

Water Conservation Tips:

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your bill. Here are some suggestions:

Inside your home:

- Fix leaking faucets, Pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets, and appliances
- Wash only full loads of laundry
- Do not use the toilet for trash disposal
- Take shorter showers
- Do not let the water run while shaving or brushing teeth
- Soak dishes before washing
- Run the dishwasher only when full

Outside your home:

- Water the lawn and garden in the early morning or evening
- Use mulch around plants and shrubs
- Repair leaks in faucets and hoses
- Use water-saving nozzles
- Use water from a bucket to wash your car, and save the hose for rinsing

Information on ways you can conserve water can be found at www.epa.gov/safewater/publicoutreach/index.html

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Town of Exeter Water & Sewer Department



Annual Water Quality Report

Water testing performed in 2006

EPA#: NH0801010

Is My Water Safe?

This Annual Water Quality Report is written to keep you informed of the past year's water quality results. The water is tested daily at the water treatment plant and weekly within the distribution system to ensure safe drinking water. Chlorine is regularly monitored in the system. Bacteria tests are done on a monthly basis. Within this report you will find a record of contaminants that were detected in the water. All water samples taken have shown that the water is safe to drink. There has been a reportable level of Arsenic in Lary Lane well source. A new regulation went into effect in 2006 regarding arsenic and Lary Lane well water has been just over the limit. We are minimizing the use of this source until a solution for treatment is determined. A more detailed explanation of this concern is found within this report.

In 2006, we had several incidents of exceeding filtered water turbidity measurements for finished water. Turbidity is an indication of how effectively the water is being filtered. Any finished water turbidity measurement over 1 ntu must be reported to the NH Department of Environmental Services and the public. We had several incidents in the summer and again in the late fall. The public was notified by mail of each incident. There has been no indication that the water was not safe to drink. More details of this violation can be found within this report.

Improvements are in process at the water treatment plant to correct the deficiencies mentioned. A clarifier was rebuilt this winter, all filter media will be replaced in the late summer and new instrumentation will be installed to allow better monitoring and reporting. These improvements are necessary to meet existing regulations. These improvements allow the plant to meet current demand and regulations.

Where Does My Water Come From?

The sources of drinking water supply in the Town of Exeter are the Exeter River, Dearborn Reservoir, Lary Lane Well and Skinner Springs. The Exeter River and Dearborn Reservoir are surface water supplies, and are treated at the water treatment plant on Portsmouth Avenue. These source waters go through a five-step process to become finished water. Skinner Springs is also filtered at the water treatment plant. Studies have shown that the existing sources provide ample supply to meet current and future demands. Lary Lane well is only being used in an emergency at this time.

Though the water supplies have been ample, there continues to be deficiencies and challenges with the treatment processes. The Water & Sewer Advisory Committee and Public Works Department continue to investigate solutions for the water treatment deficiencies. This investigation has included consideration of new groundwater sources. The goal is to provide the most cost efficient solution with the least impact to the consumer.

Source Water Assessment Report

The New Hampshire Department of Environmental Services (NHDES) has prepared the Source Water Assessment Report for the sources serving this community water system, assessing the sources' vulnerability to contamination. The results of the assessment, prepared on October 28, 2002, and last updated August 8, 2006, are as follows. The Dearborn Reservoir received three high susceptibility ratings, three medium susceptibility ratings, and six low susceptibility ratings. The Exeter River received three high susceptibility ratings, five medium susceptibility ratings, and four low susceptibility ratings. Lary Lane Well received two high susceptibility ratings, three medium susceptibility ratings, and seven low susceptibility ratings. Skinner Springs received two high susceptibility ratings, three medium susceptibility ratings, and seven low susceptibility ratings. The complete Source Water Assessment Report is available for inspection at the Exeter Water Treatment Plant or the NHDES Web site.

Working Hard for You

Customer service is a priority of the Exeter Water Department. We take customer calls seriously, documenting complaints and analyzing causes for concerns. Residents are the "inspectors" for our system. We appreciate residents taking the time to make a call. If you have questions or concerns regarding water quality, the treatment process, or when the next Water & Sewer Advisory Committee meeting is scheduled, do not hesitate to call. The following names and numbers are available for contacts and information:

Please note the following numbers for more information:

Water/Sewer Department: W/S Superintendent—Victoria Del Greco (603) 773-6157

Exeter Water Treatment Plant: Acting Senior Operator—Paul Roy (603) 773-6169

24-Hour Emergency: Police Dispatch—(603) 772-1212

Town of Exeter Web site—www.exeternh.org

New Hampshire Department of Environmental Services: www.des.state.nh.us

Substances That Might Be in Drinking Water:

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoir, springs, and wells. As water travels over the surface of land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Important Health Information:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Center for Disease Control and Prevention) 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 (800) 426-4791.

