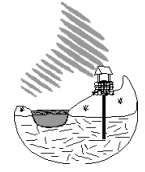


SUPPLY LINES WITH THE SOURCE



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

Winter 2022

American Rescue Plan Act of 2021 (ARPA) Funds Drinking Water Projects

Using ARPA funds received from the US Treasury, the New Hampshire Governor and Executive Council and the Legislature’s Fiscal Committee have allocated \$150 million to NHDES for drinking water, wastewater and storm water projects (additional funding may be allocated next year.) The funds have to be obligated by the end of 2024 and projects must be completed by the end of 2026. The majority of the funds allocated to NHDES must be used on projects that meet the eligibility requirements of the Clean Water or Drinking Water State Revolving Loan Funds (SRFs). A small percentage of the funds can be used on projects that do not necessarily meet the eligibility requirements of those programs, such as addressing contamination in private drinking water supplies.

DWGB has developed a plan for investing these funds in public water systems. The Wastewater Engineering Bureau and Watershed Management Bureau at NHDES are establishing similar programs. Funding for the following existing drinking water financial assistance programs will be expanded and cost-sharing requirements by the water systems will be removed or reduced:

- Capital Investment Projects in Drinking Water and Wastewater Infrastructure Improvements (grant funds coupled with Drinking Water State Revolving Loan Funds)
- Asset Management
- Energy Audits

Additionally, NHDES expects to establish the following new grant programs:

- Implementation of Energy Audit Recommendations
- Implementation of Cyber-security Measures

- Planning
- Disadvantaged System Assistance Grant Program

Drinking Water Infrastructure Projects

ARPA funding for drinking water infrastructure projects will be made available as grants and will be combined with SRF loans for projects that have been awarded funding in the 2021 SRF project priority list (PPL). The amount of ARPA grant that will be combined with the SRF loan is dependent on the affordability index for the water system, which considers the cost of water for customers relative to the median household income for customers of the water system. The maximum ARPA grant amount available for a DWSRF project is 50% of the total project cost. ARPA grants are anticipated to be available again for the 2022 DWSRF PPL.

A portion of the ARPA money will be used to develop and implement a disadvantaged grant program for some of the neediest water systems in the state, manufactured-home cooperatives (COOPS). New Hampshire COOPS are non-profit corporations whose members, the homeowners, own and operate their common infrastructure. Due to the

Funding Summary

Category	Total Allocation	Allocation for PWS from Total
Drinking/Clean Water Infrastructure	\$75	\$37.5
Critical Flood Risk	\$6	---
Planning	\$7.5	\$3.75
Disadvantaged	\$26.5	\$13.25
Sustainability	\$10	\$5
PFAS	\$25	---
Total Appropriation to Date	\$150M	\$59.5M

(ARPA, continued on pg 2)

(ARPA, continued from pg 1)

nature of manufactured home parks (MHPs) developed from the late 1950s to the late 1970s, most of these parks are facing water and sewer infrastructure that are at the end of their useful service life. Private investors often neglected to properly maintain or update water and wastewater systems, passing along the deteriorated infrastructure to the next buyer, in this case, to the COOP residents. The maximum grant amount that a COOP can receive for drinking water is \$1 million. The COOP may also receive a grant for wastewater up to \$1 million. If the COOP applies for funding for a combined drinking water and wastewater project, the maximum grant amount is \$2 million. COOPS that meet the following disadvantaged criteria are eligible:

- A COOP that serves residents whose median household income (MHI) is less than the statewide MHI based on the most recent income survey (completed within the past three years). The statewide MHI for New Hampshire is \$76,768 using the 2015 - 2019 American Community Survey data.
- At least 50% of the residential units must be occupied at least six months of the year by a population meeting the disadvantaged income criterion.

Eligible projects on the 2021 SRF PPL may receive grants under the disadvantaged COOP grant program. There will be an additional solicitation for projects to receive grants early next year.

A percentage of the ARPA funds allocated to drinking water and wastewater infrastructure will be designated to support grants for planning projects. Planning grants are critical to improve project development, increase project readiness, assist communities in applying for funding for implementation of the project, and ensure efficient use of funds. There was a solicitation for wastewater and stormwater projects and a solicitation for drinking water planning at the end of 2021; grant awards will occur early in 2022. Additional solicitations are anticipated.

