

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
Town of Derry



To Our Customers,

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

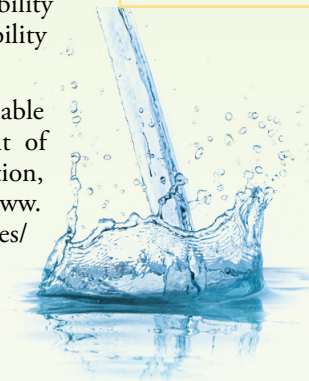
Source Water Assessment

The New Hampshire Department of Environmental Services prepared drinking water source assessment reports for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of each of the state's public water supply sources. Included in that report are a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. The assessment conducted for Lake Massabesic, Derry's water supply source, was prepared in September 2002. Our source received four high and four medium vulnerability ratings, while it ranked at low vulnerability for five additional categories.

The complete assessment report is available for review at the Derry Department of Public Works office. For more information, call (603) 432-6147 or visit <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/manchester.pdf>.

“Thousands have lived without love, not one without water.”

—W.H. Auden



Where Does My Water Come From?

The Derry core water system is serviced by Manchester Water Works (MWW), which supplies treated water from Lake Massabesic, located in Manchester and Auburn. MWW has served as Derry's water supplier since 1985. In order to satisfy stringent state and federal drinking water regulations, the lake water is purified at the MWW treatment plant. This facility has been routinely updated with state-of-the-art equipment to improve quality control and operational efficiency. Located adjacent to Lake Massabesic, the plant treats the water before it is pumped into a 500-mile piping network for distribution to homes, industries, and adjacent communities, including Derry.

Derry's water supply is stored in a four-million-gallon atmospheric storage tank. Most of Derry's water system is gravity fed; however, there are four water booster stations which service areas at higher elevations. Derry services approximately 17,000 customers, including 800 Pennichuck Water Works customers. Derry services parts of Londonderry and Windham as well. You can find a copy of MWW's water quality report at <https://www.manchesternh.gov/Departments/Water-Works/Water-Quality-Report>.

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. EPA/CDC (Centers for Disease Control and Prevention) 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 <http://water.epa.gov/drink/hotline>.



How Can I Get Involved?

The Town of Derry invites its customers to become involved with the town's 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, call the Municipal Center or visit www.derrynh.org.

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.

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>.

Substances That Could Be in Your Drinking 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 and 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.

Lead in Home Plumbing

If present, elevated levels of 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, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.





BY THE NUMBERS

The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

800
TRILLION

1 The average cost in cents for about 5 gallons of water supplied to a home in the U.S.

The percent of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

99

50 The average daily number of gallons of total home water use for each person in the U.S.

The percent of Earth's surface that is covered by water.

71

330
MILLION

The amount of water on Earth in cubic miles.

The percent of the human brain that contains water.

75

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.



Fluoridation Information

Your public water supply is fluoridated. According to the CDC, if your child under the age of six months is exclusively consuming infant formula reconstituted with fluoridated water, there may be an increased chance of dental fluorosis. Consult your child's health care provider for more information.



Test Results

Our 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
Barium (ppm)	2018	2	2	0.0117	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines (ppm)	2022	[4]	[4]	2.0	0.02–2.44	No	Water additive used to control microbes
Chlorine (ppm)	2022	[4]	[4]	1.73	0.01–2.2	No	Water additive used to control microbes
Fluoride (ppm)	2018	4	4	0.56	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	11.4	ND–44.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	0.27	0.10–0.37	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2022	1	1	0.07	0.01–0.27	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	14.5	2.4–66.0	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)	2020	1.3	1.3	0.284	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2020	15	0	<0.001	1/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese (ppb)	2020	50	NA	11.3	8.5–11.3	No	Leaching from natural deposits
Sodium (ppm)	2018	100-250	NA	43.7	43.6–43.8	No	Naturally occurring
Sulfate (ppm)	2018	250	NA	17	NA	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Ammonia [as nitrogen] (ppm)	2022	0.49	0.07–0.63	By-product of drinking water disinfection
Ammonia, Free (ppm)	2022	0.18	ND–0.28	By-product of drinking water disinfection

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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

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).

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