



Water Quality Report

2018



Calderwood Treatment Building

City of Dover
Community Services
Department

Frequently Asked Questions

- **What is the source of my water?**

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

- **Why are there contaminants in my water?**

Drinking water, including bottled water, may 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. Some contaminants are naturally present in the environment, some are due to the erosion of natural deposits and some are attributable to the corrosion of plumbing systems. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

- **How can I get involved?**

For more information about your drinking water, please contact **Richard Fowler** at the **Community Services Department**, Utilities Division (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.

- **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 (1-800-426-4791).

- **In order to ensure that tap water is safe to drink**, the EPA prescribes 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.



Description of Drinking Water Contaminants



The sources of drinking water (both tap water and bottled water) includes 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 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.

Radon is a radioactive gas that you can't see, taste or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer. Presently, the EPA is reviewing a standard for radon in water.

Methyl tertiary-butyl ether (MtBE) is a colorless, synthetically produced liquid added to gasoline to increase octane and help it burn cleaner. Found in many ponds, lakes and wells in New Hampshire, MtBE has been the focus of much media attention recently. In 2015, there was no MtBE detected within the City of Dover's wells. Legislators are being urged to substantially cut the use of MtBE and improve source protection programs on state and federal levels.

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 can not 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 your cold water 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://www.epa.gov/safewater/lead>.

Contaminant (Units)	Violation	Range/Average Level of Detection	MCLG	MCL	Likely Source of Contamination	
INORGANIC CONTAMINANTS						
		*2017 data	**2016 data	***2015 data	****2014 data	*****2013 data
Arsenic (ppb) *	NO	0.0 to 1.6 Average 0.4	0	10	Erosion of natural deposits Runoff from orchards or from glass and electronic production waste	
Barium (ppm) *	NO	0.0 to 0.0014 Average 0.0057	2	2	Erosion of natural deposits Discharge of drilling wastes Discharge from metal refineries	
Chlorine (ppm)*	NO	0.12 to 0.25 Average 0.19	MRDL	MRDL =4	Water additive used to control microbes	
Copper (ppm)*	NO	0.274 @ 90 th percentile	1.3	AL=1.3	Corrosion of household plumbing systems Erosion of natural deposits Leaching from wood preservatives	
Lead (ppb)*	NO	1.0 @90 th percentile	0	AL = 15	Corrosion of household plumbing systems Erosion of natural deposits	
Fluoride (ppm)*	NO	0.50 to 0.68 Average 0.50	4	4	Erosion of natural deposits Water additive which promotes strong teeth Discharge from fertilizer and aluminum factories	
Nitrate (ppm)* (as Nitrogen)	NO	0 to 1.3 Average 0.61	10	10	Runoff from fertilizer use Leaching from septic tanks, sewage Erosion of natural deposits	
VOLATILE ORGANIC COMPOUNDS						
MtBE**	NO	0 to 0.8 Average 0.11	13	13	A gasoline additive	
TTHM (ppb)* Total Trihalomethanes	NO	11.3 to 20.8 Average 14.6	n/a	80	Byproduct of drinking water chlorination	
HAA5 (ppb)* Haloacetic Acids	NO	0.3 to 1.2 Average 0.5	n/a	60	Byproduct of drinking water chlorination	
Additional Testing						
Additional Tests (no primary MCL)	Results	Date	Treatment Technique	Action Level	Specific Contaminant Criteria	
Sodium mg/L*	21.6-100 Average 40.5	7/19/2017	None	secondary MCL	Erosion of natural deposits Road salt	

Definitions

MCLG: Maximum Contaminant Level Goal, or 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.

MCLs: The highest level of a contaminant in drinking water below, which there is no known or expected risk to health. They are set as close to the MCLGs as feasible using the best available treatment technology.

AGQS: The maximum concentration levels for contaminants in groundwater that are established under RSA 485-C, the Groundwater Protection Act.

