

# 2022 Consumer Confidence Report

City of Dover

PWS ID#: 0651010

## Introduction

Like any responsible public water system, our mission is to deliver the best-quality drinking water and reliable service at the lowest, appropriate cost.

Aging infrastructure presents challenges to drinking water safety, and continuous improvement is needed to maintain the quality of life we desire for today and for the future.

In the past year, we installed a new water main on Washington Street, Main Street and Central Ave. Future construction projects for 2022 includes a new water tank and the start of a 2-year construction project for the PFAS plant.

These investments along with on-going operation and maintenance costs are supported by the water rates that are \$5.95 per cubic foot. 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 high-quality of life we enjoy.

## What is a Consumer Confidence Report?

The Consumer Confidence Report (CCR) details the quality of your drinking water, where it comes from, and where you can get more information. This annual report documents all detected primary and secondary drinking water parameters, and compares them to their respective standards known as Maximum Contaminant Levels (MCLs).

NOW IT COMES WITH A LIST OF INGREDIENTS.



**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 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 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.

**In order to ensure that tap water is safe to drink**, EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

## What is the source of my drinking water?

Dover residents drink groundwater from eight wells located throughout the City. These wells provide access to four underground aquifers of high-quality water to supply our multifaceted needs.

The water is treated for Iron and Manganese. It is also disinfected and fluoridated.

## Why are contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

## Do I need to take special precautions?

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 at 1-800-426-4791.

## Source Water Assessment Summary

NHDES 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 the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. The results of the assessment, prepared on September 26, 2007, are noted below. Assessment found use web site <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/dover.pdf>

Source Information	Summary of Susceptibility Ratings		
	High	Med	Low
GPW 1 Calderwood / Hoppers	1	3	8
GPW Cummings	3	5	4

GPW Hughes Well	2	3	7
GPW Ireland Well	2	6	4
GPW Campbell / Hoppers	1	3	8
GPW Smith Well	3	4	5

Note: This information is over 14 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data.

The complete Assessment Report is available for review at Pierre R. Bouchard Public Works Facility located at 271 Mast Road, Dover, NH. For more information, call **Michael Nadeau at 603-516-6450** or visit the [NHDES website](#).

#### How can I get involved?

For more information about your drinking water, please contact **Michael Nadeau** at the **Community Services Department** (603) 516-6450. Currently, the Dover Utilities Commission meets in the Pierre R. Bouchard Public Works Facility, located at 271 Mast Road, on the third Monday of each month at 6:00 p.m. Meetings are open to the public.

**Violations and Other information: Violations in 2021 two.** See violations in table below.

#### Definitions

**Ambient Groundwater Quality Standard** or **AGQS**: The maximum concentration levels for contaminants in

groundwater that are established under RSA 485-C, the Groundwater Protection Act.

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

**Maximum Contaminant Level** or **MCL**: 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.

**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. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level** or **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** or **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.

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

#### Abbreviations

BDL: Below Detection Limit

mg/L: milligrams per Liter

NA: Not Applicable

ND: Not Detectable at testing limits

NTU: Nephelometric Turbidity Unit

pCi/L: picoCurie per Liter

ppb: parts per billion

ppm: parts per million

RAA: Running Annual Average

TTHM: Total Trihalomethanes

UCMR: Unregulated Contaminant Monitoring Rule

ug/L: micrograms per Liter

#### Drinking Water Contaminants:

**Lead**: 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. This water system is responsible for high quality drinking water, but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and 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 <http://water.epa.gov/drink/info/lead/index.cfm>

## 2022 Report (2021 Data)

If a drinking water public notice, MCL, Monitoring/Reporting, or treatment technique violation has occurred, the following table should be used to explain the violation and health effects:

VIOLATIONS					
VIOLATIONS	Date of violation	Explain violation	Length of violation	Action taken to resolve	Health Effects (Env-Dw 804-810)
Monitoring and Reporting (M/R)	1) 10/01/2021 2) 05/17/2021	1) Lead and Copper sample results were not sent to residents that where sampled. 2) Missed reporting Q1 water use results	1) 11 Days 2) 9 Months	1) Letters were sent out to the residents that were sampled. 2) Completed Q1 2021 water use reporting.	None

\*The value must be reported as whole number, see Env-Dw 811, Appendix B for conversions:

### LEAD AND COPPER

Contaminant (Units)	Action Level (AL)	90 <sup>th</sup> percentile sample value *	Date	# of sites above AL	Violation Yes/No	Likely Source of Contamination	Health Effects of Contaminant
Copper (ppm)	1.3	0.268	5/19/2021	0	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead (ppb)	15	1.0	5/19/2021	0	No	Corrosion of household plumbing systems, erosion of natural deposits	(15 ppb in more than 5%) Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791). (Above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

