

# ANNUAL WATER QUALITY REPORT

Reporting Year 2023



*Presented By*  
**Derry Autumn Woods Community Water System**

## To Our Customers

We are pleased to present to you this year's annual water quality report for the Autumn Woods community water system. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies.



The Town of Derry continues its ongoing mission of complying with federal and state regulations to provide safe and reliable drinking water to Derry's residents, institutions, and businesses. Each year, the town replaces water lines, service meters, fire hydrants, shut-off valves, and pumping equipment; flushes mains; and conducts extensive water quality testing. The town utilizes a comprehensive asset management system to track these efforts, which ensures that Derry's water system infrastructure meets high standards of quality and service. These investments result in a sustainable rate structure that is adequate to provide this service and affordable to our customers. Safe and reliable drinking water is necessary to maintain the quality of life we've come to expect.

When considering the high value we place on water, it is truly a bargain to have water service that protects public health, fights fires, supports businesses and the economy, and provides us with the quality of life we enjoy. We remain committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

## Source Water Assessment

The New Hampshire Department of Environmental Services (NHDES) has prepared a Source Water Assessment Report to assess the vulnerability of the Autumn Woods wells to contamination. The result of the assessment, prepared on October 10, 2002, is as follows:

Bedrock Wells 1 and 2 received 1 high, 1 medium, and 10 low susceptibility ratings.

The complete assessment report is available for review at the Derry Department of Public Works, 14 Manning Street. For more information, call our office at (603) 432-6147, email [dpwbilling@derrynh.org](mailto:dpwbilling@derrynh.org), or visit <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/derry.pdf>.

“When the well is dry, we know the worth of water.”

—Benjamin Franklin

## Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested many water samples for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

## Where Does My Water Come From?

The Derry Autumn Woods community water system is serviced by groundwater supply from two bedrock wells located

off Applewood Drive, a water storage tank, an arsenic removal treatment system, a booster pump station, and over 3,000 feet of ductile iron water lines. Chlorine is injected prior to distribution in order to maintain adequate disinfection. The system provides drinking water to 29 single-family homes on Applewood Drive, Buttonwood Drive, and English Range Road.



## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or [water.epa.gov/drink/hotline](http://water.epa.gov/drink/hotline).



## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including per- and polyfluoroalkyl substances, synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

### How Can I Get Involved?

The Town of Derry invites its customers to become involved with water quality efforts. The Derry Town Council, which acts as the Water Commission, meets periodically to discuss issues that concern our customers. Town council meetings are usually held on the first and third Tuesday of each month at the Derry Municipal Center, 14 Manning Street. For more information on meeting dates, agendas, and minutes, call the Municipal Center at (603) 432-6147 or visit [derrynh.org](http://derrynh.org). Derry's council meetings are also available to stream live and on demand at [derrycam.org/tune-in/](http://derrycam.org/tune-in/).

## Lead in Home Plumbing

Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water and removing lead pipes, but we cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the Derry Department of Public Works at (603) 432-6147. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).



## What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, and toothbrush holders and on pets' water bowls is caused by the growth of the bacterium *Serratia marcescens*. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including humans). The bacteria can be introduced into the house through any of these sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to clean and dry these surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence. *Serratia* will not survive in chlorinated drinking water.

**QUESTIONS?** For more information about this report, or for any questions relating to your drinking water, please contact Thomas Carrier, Deputy Director of Public Works, at (603) 432-6147 or [tomcarrier@derrynh.org](mailto:tomcarrier@derrynh.org).



## Violation Information

Effective July 1, 2021, New Hampshire implemented a new maximum contaminant level (MCL) for arsenic of 5 parts per billion (ppb). This limit is based on a running annual average (RAA), which represents the average of all sample results collected within a 12-month period. Our first quarter compliance sample, taken on January 6, 2023, just before the arsenic treatment system went online, was 5.9 ppb. This resulted in an RAA of 6.1 parts per billion (ppb) and 5.3 ppb for the first and second quarters of 2023, which were above the drinking water limit of 5 ppb. As a result, NHDES issued a drinking water violation for this system. The new arsenic treatment system is functioning as designed, and arsenic levels are averaging 3 ppb, below the NHDES limit of 5 ppb.

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

## What Are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit <http://bit.ly/3Z5AMm8>.

## How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

## Test Results

Your drinking water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2023	5	0	6	3–6	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2021	2	2	0.0081	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2023	[4]	[4]	0.47	0.13–0.47	No	Water additive used to control microbes
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	1.9	NA	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2021	1.3	1.3	0.261	0/8	No	Corrosion of household plumbing systems; Erosion of natural deposits
SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2022	250	NA	57	NA	No	Runoff/leaching from natural deposits
Manganese (ppb)	2019	50	NA	13	NA	No	Leaching from natural deposits
Sodium (ppm)	2022	100-250	NA	8.3	NA	No	Naturally occurring
Sulfate (ppm)	2022	250	NA	24	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Zinc (ppm)	2022	5	NA	0.0029	NA	No	Runoff/leaching from natural deposits; Industrial wastes
UNREGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE			
Perfluorooctanoic Acid [PFOA] (ppt)	2021	4.25	2.06–4.25	Discharge from industrial processes; Wastewater treatment; Residuals from firefighting foam; Runoff/leachate from landfills and septic systems			

