized as “real losses,” such as leakage and storage tank overflows, and “apparent losses,” such as meter inaccuracies and data handling errors. The AWWA water audit is a free spreadsheet-based tool that provides a systematic approach to help you break down where water distributed to the system is going, to validate the entered data, and to provide indices that can inform management decisions. The results of the audit are most commonly used in conjunction with asset management plans and leak detection and repair programs. For example, a water audit may indicate water lost to leakage is higher than assumed and is costing the system significantly in pumping and treatment expenses.

Combining the results of the audit and the information in your asset management plan, such as locations of prior leaks, condition of the water main in that area, production of the sources, and current priorities of the system, will help determine what actions to take. Actions may include hiring a leak detection firm or deploying staff for rapid leak detection and repair, prioritizing main replacement in a problem area, reducing pressure in a zone to prevent future leaks, or investing in leak loggers to catch leaks early. Or, if the audit indicates a low data validity score, focusing on obtaining more dependable data will help to ensure future, smart decisions are made. For example, the system may prioritize flow testing of service meters and distribution meters to determine their accuracy, which can then be used to adjust volumes that are used to calculate real losses.

The above examples provide a peek into how a water audit can inform water management decisions to prepare for emergencies, such as drought. Furthermore, the systematic approach to decision making, through the water audit methodology coupled with a system’s asset management plan, provides the facts and transparency needed to gain the support of grant and loan programs, water commissioners, and customers. [Download the AWWA M36 water audit software for free](#) at the AWWA website and see [NHDES’ Water Audit Resources Guide](#) for further assistance. For more information please contact Stacey Herbold at (603) 848-1372 or stacey.herbold@des.nh.gov. 💧

Huzzah! The New NHDES Website is Live!

Our website is still at <https://www.des.nh.gov> but everything else is new and improved. The new site has been re-organized based on environmental topics with a more robust search function so you can easily find what you need. Click on by to see our new website!

Trust Fund Provides Relief for Homeowners Hit by Drought

Low-income New Hampshire homeowners with residential wells that are experiencing insufficient water or no water due to drought conditions can now apply for short-term relief and financial assistance for a long-term solution. In the near term, qualifying households on residential wells, and whose income is at or below 80% of the state’s median household income, may be eligible for the provision of bottled water at no cost. For long-term drought resiliency, financial assistance may be available for qualifying homeowners to improve or replace the residential well at their primary residence or connect to an existing community water system. Eligibility



A well in Pittsburg – dried up in July

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NEW HAMPSHIRE
Drinking Water Festival

The 4th Grade Drinking Water Festival
will be digital in 2021!

Look for us online starting in March and let your local
teachers know about this FREE opportunity.
Contact Lara Hooper at lara.hooper@des.nh.gov
for more information.

DWGB Calendar of Events & Deadlines: March – July 2021

March 31	Community Water Systems Emergency Plan (EP) due to DWGB; contact Stephanie Nistico at stephanie.nistico@des.nh.gov or (603) 271-0867
April 10	Disinfection Byproducts and Chlorine Residual report for Quarter 1 – 2021 due; contact the DBP Program at dwmonitoring@des.nh.gov or (603) 271-2516
April	DWSRF pre-applications available; contact Johnna McKenna at johnna.mckenna@des.nh.gov or (603) 271-7017
May 4-13	New Hampshire Water Infrastructure Financing webinars. Registration information available soon; contact Emily Nichols at emily.nichols@des.nh.gov or (603) 271-8320
May 19-20	NHDES' Annual Source Water Protection Conference (virtual), TCHs offered
June 15	Community Water System Leak Detection Survey grant application period open; contact Stacey Herbold at stacey.herbold@des.nh.gov or (603) 271-6685
June	DWSRF pre-applications due; contact Johnna McKenna at johnna.mckenna@des.nh.gov or (603) 271-7017
June	DWGTF Source Water Protection (land conservation) eligibility applications 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	AWIA deadline ; contact Stephanie Nistico at stephanie.nistico@des.nh.gov or (603) 271-0867
June 30	Community Water System Risk and Resilience Assessment Certification due to EPA; contact Stephanie Nistico at stephanie.nistico@des.nh.gov or (603) 271-0867
June 30	Permit to Operate signed application and fee deadline; contact Jane Murray at jane.murray@des.nh.gov or (603) 271-3544
July 1	Consumer Confidence Reports due; contact Kimberly Durgin at dwmonitoring@des.nh.gov or (603) 271-6703
July 10	Consumer Confidence Report certification forms due, contact Kimberly Durgin at dwmonitoring@des.nh.gov or (603) 271-6703
July 31	Community Water System Leak Detection Survey grant application period closed; contact Stacey Herbold at stacey.herbold@des.nh.gov or (603) 271-6685
Anytime	Cyanobacteria Monitoring and Training grant applications accepted; contact Liz Pelonzi at ann.pelonzi@des.nh.gov or (603) 271-3906