Long-Term System Sustainability Programs

Funding for long-term system sustainability projects ensures the future viability of systems by modernizing technology and infrastructure. Funding programs that fit under this category include asset management, energy audits and energy audit implementation, water audits and cybersecurity upgrades. ARPA grant funds applied to long-term system sustainability programs will either support or enhance existing programs by reducing the cost share historically required or be used to implement new programs. The programs will incentivize water systems to complete audits of their systems (i.e., energy audit), which they can then use to apply for additional ARPA grant funds to implement the measures identified in audits. Development of an asset management program provides a community a way to identify and prioritize future projects to avoid the pitfalls of running a system to failure and to ensure that appropriate water rates are developed to adequately maintain the system.

Many water systems rely heavily on information technology to operate. USEPA and the Cybersecurity and Infrastructure Security Agency (CISA) offer free cybersecurity audits for water systems. ARPA grants will be available to implement the recommendations of these audits, which could include activities such as training employees or upgrading a water system information technology system. The cybersecurity grant program is expected to launch in spring 2022. For more information, visit the [NHDES Infrastructure Funding website](#). 💧

Water System Owners Must Notify NHDES When Contact Information Changes

It is critical that NHDES DWGB personnel are able to contact system owners, operators, and other contacts with important information that affects the water system. [Env-Dw 503.04](#) requires PWS owners to

(Water System Owners, continued on pg 3)

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DWGB Calendar of Events & Deadlines: February – July 2022

April 26	Drinking Water Operator Certification Exams hosted at NHDES; contact Jason Smith at dwgbcertop@des.nh.gov or (603) 271-2410.
May 24-25	NHDES' Drinking Water Source Protection Conference. Registration will occur online through the American Ground Water Trust's website at www.agwt.org , click on "Events." Technical Credit Hours will be offered to NH Water Works Operators.
June	Drinking Water and Groundwater Trust Fund (DWGTF) Source Water Protection (land conservation) Grant eligibility applications due (subject to funding); email wslp@des.nh.gov or call (603) 271-2862. Check DWG Trust Fund SWP grant website for updates.
June 30	Permit to Operate signed applications and fees are due, contact Lisa Fortier at pto@des.nh.gov or (603) 271-3544.
July 1	Consumer Confidence Report (CCR) due to community water system customers; contact Kimberly Durgin at dwmonitoring@des.nh.gov or (603) 271-6703.
July 10	CCR certification to NHDES due; contact Kimberly Durgin at dwmonitoring@des.nh.gov or (603) 271-6703.
Anytime	Computer based Drinking Water Operator certification exams Grades I-IV are now available at various locations throughout the state; contact Jason Smith at dwgbcertop@des.nh.gov or (603) 271-2410.
Anytime	Small Water System Consolidation Study Assistance Program grant applications accepted; contact Erin Holmes at erin.holmes@des.nh.gov or (603) 271-8321.
Anytime	PFAS Treatment Design Services Reimbursement applications accepted; contact Amy Rousseau at amy.rousseau@des.nh.gov or (603) 271-1372.
Anytime	PFAS Remediation Loan Fund applications accepted; contact Amy Rousseau at amy.rousseau@des.nh.gov or (603) 271-1372.
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](#)

(Water System Owners, continued from pg 2)

notify DWGB of changes in any of the following **within five days**:

- Owner contact person
- Owner's representative
- Primary certified operator
- Sampling agent
- Emergency designee

The notice to DWGB must include the following per Env-Dw 503.04(b):

- PWS name, 7-digit PWS ID number, and location of system.
- Person's name, mailing address, daytime phone number, emergency phone number, fax number, and email address.

The notice must be provided by mail, fax, email, messenger or other means of delivery and the owner must follow up to confirm delivery if DWGB does not confirm receipt right away. The preferred method of notification is email to imupdates@des.nh.gov or using the [Public Water System Contact Update form](#). For changes in PWS ownership, the owner must notify DWGB one month before the change per [Env-Dw 503.05](#). 💧

Accessing Mutual Aid During a Water System Emergency

During a water system emergency, it can make a big difference if your utility can receive assistance from a neighboring utility.