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

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

pCi/L: Picocuries per liter is a measurement of radioactivity in water. A picocurie is 10–12 curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

ppm: parts per million.

ppb: parts per billion

UCMR3: Unregulated Contaminant Monitoring Rule

ug/L: micrograms per Liter



"Your public water supply is fluoridated. According to the Center for Disease Control and Prevention, if your child under the age of 6 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."

UNREGULATED CONTAMINANT MONITORING RULE

Contaminant (unit)	Range/Average	Date	Reason For Monitoring
Chromium total (ppb)	0.25 to 0.62/0.32	9/24/2013	The Safe Drinking Water Act (SDWA), as amended in 1996, required the U.S. Environmental Protection Agency (EPA) to establish criteria for a program to monitor unregulated contaminants in drinking water and to identify no more than 30 contaminants to be monitored every five years. The purpose of monitoring for unregulated contaminants is to provide data to support the EPA Administrators decisions concerning whether or not to regulate these contaminants in the future to protect public health.
Hexavalent Chromium (ppb)	0 to 0.33/ 0.091	9/24/2013	
Chromium –6 (ppb)	0.074 to 0.39/0.114	2/24/2014	
Strontium (ppb)	48.4 to 236/119.3	9/24/2013	
Chlorate (ppb)	70.8 to 435/ 221.98	9/24/2013	
1,4 Dioxane (ppb)	0 to 0.36/0.036	9/24/2013	
PFHpA (ppb)	0.0 to 0.022/0.003 avg.	10/13/2016	
PFHXS (ppb)	0.0 to 0.022/0.003 avg.	10/13/2016	
PFOA (ppb)	0.0 to 0.16/0.023 avg.	10/13/2016	
PFOS (ppb)	0.0 to 0.082/0.012 avg.	10/13/2016	

Health Effects Information

IN THE EVENT CONTAMINANTS EXCEEDED THE MAXIMUM CONTAMINANT LEVELS, PERTINENT HEALTH EFFECTS INFORMATION WILL BE PROVIDED.

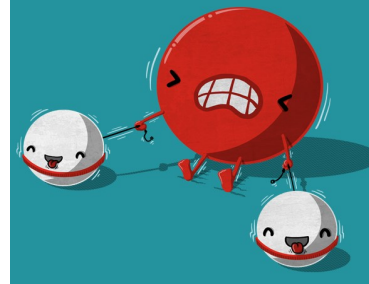
SOURCEWATER ASSESSMENT REPORT

The NH Department of Environmental Services has prepared a Source Assessment Report for the source(s) serving this community water system, assessing the sources' vulnerability to contamination. The results of the assessment, prepared on January 7, 2003, are as follows:

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

The complete Assessment Report is available for review at the Pierre R. Bouchard Public Works Facility located at 271 Mast Rd, Dover, NH. For more information, call Community Services at (603) 516-6450 or visit NH Department of Environmental Services Drinking Water Source Assessment Program web site at <http://des.nh.gov/organization/divisions/water/dwgb/dwspp/dwsap.htm>.

THE WATER MOLECULE



Contaminants (Units)	Violation	Level of Detection	MCLG	MCL	Likely Source of Contamination
Radioactive Contaminants Data					
Combined Radium (pCi/L)					
Site 003****	NO	0.3 to 4 / 1.6 average	0	5	Erosion of natural deposits
Site 513*	NO	1.5	0	5	Erosion of natural deposits
Site 517*	NO	0.7	0	5	Erosion of natural deposits
Compliance Gross Alpha* (pCi/L)	NO	0.0 to 2 0.43 average	0	5	Erosion of natural deposits

Water Treatment Techniques

Iron & Manganese Removal is conducted at three treatment plants. Water is filtered through tanks filled with media. One facility uses "PUREFLOW" inorganic oxide, while the other facilities use green sand to remove the iron and manganese.

Volatile Organic Compounds are removed via air stripping. Air is forced through the water at the plants, which allows the VOC's to be removed.