To see event calendars for additional opportunities, please visit:

[Granite State Rural Water Association](#)
[New Hampshire Water Works Association](#)
[New England Water Works Association](#)

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and the amount of financial assistance is determined based on the household income and the lack of water must be validated that it is related to the 2020 drought. This program is a collaboration between the New Hampshire Drinking Water and Groundwater Advisory Commission and NHDES, with funding from the [New Hampshire Drinking Water and Groundwater Trust Fund](#). 💧

PFAS Remediation Loan Fund Program

House Bill 1264 (HB1264), signed by Governor Sununu in July 2020, enacted RSA 485-H, which provides for up to \$50 million in loans for public water systems and wastewater facilities to address Per- and Polyfluoroalkyl Substances (PFAS) maximum contaminant level (MCL) violations that may occur as a result of new PFAS standards. The PFAS MCLs were also passed into law with the signing of HB1264, and compliance sampling for public water systems resumed in Quarter 4 of 2020 under Env-Dw 712 Monitoring for Organics.

The PFAS Remediation Loan Fund (PFAS RLF) is a low-interest loan program. It also offers 10% loan forgiveness for disadvantaged communities and up to 50% contingent reimbursement for all loan recipients if the State receives sufficient funds from PFAS contamination judgments or settlements. Any cost-effective efforts towards meeting the PFAS MCLs will be eligible as long as a no-cost or lower-cost option is not feasible. In order to administer the PFAS RLF, NHDES is in the process of establishing two new rules.



1. Env-Dw 1400 Per- and Polyfluoroalkyl Substances (PFAS) Remediation Loan Fund Program for Certain Public Water Systems is the newly proposed drinking water rule establishing the loan program for community and non-profit, non-transient public water systems with an exceedance of the running annual average for any of the four PFAS MCLs. This is an open enrollment program with a two-step application process – eligibility request and final application. Pending adoption of the rule, eligibility requests may begin to be accepted as soon as February 1, 2021.
2. Env-Wq 600 will be drafted in 2021 to establish the loan program for publicly-owned and non-profit wastewater and/or wastewater residual treatment or storage facilities that are required to treat effluent and residuals to achieve PFAS standards prior to discharge or disposal.

Reimbursement for PFAS Design Services

Schools and childcare centers are now eligible to receive reimbursement through NHDES for up to 26% of the total cost of treatment design service projects that address PFAS remediation.

There are three easy steps to apply. NHDES approval is required prior to installation of treatment.

Please contact Amy Rousseau, PFAS Response Administrator, at amy.rousseau@des.nh.gov or (603) 848-1372 for more information or to request an application form.

For more information and/or application forms, please contact Amy Rousseau, PFAS Response Administrator, at (603) 848-1372 or amy.rousseau@des.nh.gov. 💧

Recent Awards

Sarah Pillsbury, former Drinking Water and Groundwater Bureau Administrator, recently received the 2020 George W. Fuller Award and the 2020 David M. Erickson Groundwater Award from the New England Water Works Association (NEWWA). The George W. Fuller Award recognizes an individual for their distinguished service to the water supply field in commemoration of the sound engineering skill, brilliant diplomatic talent, and constructive leadership characterized by the life of George Warren Fuller. Sarah was recognized for her service in top leadership roles in national drinking water organizations, shaping policies that ensure safe drinking water on the federal and state levels, and enthusiastically engaging government officials and water suppliers in constructive collaboration.

