To our Customers:

We are pleased to present our 2022 Water Quality Report. The report presents important information about our operations, the quality of the water and useful water conservation tips.

The District is governed by 3 elected Water Commissioners and operated by 9 employees. We are here to serve you 24 hours a day—365 days a year. The District continues to improve ways to better serve our customers.

The District is facing the following challenges: the aging water system infrastructures, Mass DEP regulation changes, increase of water demand, limitations of water hydraulic, cost of water, redundancy of the water system, increase the flow for fire protection, etc. The Commissioners of the District have searched for financial assistance from Mass DEP and will implement a series of capital improvement projects in the coming years.

Projects in 2021-2023:
In FY19, DWSD and the Engineers of Tighe & Bond (T&B) produced a 20-year Master Plan.
In FY20, DWSD applied and received $20 million from the Massachusetts Drinking Water State Revolving Fund (SRF).
In FY 2021, DWSD implemented the following projects: the Manganese Removal Treatment Facility, 16" Water Main Improvement Project & State Forest Water Storage Tank Replacement
In FY 2022, the projects of 16" Water Main Improvement and State Forest Water Storage Tank Replacement were completed.
In FY 2023-2024, the project of Manganese Removal Treatment Facility is expected to be completed.

We are committed to providing safe and high quality drinking water to our customers. We pledge to continue to work on the behalf of all the District customers and we welcome your constructive criticism in order to improve the efficiency of the District operations.

Water Commissioners:
William "Zee" Zielinski, William Morin, and Leslie Gay Corey

PWSID: 3079000

2022 Water Quality Report

59 Hopkins Street
Dracut, MA 01826
www.dracutwater.com

Imagine a Day Without Water No water to shower or brush your teeth, when you flush the toilet, nothing happens, Firefighters can't put out the fires, manufacturing stops. restaurants close, doctor can't wash their hands.

The 2022 average monthly utility payments in Massachusetts from Move.org:

Electricity	$268
Heating	$171
Internet (lowest)	$51
Cell Phone (lowest, per line)	$50
Water*	**$45**

*(The District's bills are quarterly)

Our drinking water and wastewater systems face multi-faceted problems. The infrastructure is aging and in need of investment. Drought, flooding, and climate change stress the water systems.

Out of sight, out of mind?
There are three unseen Water Systems that work independently of one another to manage the flow of water in Dracut and Tyngsboro. The drinking water system utilizes more than **135 miles of pipe** to deliver safe drinking water to homes and businesses across the Towns. And while the Water District does a good job of bringing safe, reliable, and affordable water to customers, residents should know that just because the infrastructure is invisible to us, it doesn't mean it doesn't exist. Water might fall from the sky and flow through our rivers to the ground, but it is far from free.

Source Water Assessment Protection (SWAP)

The SWAP program was established under the Federal Safe Drinking Water Act. Call the office for a copy of the District's SWAP Report or check our website at www.dracutwater.com.
For more information, please visit DEP's website at https://www.mass.gov/doc/northeast-region-source-water-assessment-protection-swap-program-reports/download

Water Supply Sources & Swap Susceptibility	
Well Name	Source ID#
Zone II #:555	Susceptibility: Moderate
New Boston Well #1	3079000 03G
New Boston Well #2R	3079000 03G
Zone II #: 556	Susceptibility: High Susceptible
Frost Road Well #1	3079000 04G
Frost Road Well #2A	3079000 14G
Frost Road Well #3A	3079000 13G
Frost Road Well #4A&4B	3079000 10G/11G
Frost Road Well #5&5A	3079000 08G/15G

Water System

The Dracut Water Supply District provides water to the residents and businesses in two thirds of Dracut as well as a portion of Tyngsboro. Our water is safe to drink and in compliance with federal and state regulations.

The Sources of Water

The District has 3 sources of water:
- One well field in Dracut (2 wells),
- One well field in Tyngsboro (5 wells),
- We purchase supplemental water from the City of Lowell.

Treatment of the Water

We provide a variety of treatments including potassium hydroxide and phosphate for corrosion control. Lowell water is filtered and treated by the City of Lowell.

Distribution of Water

We have 3 water storage tanks, 8 booster pump stations, 8 pressure zones with over 100 miles of water mains. We provide maintenance, repairs, and improvements to the water system. We also work with an engineering firm on a master plan for long term system improvement planning. Our goal is to provide good quality water and better service to you—our customers.

Potential Substances in Water

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants 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, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Water Quality Information

In order to ensure that tap water is safe to drink, the MADEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. We treat our water according to EPA's regulations.

Important Health Information
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/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 (1-800-426-4791).