\*If applicable report average, range, and date sampled if prior to the reporting year. Level detected must be reported as whole number, see Env-Dw 811, Appendix B for conversions:

### DETECTED WATER QUALITY RESULTS

#### Radioactive Contaminants

Contaminant (Units)	Level Detected*	Date	MCL	MCL G	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Compliance Gross Alpha (pCi/L)	<b>3.1 pCi/L</b> (French Cross Rd Plant Site 515) <b>2.0 pCi/L</b> (Lowell Plant Site 003) <b>2.2 pCi/L</b> (Lowell Plant Site 003)	7/25/2018 11/23/2020 2/10/2021	15	0	No No No	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation know as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (ug/L)	<b>1 ug/L</b> (Griffin Plant-DPH1 Site 517)	10/10/2017	30	0	No	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of

	<b>1 ug/L</b> (Griffin Plant- DPH1 Site 517)	4/19/2018					getting cancer and kidney toxicity.
Combined Radium 226 + 228 (pCi/L)	<b>0.3 pCi/L</b> (Ireland Well Site 513) <b>0.5 pCi/L</b> (Griffin Plant-DPH1 Site 517) <b>0.6 pCi/L</b> (Lowell Plant Site 003) <b>1.4 pCi/L</b> (Hughes Plant Site 502)	1/23/2018 4/19/2018 2/10/2021 9/1/2021	5	0		Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

**Inorganic Contaminants**

<b>Contaminant (Units)</b>	<b>Level Detected*</b>	<b>Date</b>	<b>MCL</b>	<b>MCL G</b>	<b>Violation YES/NO</b>	<b>Likely Source of Contamination</b>	<b>Health Effects of Contaminant</b>
Barium (ppm)	<b>0.0072 PPM</b> (Hughes Plant Site 502) <b>0.008 PPM</b> (Griffin Plant-DPH Site 517) <b>0.0191 PPM</b> (Lowell Plant Site 003) <b>0.0082 PPM</b> (French Cross Rd Plant Site 515)	7/10/2019 7/9/2020 4/3/2020 7/1/2020	2	2		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Fluoride (ppm)	<b>0.53 PPM</b> (Hughes Plant Site 502) <b>0.66 PPM</b> (Campbell/Calderwo od Site 505) <b>0.52 PPM</b> (Griffin Plant-DPH1 Site 517) <b>0.60 PPM</b> (Lowell Plant Site 003) <b>0.67 PPM</b> (French Cross Rd Plant Site 515)	7/10/2019 7/10/2019 7/9/2020 4/3/2020 7/1/2020	4.0	4.0	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Contaminant (Units)	Level Detected*	Date	MCL	MCL G	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Nitrate (as Nitrogen) (ppm)	0.19 PPM (Lowell Plant Site 003)	8/24/2021	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	(5 ppm through 10ppm) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
	0.42 PPM (Campbell/Calderwood Site 505)	8/24/2021					
	0.069 PPM (French Cross Rd Plant Site 515)	8/24/2021					
	0.92 PPM (Griffin Plant-DPH1 Site 517)	9/1/2021					
	2.1 PPM (Hughes Plant Site 502)	9/1/2021					

**Synthetic Organic Contaminants including Pesticides and Herbicides**

Contaminant (Units)	Level Detected*	Date	MCL	MCL G	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Haloacetic Acids (HAA) (ppb)	1.1 PPB – 2.6 PPB	2/17/2021-11/17/2022	60	N/A	No	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Methyl tertiary-butyl ether (MtBE) (ppb)	0.56 PPB (Lowell Plant Site 003)	2-10-2021	13	13	No	A gasoline additive	The New Hampshire Bureau of Health Risk Assessment considers MtBE a possible human carcinogen. Some people who drink water containing MtBE in excess of the MCL over many years could experience problems with their kidneys and may have an increased risk of getting cancer.
Total Trihalomethanes (TTHM) (Bromodichloromethane Bromoform Dibromochloromethane Chloroform) (ppb)	3.9 UG/L – 12 UG/L	2/17/2021-11/17/2021	80	N/A	No	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

\*If applicable report average, range, and date sampled if prior to the reporting year. Level detected must be reported as whole number, see Env-Dw 811, Appendix B for conversions:

## PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) CONTAMINANTS

Contaminant (Units)	Level Detected*	Date	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Perfluorohexane sulfonic acid (PFHxS) (ppt)	<b>3.11 PPT</b> <b>6.85 PPT</b> <b>7.37 PPT</b> (Griffin Plant- DPH1 Site 517)	6/22/2021 9/1/2021 11/16/2021	18	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorohexane sulfonic acid (PFHxS) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, or may experience increased cholesterol levels. It may also lower a women's chance of getting pregnant.
Perfluorononanoic acid (PFNA) (ppt)	None		11	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorononanoic acid (PFNA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, or may experience increased cholesterol levels.
Contaminant (Units)	Level Detected*	Date	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Perfluorooctane sulfonic acid (PFOS) (ppt)	<b>3.49 PPT</b> <b>4.08 PPT</b> (Griffin Plant- DPH1 Site 517)	9/1/2021 11/16/2021	15	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctane sulfonic acid (PFOS) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.
Perfluorooctanoic acid (PFOA) (ppt)	<b>3.98 PPT</b> <b>4.92 PPT</b> <b>7.57 PPT</b> <b>9.52 PPT</b> (Griffin Plant- DPH1 Site 517) <b>1.98 PPT</b> (Lowell Plant Site 003)	2/24/2021 6/22/2021 9/1/2021 11/16/2021  6/22/2021	12	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.

## SECONDARY CONTAMINANTS

Secondary MCLs (SMCL)	Level Detected	Date	Treatment technique (if any)	SMCL	50 % AGQS (Ambient groundwater quality standard)	AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Chloride (ppm)	<b>46 PPM</b> (Hughes Plant Site 502) <b>20 PPM</b> (Campbell/Calderwood Site 505) <b>46 PPM</b> (Griffin Plant-DPH1 Site 517) <b>180 PPM</b> (Lowell Plant Site 003) <b>41 PPM</b> (French Cross Rd Plant Site 515)	7/10/2019 7/10/2019 7/9/2020 4/3/2020 7/1/2020	N/A	250	N/A	N/A	Wastewater, road salt, water softeners, corrosion
Fluoride (ppm)	<b>0.53 PPM</b> (Hughes Plant Site 502) <b>0.66 PPM</b> (Campbell/Calderwood Site 505) <b>0.52 PPM</b> (Griffin Plant-DPH1 Site 517) <b>0.60 PPM</b> (Lowell Plant Site 003) <b>0.67 PPM</b> (French Cross Rd Plant Site 515)	7/10/2019 7/10/2019 7/9/2020 4/3/2020 7/1/2020	N/A	2	2	4	<i>Add Health effects language from Env-Dw 806.11 or attach public notice to CCR</i>
Iron (ppm)	<b>0.233 PPM</b> (Hughes Plant Site 502)	7/10/2019	N/A	0.3	N/A	N/A	Geological
Manganese (ppm)	<b>0.0562 PPM</b> (Hughes Plant Site 502) <b>0.2163 PPM</b> (Griffin Plant-DPH1 Site 517)	7/10/2019 7/9/2020	N/A	0.05	0.15	0.3	Geological
Nickel	<b>0.005 PPM</b> (Griffin Plant-DPH1 Site 517) <b>0.0051 PPM</b> (Lowell Plant Site 003)	7/9/2020 4/3/2020	N/A	Not established; reporting is required for detections	0.005	0.01	Geological; electroplating, battery production, ceramics
PH (ppm)	<b>7.47 units</b> (Hughes Plant Site 502) <b>7.55 units</b> (Campbell/Calderwood Site 505)	7/10/2019 7/10/2019	N/A	6.5-8.5	N/A	N/A	Precipitation and geology

	<b>7.79 units</b> (Griffin Plant-DPH1 Site 517) <b>7.13 units</b> (French Cross Rd Plant Site 515)	7/9/2020 7/1/2020					
Sodium (ppm)	<b>40.0 PPM</b> (Hughes Plant Site 502) <b>21.8 PPM</b> (Campbell/Calderwood Site 505) <b>37.1 PPM</b> (Griffin Plant-DPH1 Site 517) <b>102 PPM</b> (Lowell Plant Site 003) <b>37.0 PPM</b> (French Cross Rd Plant Site 515)	7/10/2019 7/10/2019 7/9/2020 4/3/2020 7/1/2020	N/A	100-250	N/A	N/A	We are required to regularly sample for sodium
Sulfate (ppm)	<b>9.2 PPM</b> (Hughes Plant Site 502) <b>16 PPM</b> (Campbell/Calderwood Site 505) <b>24 PPM</b> (Griffin Plant-DPH1 Site 517) <b>16 PPM</b> (Lowell Plant Site 003)	7/10/2019 7/10/2019 7/9/2020 4/3/2020	N/A	250	250	500	Naturally occurring
Zinc (ppm)	<b>0.333 PPM</b> (Hughes Plant Site 502) <b>0.213 PPM</b> (Campbell/Calderwood Site 505) <b>0.35 PPM</b> (Griffin Plant-DPH1 Site 517) <b>0.258 PPM</b> (Lowell Plant Site 003) <b>0.245 PPM</b> (French Cross Rd Plant Site 515) <b>22 PPM</b> (French Cross Rd Plant Site 515)	7/10/2019 7/10/2019 7/9/2020 4/3/2020 7/1/2020 7/1/2020	N/A	5	N/A	N/A	Galvanized pipes