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Sarah also was recognized with the David M. Erickson Groundwater Award as a member of NEWWA who has demonstrated excellence in the field of groundwater science as it relates to groundwater supply, development, management, and protection.

Richard “Rick” Skarinka recently received the 2020 Jerome J. Healey Award from NEWWA. The Jerome J. Healey Award acknowledges the contributions of an individual or a group of individuals, who have promoted the drinking water profession by reaching out to other NEWWA members and the public and who have enhanced the relationship between the regulated community and state and federal personnel to protect water supply and public health.

Rick serves as manager of the Engineering and Survey Section of the NHDES’ Drinking Water and Groundwater Bureau. The section is responsible for the technical review and oversight of public water systems.

Both Sarah and Rick were recognized with these awards on September 23, 2020, during the virtual 139th NEWWA Annual Conference. 💧



Rick Skarinka

State and Federal Deadlines for Community Water Systems

Deadlines are fast approaching for community water systems (CWSs) to meet emergency planning requirements. You may be familiar with America’s Water Infrastructure Act (AWIA), a new federal law requiring CWSs serving more than 3,300 people to conduct risk and resilience assessments (RRA) and update emergency response plans (EP).

But while you are working on your AWIA plans, don’t forget about New Hampshire’s March 31, 2021 EP deadline required of all CWSs, regardless of size. New Hampshire rule [Env-Dw 503.21](#) requires CWSs to submit an updated EP to DWGB every six years. EPs must be received no later than March 31, 2021. Resources available to update your EP include the NHDES and EPA emergency planning templates, as well as [EPA’s incident action checklists](#), to help prepare for disasters like winter storms and pandemics.

Additionally, systems serving more than 3,300 people must comply with AWIA requirements by certifying completion of a RRA and updated EP. The law specifies the components that these must address and establishes deadlines.

Re-certification is required every five years.

Conducting an RRA requires a CWS to assess the risks to its system from malevolent acts and natural hazards. CWSs serving 3,301-49,999 people are required to submit certification of their RRA to EPA no later than June 30, 2021. Within six months of certifying completion of the RRA, a CWS must incorporate its results in the update of its EP. CWSs serving 3,301-49,999 people are required to submit certification of their EP to EPA no later than December 30, 2021.

Visit the [EPA website](#) for information to include in your RRA and EP. Systems are not required to send either of those documents to EPA, but rather [certify that this work has been completed](#) and meet the requirements. EPA does not require water systems to use any designated standard, method or tool, however, there are resources available to assist in meeting these requirements including the [Vulnerability Self-Assessment Tool \(VSAT\)](#) and the [Small System Risk and Resilience Assessment Checklist](#).

For more information about these requirements please 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 NHDES
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

Recently Approved DWGB Rules



NEW ARSENIC MCL EFFECTIVE JULY 1, 2021

The existing rules in Env-Dw 704 establish maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) for regulated inorganic contaminants.

Env-Dw 704.02 has been amended to reduce the MCL for Arsenic from 0.010 mg/L to 0.0050 mg/L effective July 1, 2021.

PFAS RULES EFFECTIVE SEPTEMBER 3, 2020

The court injunction on the New Hampshire administrative rules relating to per- and poly-fluoroalkyl substances (PFAS) was lifted on September 3, 2020 and reinstated rules Env-Dw 705.06 and Env-Dw 712.23 through Env-Dw 712.30.

For questions related to water system compliance, please email dwmonitoring@des.nh.gov. If you have questions related to treatment, please contact Cynthia Klevens, P.E., at (603) 271-3108 or cynthia.klevens@des.nh.gov. If you are interested in receiving emails when proposed DWGB rules are in the rulemaking process, please submit a request to dwgbrules@des.nh.gov.