Lead and Copper 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. Dracut Water Supply District is responsible for providing high-quality drinking water but 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 2 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 or at https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

Manganese is a naturally occurring mineral found in rocks, soil and groundwater, and surface water. Drinking water may naturally have manganese and, when concentrations are greater than 50 µg/L, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 µg/L and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 µg/L, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese concentrations over 300 µg/L, nor should formula for infants be made with that water for longer than10 days. See: MassDEP Office of Research and Standards Guideline (ORSG) for Manganese *https://www.mass.gov/files/documents/2016/08/nr/mangorsg.pdf*

Per- and polyfluoroalkyl substances (PFAS)
Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams. PFAS6 was regulated on October 2, 2020. Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

A cross-connection or backflow can be a serious health hazard as a result of chemical or bacterial contamination of the drinking water system. Backflow prevention devices must be installed and must be maintained to eliminate backflow of contamination into our drinking water supply. Community water supplies are continuously vulnerable to cross-connection contamination unless protected by properly maintained backflow prevention devices. All industrial, commercial, and institutional facilities within the District have been surveyed according to Massachusetts Division of Drinking Water Regulations to prevent cross-connection contamination. If you have a residential irrigation or fire sprinkler system we need you to do your part in protecting the District's drinking water by also installing and maintaining appropriate backflow prevention devices in your home.

The District's Website contains lots of useful information. One of the new features includes enhanced customer account information access and payments through Invoice Cloud. Once you register your account on-line, you can make payments, review your invoice payment history, go paperless and schedule automatic payments. It's fast, easy, secure and eco-friendly. Check out the District's home page at www.dracutwater.com. Please call Michael Sheu at 978-957-0441 with questions, comments or suggestions about any aspect of the District's drinking water.

Water Conservation Outside
•Minimize the size of your lawn as lawn watering may consume more than 30% of summer residential water use.
Use mulch around plants and shrubs and choose plants that don't need much water.
•Use water from a bucket to wash your car, and save the hose for rinsing.
•Sweep clippings and leaves from walks and driveways rather than using the hose.
•Dracut's Outside Watering Guidelines allow odd numbered houses on Wed, Fri, and Sun and even numbered houses on Tues, Thurs, and Sat. No watering on Mondays. In the event time restrictions are required customers will be notified in the local news media along with community signs.
•Underground sprinkler systems require moisture sensors.

Water Conservation in Your Home
•Fix leaking faucets, pipes, toilets, etc.
•Install water-saving devices in faucets, toilets and appliances.
•Wash only full loads of laundry.
•Don't use the toilet for trash disposal.
• Take shorter showers.
• When washing hands, brushing teeth or shaving, use only as much water as you need.

Water Quality Testing Results
Several times each year, your water is collected and tested for over 120 possible impurities. The table (below) provides information about substances that have been detected in the most recent water quality testing. Some of the tests were completed in years other than 2022. Because the water delivered to you could have come from either Lowell or Dracut or be a mix of the two, the data presented in the table represents the results of testing done by the Lowell Regional Water Utility and the Dracut Water Supply District. If you are interested in more information about the source of your water, contact the Dracut Water Supply District (978-957-0441).

