



Water Quality Report 2009



CITY OF DOVER
COMMUNITY SERVICES DEPARTMENT
DOVER, NH

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?

Direct inquiries about public participation and policy decisions to the Community Services Department Utilities Division at 516-6450. 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 5:30 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).

HEALTH EFFECTS INFORMATION

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

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 271 Mast Rd, Dover, NH. For more information, call Community Services at 516-6450 or visit NH DES' Drinking Water Source Assessment Program web site at www.des.state.nh.us/dwspp.

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.

TEST RESULTS

Contaminant (Units)	Violation	Range/ Average Level of Detection	MCLG	MCL	Likely Source of Contamination
Radioactive Contaminants *2006 Data					
Compliance					
Gross Alpha (pCi/l)					
Site 504	NO	ND to 2.7 / 1.3	0	15	Erosion of natural deposits
Site 501	NO	ND to 2.9 / 1.632	0	15	Erosion of natural deposits
Site 502	NO	ND to 2.7 / 1.332	0	15	Erosion of natural deposits
Site 011	NO	ND to 3.2 / 1.574	0	15	Erosion of natural deposits
Site 503	NO	ND to 2.9 / 1.566	0	15	Erosion of natural deposits
Site 003	NO	ND to 3.3 / 1.9	0	15	Erosion of natural deposits
Site 515	NO	ND to 1.0 / 0.5	0	15	Erosion of natural deposits
Uranium (pCi/l)					
Site 504	NO	ND to 1.18 / 0.578	N/a	30	Erosion of natural deposits
Site 501	NO	ND to 0.090 / 0.023	N/a	30	Erosion of natural deposits
Site 502	NO	ND to 0.67 / 0.339	N/a	30	Erosion of natural deposits
Site 011	NO	ND to 0.724 / 0.181	N/a	30	Erosion of natural deposits
Site 503	NO	ND to 0.125 / 0.059	N/a	30	Erosion of natural deposits
Site 003	NO	ND to 0.047 / 0.012	N/a	30	Erosion of natural deposits
Site 515	NO	ND	N/a	30	Erosion of natural deposits
Combined Radium (pCi/l) 226 + 228					
Site 504	NO	ND to 1.7 / 0.935	0	5	Erosion of natural deposits
Site 501	NO	ND to 1.28 / 0.095	0	5	Erosion of natural deposits
Site 502	NO	ND to 2.9 / 1.298	0	5	Erosion of natural deposits
Site 011	NO	ND to 5.5 / 1.705	0	5	Erosion of natural deposits
Site 503	NO	0.6 to 1.380 / 0.965	0	5	Erosion of natural deposits
Site 003	NO	ND to 5.4 / 1.967	0	5	Erosion of natural deposits
Site 515	NO	0.5 to 1.13 / 0.82	0	5	Erosion of natural deposits

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.

MCL: 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.

ppm- parts per million.

ppb - parts per billion.

N/a - Not applicable

ND - Not detected.



Contaminant (Units)	Violation	Range / Average Level of Detection	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants					
Arsenic (ppb) *2007 data	NO	ND - < 0.0020	0	10	Erosion of natural deposits Runoff from orchards or from glass and electronic production waste
Barium (ppm) *2007 data	NO	ND - < 0.0100 average .006 ppm	2	2	Erosion of natural deposits Discharge of drilling wastes Discharge from metal refineries
Copper (ppm) *2008 data	NO	.476 @ 90 th percentile	1.3	AL=1.3	Corrosion of household plumbing systems Erosion of natural deposits Leaching from wood preservatives
Lead (ppb) *2008 data	NO	2.7 @ 90 th percentile	0	AL = 15	Corrosion of household plumbing systems Erosion of natural deposits
Fluoride (ppm)	NO	0.53 - 1.20 average .94 ppm	4	4	Erosion of natural deposits Water additive which promotes strong teeth Discharge from fertilizer and aluminum factories
Selenium (ppb) *2007 data	NO	ND—2.2 / 0.5	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Nitrate (ppm) (as Nitrogen)	NO	ND—1.4	10	10	Runoff from fertilizer use Leaching from septic tanks, sewage Erosion of natural deposits
Volatile Organic Compounds					
MtBE (ppb) Methyl tertiary-butyl ether	NO	ND - 0.7	0	13 State level	Synthetically produced liquid added to gas Leakage from underground storage tanks
TTHM (ppb) Total Trihalomethanes	NO	3.4 - 8.5 / 6.15	N/a	80	Byproduct of drinking water chlorination.
HAA5 (ppb) Haloacetic Acids	NO	ND - 3.8 / 1.9	N/a	60	By product of drinking water chlorination.
Chlorine (ppm)	NO	0.02 to 0.75 / 0.21	MRDL G=4	MRDL=4	Water additive used to control microbes.

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

Description of Drinking Water Contaminants:

The sources of drinking water (both tap water and bottled water) included 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 sources 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. The City of Dover is included in the list of community wells showing very low levels of MtBE. 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>.