Five ppb Arsenic MCL Effective July 2021

New Hampshire's more protective arsenic Maximum Contaminant Level (MCL) of 5.0 micrograms per liter takes effect July 1, 2021. In June of 2020, DWGB sent a letter to each community and non-transient non-community system that is likely to be affected by the new MCL based on previous arsenic monitoring results. Beginning the third quarter of 2021, some of those systems will have to increase the frequency of arsenic monitoring to quarterly and some will need to implement changes in treatment. NHDES strongly encourages affected systems to promptly take action to ensure compliance with the new standard by the July 1, 2021 deadline. Failure to meet the new MCL as a running annual average by July 2021 will subject the water system to enforcement action and will require that the water system issue public notice to all consumers until the MCL exceedance is corrected. Please remember that no new construction, addition, or alteration involving the source, treatment, distribution, or storage of water in a public water system can proceed without prior NHDES approval. Technical assistance is available from DWGB by contacting Cindy Klevens at cynthia.m.klevens@des.nh.gov. ♦

Got mail?

Did you know that DWGB is moving away from issuing paper correspondence? Are you ready? DWGB is working to go 100% electronic for sending and filing records. Currently, for contacts who don't have email, paper documents will be mailed. If you do not currently have an email account, consider setting one up.

It is essential for water systems to provide contact information changes to the bureau whenever they occur. Water system owners are required to keep contacts current with DWGB per New Hampshire Administrative Rule Env-Dw 503.04, Notice of Change of Personnel. Water system owners are required to notify DWGB within five business days of any changes in the owner's contact person, owner's representative, primary operator, sampling agent, or emergency designee. Water system contact changes should be sent to imupdates@des.nh.gov.

DWGB staff will be reaching out to water systems in the next few months to verify contact information and email address(es). ♦

Latest Federal Farm Bill Boosts Source Water Protection

The US Department of Agriculture (USDA) spends approximately \$6 billion annually to help farmers, forest landowners and ranchers implement conservation practices. Nearly two thirds of those funds are administered locally and regionally through USDA's Natural Resources Conservation Service (NRCS). This funding is provided through the federal Farm Bill. In 2018, the law was changed to [make source water protection a goal of Farm Bill conservation programs for the first time](#). Now, a minimum of 10% of NRCS' conservation funding will be used in watersheds with source water protection areas. Over time, NRCS funding will improve the quality of source water and reduce potential threats to community water systems and their customers.

NRCS works directly with private landowners to provide funding to install conservation practices on working lands where they will improve water quality and conserve productive agricultural land. Many of these practices also deliver ecologically significant benefits to wetlands and riparian corridors. NRCS provides funding for financial and technical assistance in watersheds most in need and where farmers can use conservation practices to address water quality issues. Conservation practices, such as agricultural waste storage facilities or riparian buffer strips, can protect drinking water by limiting the amount of phosphorous discharged to