Mutual aid programs exist throughout the nation as part of a [Water and Wastewater Agency Response Network \(WARN\)](#). A WARN is a formalized network of utilities helping other utilities during emergencies or disasters, and is governed by a mutual aid agreement. There are 50 WARNs in the United States and two in Canada.

New Hampshire's WARN is the [New Hampshire Public Works Mutual Aid program \(NHPWMA\)](#), a network of utilities that assist one another during emergencies through partnering agreements, and a protocol for requesting and receiving aid.

Disasters are seldom limited to a single community. That is why NHPWMA allows communities from all over the state to become members, respond to emergency events and support communities most affected. The majority of members are municipalities, but any water system, regardless of size, may become a member and reap the benefits of this program. Benefits of the NHPWMA program include:

- Prompt and effective response.
- Rapid and orderly rehabilitation of infrastructure.
- Sharing of specialized supplies, equipment and personnel.
- Reduced vulnerability of participating communities.

An added benefit of NHPWMA membership is that mutual aid services do not require a disaster declaration, so communities can request aid at almost any time, even for small-scale events.

If a federal disaster is declared, being a member

of NHPWMA can facilitate FEMA reimbursement.

Joining NHPWMA is easy, and can be done in three steps:

1. Visit the [NHPWMA Mutual Aid](#) site, click Joining Mutual Aid and complete the agreement.
2. Mail a \$25 check, payable to NH Public Works Mutual Aid, and the signed agreement to: New Hampshire Public Works Mutual Aid c/o New Hampshire Municipal Association, 25 Triangle Park Drive, Concord, NH 03301.
3. Complete the NHPWMA Member Contact Form and send to t2.center@unh.edu or mail to Technology Transfer Center, 33 Academic Way, Durham, NH 03824.



Learn how to access mutual aid services by visiting the [Providing Mutual Aid](#) or [Requesting Mutual Aid](#) pages. For more tools and resources, please visit the [Mutual Aid Members, Links and Other Resources](#) page.

Emergency preparedness and mitigation are just as important as the response. For that reason, it's important to plan ahead of time by establishing a relationship with your local Emergency Management Director (EMD) and contact them during an emergency for assistance. Additionally, make sure your community water system is up-to-date with contact information and notification procedures, making it easy to follow step-by-step instructions during an emergency.

For more information on mutual aid, please visit the [FAQ on Water and Wastewater Mutual Aid and Assistance](#) or contact Stephanie Nistico at stephanie.nistico@des.nh.gov or (603) 271-0867. 💧



Interdepartmental Collaboration Creates First-of-its-Kind Human and Environmental Dataset

Amanda Cosser, MPH, BiomonitoringNH Program Administrator

Over the past two years, staff from the New Hampshire Departments of Health and Human Services (NH DHHS) and Environmental Services (NHDES) have worked tirelessly on the state's first biomonitoring surveillance study. Biomonitoring is the evaluation of human exposure to environmental chemicals by testing for chemicals or chemical breakdown products in clinical specimens (blood, urine, etc.). The Centers for Disease Control and Prevention (CDC) conducts a [national biomonitoring surveillance study](#) every two years and compiles the data into a report; however, state-level information is not available. With the help of many partners, the BiomonitoringNH Program, which is part of the NH DHHS Public Health Laboratories Chemistry Program, ambitiously took on the same task.

With New Hampshire grit in their souls and a dedicated (possibly stubborn) mindset, the BiomonitoringNH toxicologists and epidemiologists dreamed of creating a large dataset of not only clinical results but also drinking water quality in order to identify populations most at risk for chemical exposures. With almost half of New Hampshire's population using unregulated private drinking water wells, contaminated water is a risk to many residents. BiomonitoringNH sought assistance from the NHDES Drinking Water and Groundwater Bureau, the New Hampshire Drinking Water and Groundwater Trust Fund, and the NH DHHS Environmental Public Health Tracking (EPHT) Section in order to collect and fund testing for hundreds of water samples. With support from these partners, the 2019 [New Hampshire Tracking and Assessment of Chemical Exposures \(TrACE\) Study](#) was launched.