CONTAMINANTS	Unit	AVERAGE DETECTED	RANGE	MCL/MRDL	MCLG/MRDLG	Violation	DATE	MAJOR SOURCES
Barium (NB)	ppm	0.02	N/A	2	2	NO	7/9/2022	Erosion of natural deposits
Manganese[2] (NB)	ppm	0.005	0.003 to 0.007	0.05 (SMCL)	0.300 (Health Advisory)	NO	Quarterly,2022	Erosion of natural deposits
Nickel (NB)	ppm	0.001	N/A	NONE	0.100	NO	7/9/2022	Discharge from Wastewater and landfill operations
Nitrate (NB)	ppm	1.43	N/A	10	10	NO	7/9/2022	Erosion of natural deposits.
Perchlorate (NB)	ppb	0.41	N/A	2	N/A	NO	7/9/2022	Rocket propellant, fireworks, blasting agents.
Sodium (NB)	ppm	47.4	N/A	NONE	NONE	NO	7/9/2022	Erosion of natural deposits.
Gross Alpha[1]	pCi/L	ND	N/A	5	0	NO	2020	Erosion of natural deposits
Uranium Activity (NB)[1]	pCi/L	ND	N/A				2014	
PFAS, Total-6 (NB)	ppt	15.7	12.6 to 18.7	20(ORSG)	0	NO	Jan-Apr, 2022	Man-made chemical
Arsenic (TWF)	ppm	0.001	N/A	0.010	0	NO	7/9/2022	Erosion of natural deposits.
Barium (TWF)	ppm	0.010	N/A	2	0	NO	7/9/2022	Erosion of natural deposits.
Manganese[2] (TWF)	ppm	0.267	0.226 to 0.290	0.05 (SMCL)	0.300 (Health Advisory)	NO	Quarterly,2022	Erosion of natural deposits.
Nitrate (TWF)	ppm	0.97	N/A	10	10	NO	7/9/2022	Erosion of natural deposits.
Perchlorate (TWF)	ppb	0.20	N/A	2	N/A		7/9/2022	Rocket propellant, fireworks, blasting agents.
Sodium (TWF)	ppm	35.2	N/A	NONE	NONE	NO	7/9/2022	Erosion of natural deposits; Runoff from orchards;
Radium-226 (TWF)[1]	pCi/L	ND	N/A	5	0	NO	2017	Erosion of natural deposits
Radium-228 (TWF)[1]	pCi/L	1.07 (± 0.37)	N/A					
PFAS, Total-6 (TWF)*	ppt	7.6	4.5 to 12.5	20(ORSG)	0	NO	Monthly (Jan-Apr), 2022	Man-made chemical
Chlorine Residual	ppm	0.20	0.00 to 1.87	4	4	NO	2022	By-product of drinking water disinfection
E. coli	P-A/100mL	0	0%	E-coli detection	0	NO	2022	Human and animal fecal waste
Fluoride[3]	ppm	0.19	0.06 to 0.63	4	4	NO	2022	Water additive
Copper	ppm	90th% Value	# of samples > AL	1.3 (Action Level)	1.3	NO	Q1 and Q3 2022	Corrosion of household plumbing systems.
		0.255 (Q1), 0.261 (Q3)	1 of 31					
Lead	ppb	90th% Value	# of samples > AL	15 (Action Level)	0	NO	Q1 and Q3 2022	Corrosion of household plumbing systems.
		0.001 (Q1), 0.001 (Q3)	1 of 31					
Turbidity	NTU	0.174	0.024 to 0.174	1.0	TT=100%	NO	2022	Soil runoff
				TT = percentage of samples less than 0.3 NTU				
Chlorine Residual	ppm	1.13	0.4 to 1.13	4	4	NO	2022	By-product of drinking water disinfection
Chlorite	ppm	0.59	0.07 to 0.59	1	0.8	NO	2022	By-product of drinking water disinfection
Nitrate	ppm	0.247	0.03	10	10	NO	2022	Erosion of natural deposits
Fluoride	ppm	0.76	0.62 to 0.76	4	4	NO	2022	Water additive
Sodium	ppm	41.0	41.0	NONE	NONE	NO	2022	Erosion of natural deposits
Total Trihalomethanes	ppb	51	22 to 51	80	0	NO	2022	By-product of drinking water chlorination
Haloacetic Acids	ppb	17	3.4 to 31	60	0	NO	2022	By-product of drinking water chlorination
Perchlorate	ppb	ND	0.00053	2	N/A	NO	2022	Rocket propellant, fireworks, blasting agents.
Gross Alpha[1]	pCi/L	0.01 (+-0.6)	N/A	15	0	NO	2014	Erosion of natural deposits
Radium 228[1]	pCi/L	-0.2 (+-0.6)	N/A	5	0	NO	2014	Erosion of natural deposits
Copper	ppm	90th% Value	# of samples > AL	1.3 (Action Level)	1.3	NO	2022	Corrosion of household plumbing systems.
		0.043	0 of 50					
Lead	ppb	90th% Value	# of samples > AL	15 (Action Level)	0	NO	2022	Corrosion of household plumbing systems.
		0.002	1 of 50					
MTBE	ppb	ND	ND<0.5	NONE	NONE	NO	2022	Gasoline Additive
Sulfate	ppm	4.0	20.0 to 8.0	NONE	NONE	NO	2022	Erosion of natural deposits.
PFAS, Total (6)	ppt	3.20	ND to 3.20	20 (ORSG)	0	Yes	2022	Man-made chemical

DEFINITIONS:

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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

NTU-Nephelometric Turbidity Unit measures the characteristic or property of water that causes it to scatter or absorb light. This is usually caused by very small particulate matter suspended in the water.

ppm-one part per million **ppb**-one part per billion **ppt**-one part per trillion, **ND**-none detected **N/A**-not applicable, **PFAS**- a broad group of perfluoroalkyl and polyfluoroalkyl substances.

[1] Sample every 9 years. **NB**-New Boston Wellfield **TWF**-Tyngsboro Wellfield **PSPS**-Pleasant Street Pump Station (Intertie with Lowell). **ORSG**-Massachusetts Drinking Water Standards and Guidelines.

[2] US EPA and MassDEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects.

[3] There was a supply issue for Sodium Fluoride during COVID-19 Pandemic.

Results represent water tested by Dracut Water Supply District (DWSD).
***For DWSD PFAS results, please visit http://www.dracutwater.com/home/pages/pfas**

Results represent water purchased from City of Lowell.
Please visit https://www.lowellma.gov/1088/Consumer-Confidence-Reports