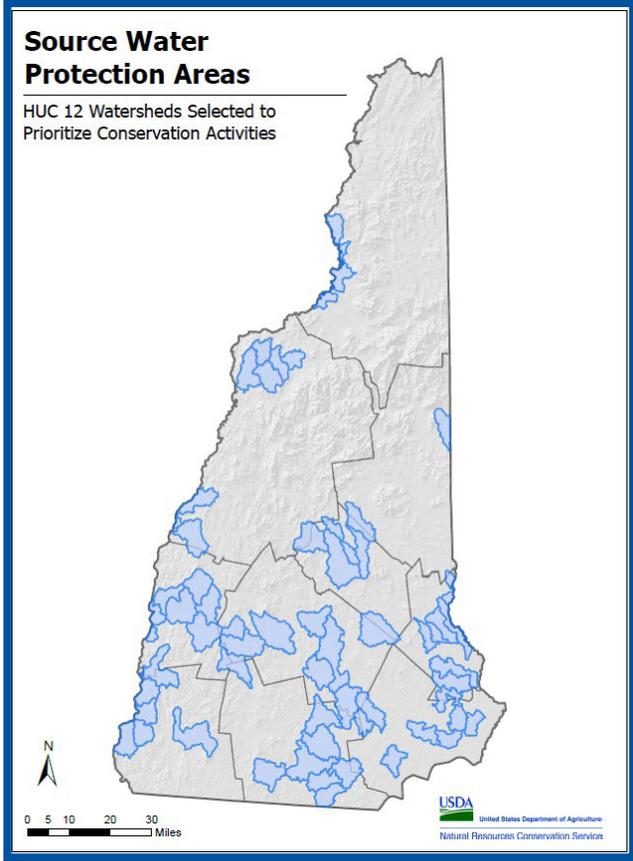
surface water. Phosphorous can increase the potential for harmful cyanobacteria blooms and disinfection byproducts. Farmland conservation practices also limit nitrogen levels in groundwater, helping to avoid nitrate and nitrite exceedances that can cause a potentially life-threatening condition in infants called methemoglobinemia or "blue baby" syndrome.

NRCS programs, such as the Agricultural Land Easement (ALE) Program and Wetland Reserve Easement (WRE) Program, provide funding for conservation easements that can protect important drinking water resources. For example

NRCS, recently provided ALE funding to match a New Hampshire Drinking Water and Groundwater Trust Fund grant to protect Tuckaway Farm in Durham. In addition to the farm, over 4,000 feet of shoreline along the Oyster River, a primary source for the town, will soon be protected.

USDA rules require state NRCS offices to designate priority source protection areas covering no more than 20% of a state's total area and to be delineated along watershed boundaries referred to as HUC-12 watersheds. Hydrologic Unit Codes (HUCs) are unique identifiers assigned by the U.S. Geological Survey to specific drainage areas according to a defined drainage hierarchy (e.g., region, basin, watershed). Priority areas will receive a higher percentage of federal funding to pay for best practices that improve water quality. To identify priority source protection areas, NHDES worked with the NRCS office in Dover to conduct a statewide GIS analysis to identify HUC-12 watersheds that meet the following criteria:

"This is truly a historic time for source water protection," said AWWA Chief Executive Officer David LaFrance. "Conservation efforts partnered between the USDA, water utilities and the agricultural industry are extremely important to everyone who depends on clean drinking water." (AWWA, 2020)



New Hampshire priority source protection watersheds

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1. The HUC-12 watershed coincides with an NHDES-designated Hydrologic Area of Concern (a watershed or truncated watershed), an important area which contributes source water to a surface water source.
2. At least 2.5% of the watershed's land cover is agricultural (typical agricultural land cover was in the 5-15% range).
3. There are NHDES-documented (Clean Water Act section 303(d) list) surface water quality impairments associated with erosion or other agricultural activities that NRCS programs can address.

To find out more about NRCS' new source water protection focus, download the NRCS fact sheet, [Source Protection: A Commitment](#) or check out the [American Water Works' USDA Tools to Support Source Water Protection](#) (2018), or contact NHDES' Source Water Protection Program at (603) 271-0688. ♦

Farewell Terri!

In September, we bid farewell and a happy retirement to Terri Sabbia, Program Specialist with the Drinking Water and Groundwater Bureau (DWGB). Terri began work with NHDES as a desktop computer support specialist in what was then the Water Supply Engineering Bureau, now known as the Drinking Water and Groundwater Bureau. Terri continued her role helping people and the bureau stay up-to-date with technology but did much, much more. She was a key player in ensuring that DWGB's federal reporting to EPA was complete and correct. Terri was the recipient of numerous data quality awards from EPA for this effort. Terri's plans for retirement include spending more time in the north country and, if the urge strikes her, she mentioned she might like to work at one of the local gardening centers or nurseries. If you see her helping people find just the right plant for their yard, give her a socially-distant high-five from us. ♦



Terri Sabbia

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