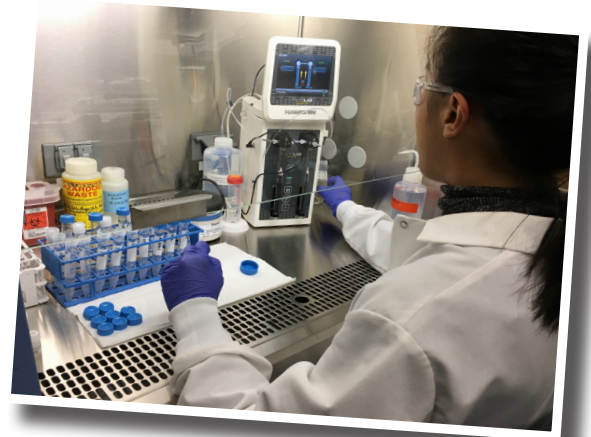
From June to September 2019, 336 residents from 180 private well and 94 public water system (PWS) households were recruited for clinical and water testing. Fifty biomonitoring chemicals were tested in whole blood, serum and urine: metals and metalloids; per- and polyfluoroalkyl substances (PFAS); pesticide metabolites; and cotinine (a nicotine metabolite indicating exposure to tobacco). Both raw (untreated) and finished (post-treatment, if present) water samples were tested in private well households and finished water was tested in PWS households.

A team from BiomonitoringNH, NHDES, and EPHT assembled regularly to discuss how to analyze the results and how to present the data for public and environmental health stakeholders. Some of the most interesting results from the 2019 TrACE Study include:

- Multiple PWSs across the state were not yet in compliance with the new arsenic standard of 5 ug/L.
- TrACE participants had higher levels of cadmium, cesium, lead, PFDA (a type of PFAS), PNP (an insecticide metabolite), total arsenic, and total mercury in their bodies when compared to the US population.
- TrACE private well water users had higher levels of lead, PFOS (a type of PFAS), and uranium in their bodies than TrACE public drinking water users.
- There was a trend of increasing levels of inorganic arsenic, lead, PFOA, and uranium in TrACE participants as the amount of those chemicals increased in home water.
- Drinking water from households served by a PWS had fewer exceedances of health limits or screening levels than water from private wells, showing the need for the regular testing and treatment of private wells.

These results and more were published in a summary report. Paper copies can be requested by emailing BiomonitoringNH@dhhs.nh.gov. For more information, contact Amanda Cosser at amanda.cosser@dhhs.nh.gov or (603) 271-4611.

BiomonitoringNH is extremely grateful to have worked with their NHDES and NH DHHS partners on this project and we look forward to supporting future collaborations in order to achieve our joint goals of excellent public and environmental health in New Hampshire. 💧



Dr. Kimberly Aviado, Biomonitoring NH Lab Supervisor, prepares specimens for testing.

Rules Recently Adopted with Amendments

Environmental Laboratory Accreditation Program rules readopted with amendments, effective 11/23/2021

Env-C 300 implements RSA 485:44 and RSA 485:46 by establishing the procedures and standards for the New Hampshire Environmental Laboratory Accreditation Program. These rules were readopted with amendments to reflect 2016 updates to the national standards.

Protecting the Purity of Surface Water Sources of Drinking Water rules readopted with amendments, effective 10/26/21

Env-Dw 902 establishes restrictions on certain activities in, upon, and within the watersheds of certain surface waters that are sources of public drinking water. These rules were readopted with amendments in order to make clarifications in advance of the rules' expiration in 2024. None of the restrictions were changed.

For questions related to Laboratory Accreditation, please contact Bill Hall at george.hall@des.nh.gov or (603) 271-2998. Questions related to the surface water purity rules should be directed to Paul Susca at paul.susca@des.nh.gov or (603) 271-7061. 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.



Partnership Aims to Understand and Reduce Exposure to Contaminants in Hooksett

In partnership with the Environmental Protection Agency (USEPA), NHDES, and New Hampshire Division of Public Health Services, the New Hampshire APPLETREE (ATSDR's Partnership to Promote Local Efforts to Reduce Environmental Exposures) program responded to uranium detected in routine groundwater sampling in Hooksett. The team conducted additional testing and drafted a report with recommendations and coordinated a presentation to town officials and community members in April, 2021. In addition, a summary document was created and resources are all available on [Hooksett's official website](#).

