



WATER QUALITY REPORT 2004



*City of Dover
Community Services Department
Dover, New Hampshire*

Water For Life...

*Dover water utility employees are committed to producing quality water - water that meets or exceeds standards on quality and safety, set by state and federal regulatory agencies.
The result is clean, clear, quality water for our consumer.*

TEST RESULTS

Contaminant	Violation	Level Detected / Range of Detection	Unit Of Measurement	MCLG	MCL	Likely Source of Contamination
Radioactive Contaminants						
Radon	NO	* <100 – 3100 See notes	pCi/l	0	*No standard at this time	Erosion of natural deposits
Inorganic Contaminants						
Arsenic	NO	<1 – 1.6 See notes	Parts per billion	50	50	Erosion of natural deposits Runoff from orchards or from glass and electronic production waste
Copper	NO	* .499 @ 90 th percentile See notes	Parts per million	1.3	AL=1.3	Corrosion of household plumbing systems Erosion of natural deposits Leaching from wood preservatives
Fluoride	NO	* .8 – 1.2 average 1.0 ppm	Parts per million	4	4 * Added to promote strong teeth	Erosion of natural deposits Water additive which promotes strong teeth Discharge from fertilizer and aluminum factories
Lead	NO	* 6 @ 90 th percentile See notes	Parts per billion	0	AL=15 * 2 sample of 30 exceeded the MCL for lead	Corrosion of household plumbing systems Erosion of natural deposits
Nitrate (as Nitrogen)	NO	.16 - .88	Parts per million	10	10	Runoff from fertilizer use Leaching from septic tanks, sewage Erosion of natural deposits
Volatile Organic Compounds						
MtBE	NO	0.7 –1.52	Parts per billion	0	13 State level	Synthetically produced liquid added to gas Leakage from underground storage tanks
TTHM Total Trihalomethanes	NO	6 - 39	Parts per billion	0	80	Byproduct of drinking water chlorination

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
- ◆ **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.

NOTES:

Radon is a naturally occurring radioactive gas that you cannot see, taste or smell. Produced by the breakdown of radioactive material naturally present in soil, rock and water, radon is found in all 50 states. It is a gas and is released from water into household air during water use. The United States Environmental Protection Agency sets drinking water standards and has determined that radon is a health concern at certain levels of exposure. Radon gas that is inhaled has been linked to lung cancer; however, it is not clear at what level radon in your drinking water contributes to this effect. In epidemiological studies, radon has been found to cause lung cancer in humans at high exposure levels. At lower exposure the risk of lung cancer is reduced. EPA has proposed setting the MCL for radon in drinking water at 300 Pico curies per liter to reduce the risk of cancer. However, the 300 Pico curies level is presently under review by the EPA and a final MCL for radon will not be determined until, at the earliest, December of 2004. As federal regulations are developed to set a standard for radon, the City of Dover Water utility will provide treatment at sources where necessary. The ranges listed in the table are results of samples tested in 1998.

Lead was a main ingredient in solder before being banned in 1987. Copper leaching can occur when pipes are exposed to corrosive water. Water samples for lead and copper sampling taken from residential taps are tested to determine if levels are elevated when water stands in the pipes for several hours. Lead may leach from faucets or plumbing components. Leaching may also occur in copper pipes joined with lead-based solder. The lead and copper test results reported here are from a targeted group of homes in the Dover service area. These homes meet criteria established to determine risk for elevated levels of lead and copper at the tap. Water utility employees adjust pH to prevent corrosive water. Every third year, we test samples a pool of 30 homes to monitor lead and copper levels at the tap. To minimize exposure to lead and copper from tap water, run water until cold if it has been standing in the pipes for more than six hours. Be sure to use lead-free solder when making repairs and check labeling on new plumbing fixtures for lead content and leaching potential. The ranges listed in the table are results of samples tested in 1999.

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. The City of Dover is included in the list of community wells showing very low levels of MtBE. The Lowell Avenue treatment plant removes this contaminant through an aeration process. Legislators are being urged to substantially cut the use of MtBE and improve source protection programs on state and federal levels.



HEALTH EFFECTS INFORMATION

Radon: Presently the US Environmental Protection Agency is determining a standard for radon in drinking water. Radon gas that is inhaled has been linked to lung cancer; however, it is not clear that at what level radon in your drinking water contributes to this health effect.

Lead: Infants and children who drink water that contain 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.

TTHM: Some people who drink water that contains trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have increased risk of getting cancer.



SOURCE WATER 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
GPW Griffin Well	3	5	4

The complete Source Assessment Report is available for inspection at the Pierre Bouchard Public Works Facility located at 217 Mast Rd, Dover, NH. For more information, call Community Services at 516-6072 or visit NH DES' Drinking Water Source Assessment Program web site at www.des.state.nh.us/dwspp.

The City is in the process of reclassifying its wellhead areas in accordance with the NHDES Wellhead Protection Program. Resulting benefits for participating in this program are community education and outreach assistance; within the City of Dover and, especially, in surrounding communities where the wellhead protection areas extend into other communities.



Water Treatment Techniques

Iron & Manganese Removal is conducted at two treatment plants using green sand filtration. This is a process where the water is filtered through tanks filled with the medium, in this case green sand, which removes 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.

~ FREQUENTLY ASKED QUESTIONS ~

What is the source of my water?

Dover residents drink groundwater pumped from seven 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 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. 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?

Direct inquiries about public participation and policy decisions to the Community Services Department Utilities Division at 516-6072. Currently, the Dover Utilities Commission meets in the Pierre B. Bouchard Public Works Facility, located at 271 Mast Road, on the third Monday of each month at 4:15 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 the 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).

Other tests are conducted but the report includes only those contaminants detected. Interested persons may view the Water Quality Report 2004 on line at <http://www.ci.dover.nh.us>. Source Water Assessments are available in the Planning Office at City Hall.

HAVE OTHER QUESTIONS?

WE HAVE ANSWERS.

Water quality questions? Contact Richard Fowler, Chief Operator, 516-6510.

Water meter questions? Contact Sharon Lucey, Meters & Backflow Coordinator, 516-6461

Water distribution questions? Contact Bill Boulanger, Utilities Supervisor, 516-6459

Environmental impact questions? Contact Dean Peschel, Environmental Programs, 516-6094

Other questions? Contact Doug Steele, Supt. of Public Works & Utilities, 516-6450

Please...don't hesitate to call.

A utility crew of nineteen employees operates and maintains:

~ Seven full-scale production wells ~ Two water treatment facilities ~

~ An elevated tank reservoir ~ 7300 water services ~

~ Approximately 135 miles of pipe ~