The testing showed that Hooksett residents are more likely to be exposed to high levels of uranium and radon com-

pared to other New Hampshire residents. Some residents are also exposed to other contaminants of concern common in New Hampshire, including arsenic, manganese and PFAS. Health-based recommendations included additional water testing, home air testing for radon gas, and installation of treatment where indicated by results.

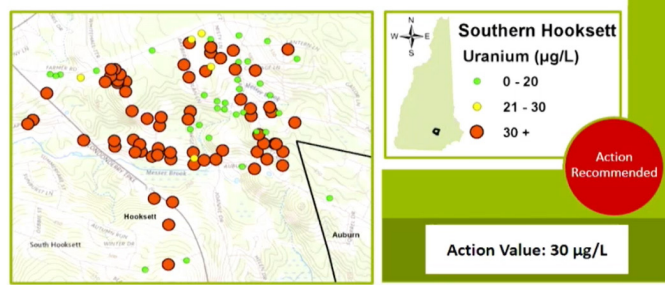
The APPLETREE team continues to work with the Town of Hooksett. Subsequent meetings in fall 2021 led to NHDES participation in Hooksett's ongoing efforts to reduce exposures through drinking water. These include exploration of alternative drinking water infrastructure and planning of community testing and education events.

The APPLETREE team includes staff from NHDES and DPHS. They have expertise in health risk assessment, toxicology, epidemiology, health education, community engagement and project management. Through funding from the Agency for Toxic Substances and Disease Registry (ATSDR), they can work with communities to

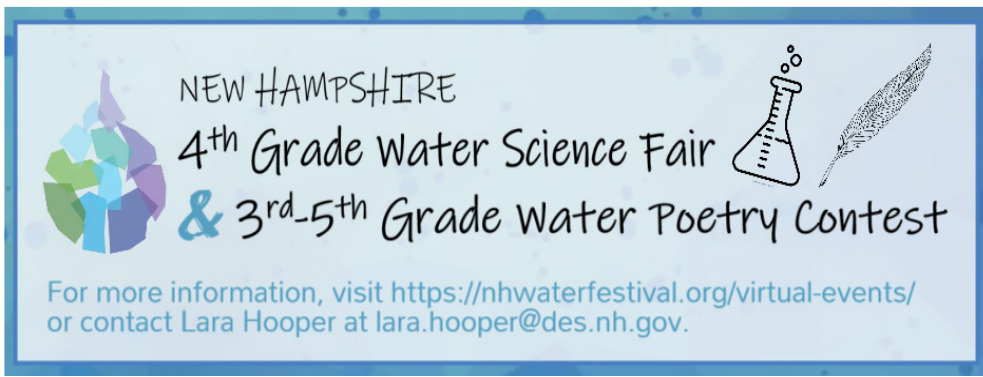
reduce exposure to environmental hazards and, in turn, reduce risk for negative health outcomes associated with exposure. Contact Robert Thistle at robert.thistle@des.nh.gov to learn more. 💧

Why we're here:

- Uranium is a naturally occurring, radioactive part of earth's crust



Excerpt from the presentation to Hooksett showing uranium research results.



the state. While applying salt to these areas improves public safety, it has created an increasing problem right below our feet.

Salt lowers the freezing point of water. Once salt binds to the water molecules, the ice is turned into a mixture of water and salt, known as brine. This brine then seeps into the

Revisions to the PFAS Remediation Loan Fund

House Bill 271, signed by Governor Sununu in August, 2021, added new provisions to RSA 485-H Per- and Polyfluoroalkyl Substances Remediation Loan Fund (PFAS RLF) program. These provisions involve:

1. Expansion of loan eligibility to include:
 - a. Municipalities for municipal use and to assist private well users.
 - b. Community water systems to expand a water system to assist additional water users.
2. Addition of grants for up to \$1.5 million or 30% of the total eligible cost of the project, whichever is greater.
3. Clarification of liable party provisions.

These amendments to the statute were adopted into rule Env-Dw 1400 on October 29, 2021. All loan applications will also be considered for grant funding; a separate grant application is not required.

For more information and/or application forms, please contact Amy Rousseau, PFAS Response Administrator, at amy.rousseau@des.nh.gov or (603) 271-8801. 💧

Road Salt, Corrosivity and Lead

Every year in the fall, private contractors, road agents and state employees begin to prepare for winter. They go over their current routes, and make sure all of their trucks are tuned up and ready to handle the incoming storms. They also make their annual calls to their supplier and purchase all of the salt they'll need. Over the course of the next five to six months salt will be spread over every road, parking lot, walkway and driveway in

ground and makes its way into groundwater. Road salt is a compound of sodium and chloride. In high concentrations, the chloride in the brine can cause water to become corrosive because it lowers the water's pH level. Our drinking water systems are reliant on thousands of miles of piping throughout the state. Once chloride enters distribution pipes, the risk for corrosion increases. Older water pipes may contain lead and copper. While public water systems are required to monitor drinking water for lead and copper levels and control pH, higher chloride levels leading to lower pH may present a risk for both private and public well users. (See a separate article in this issue on the TrACE program, which found that private well users in New Hampshire are more likely than PWS customers to have elevated lead levels in their drinking water.)

In 2011, DWGB worked with the United States Geological Survey (USGS) to analyze chloride and sodium trends in drinking water using historical water quality monitoring data from public water systems and private wells. The [USGS report](#) documented dramatic increases in groundwater levels of sodium and chloride between 1960 through 2011, particularly from 2000 to 2011. The report compiled groundwater quality data by town and notes, "Between 1995 and 2005, the number of towns with median concentrations of chloride greater than 20 mg/L almost doubled from 35 to 65, and the number of towns with concentrations of chloride greater than 40 mg/L more than tripled from 10 to 34."

Although the use of road salt has been the number one contributor to chloride and sodium contamination in groundwater, water softeners are another growing source of salt contamination. There has been an increase in water softener installations across the state, despite the fact that most homeowners do not need it to make their water potable. Learn more about how to [safely reduce the use of salt in your community](#) here or contact Ted Diers at theodore.e.diers@des.nh.gov, Marilee Enus with the UNH T2 Program at (603) 862-1362 or the SnowPro Program at salt@des.nh.gov and call (603) 271-5329. 💧

New Guidance Available to Protect Surface Sources of Drinking Water


New guidance is now available to help revise local zoning to better protect critical riparian buffer areas adjacent to surface water used as a source of drinking water. Preserving vegetated buffer areas can significantly limit non-point source (NPS) pollutants, like phosphorous and nitrogen, from entering lakes, reservoirs and rivers. Non-point source pollution in stormwater runoff is the leading cause of surface water quality problems in the United States. Maintaining vegetated buffers is important to filter and reduce NPS pollution and protects source water by limiting contaminants that tend to increase the cost and complexity of drinking water treatment for public water systems.

The [New Hampshire Drinking Water Quality Buffer Model](#)

[Ordinance](#) (2021) recommends a minimum 100-foot natural buffer measured from the reference line of the surface water source. The guidance also recommends the same buffer protection for wetlands that are contiguous and discharge into a drinking water source. An analysis of New Hampshire's water supply watersheds done by the Source Water Protection Program found many municipalities have not adopted zoning ordinances with riparian buffers wide enough to effectively filter out certain NPS pollutants. Adopting a minimum 100-foot vegetated buffer that applies to the

shoreline of lakes and rivers used as sources of drinking water would be a big step forward to protecting these important drinking water resources.

The new guidance was supported through a grant from the Local Source Water Protection Grant Program. For more information and additional resources from NHDES or the Rockingham

Planning Commission, please contact Pierce Rigrod at pierce.rigrod@des.nh.gov or (603) 271-0688 or Jennifer Rowden at jrowden@therpc.org or (603) 658-0521. 

Riparian buffer –

An area adjacent to streams, lakes and wetlands that protect water quality and provide conservation benefits. They contain trees, shrubs and perennials, which absorb and mitigate erosion, stormwater runoff, excess nutrients and other types of pollutants from reaching surface waters.



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