Lead in Drinking Water:

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 at (800) 426-4791.

Arsenic Regulation:

Low levels of arsenic are naturally present in water about 2 parts of arsenic per billion parts of water (ppb). Thus, you normally take in small amounts of arsenic in the water you drink. Some areas of the country, such as New Hampshire, have unusually high natural levels of arsenic in rock, which can lead to high levels of arsenic in water.

A new limit for arsenic of 10 ppb became effective in 2006. The level of arsenic at Lary Lane Well has historically averaged 11 ppb. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Exposure assumptions used to calculate Maximum Contaminant Levels include consuming two liters of water per day by a 154 lb adult for a 70-year exposure duration.

It is not necessary to use alternate water; however, if you have specific health concerns, please contact your health care professional.

Lary Lane Well is on a limited use schedule until a treatment solution has been implemented. Until treatment is provided, we anticipate violations. Notification of these violations will be given.

Turbidity:

Last year the Exeter Water System violated turbidity limits of filtered water. Turbidity is the measurement of the cloudiness of the water. It is an indication of the effectiveness of filtration.

Normal turbidity levels at the Exeter water treatment plant are less than 0.1 turbidity unit. Any measurement over 1.0 unit reportable. There were five months that had an occurrence of high turbidity.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. When there is an indication of turbidity, disinfection of the finished water is increased to ensure safe drinking water.

In December 2006, the Board of Selectmen approved funds for replacing media in all filters, repairing one of the clarifiers, and upgrade of instrumentation at the water treatment plant. The improvements began immediately. These improvements will help ensure proper filtration and treatment.

Cryptosporidium in Drinking Water:

Cryptosporidium is a microbial parasite found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring of source water was done for two years and ended in the summer of 2004. During that time, only one sample tested positive; consequently, we are no longer required to test for Cryptosporidium. The data has been grandfathered and used to determine bin classification under the upcoming LT2 Enhanced Surface Water Treatment Rule (LT2). Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks, but immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Radon:

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of total radon in air. Radon is released into homes and groundwater from soil. Radon is a known human carcinogen. Samples taken of our groundwater source in 2002 indicated a radon concentration of 770 picocuries per liter (pCi/L). Inhalation of radon gas has been linked to lung cancer, and drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, call (800) SOS-RADON.

Sampling Results:

Water samples are taken to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although most of the substances listed here are under the Maximum Contaminant Level (MCL), it is important to note that the arsenic MCL and the turbidity MCLs were violated. The arsenic concentration at Lary Lane Well has historically surpassed its MCL threshold, and in January 2006 the new regulation was enforced.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Regulated Substances	Year Sampled	Violation	MCL	MCLG	Amount Detected	Range	Units of Measure	Typical Source
Lary Lane Well								
Arsenic ¹	2006	YES	10	0	11.2	10.8-11.8	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
(Compliance) Gross Alpha	2005	NO	15	0	3	0-3	pCi/L	Erosion of natural deposits
Combined Radium	2005	NO	5	0	0.3	0-.3	pCi/L	Erosion of natural deposits
cis-1,2-Dichloroethylene	2006	NO	70	70	0.5	NA	ppb	Discharge from industrial chemical factories
Trichloroethylene	2006	NO	5	0	0.9	NA	ppb	Discharge from metal degreasing sites and other factories
Finished Water								
Barium	2006	NO	2	2	0.0101	NA	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate	2006	NO	10	10	0.17	NA	ppm	Runoff from fertilizer use; leaching from septic tanks (sewage); erosion of natural deposits
TTHMs (trihalomethanes)	2006	NO	80	NA	58.8	9.9-126	ppb	By-product of drinking water chlorination
HAA5 (Haloacetic Acids)	2006	NO	60	NA	32.1	0-88	ppb	By-product of drinking water chlorination
Total Organic Carbon (removal ratio) ²	2006	NO	TT	NA	1.3	1.06-1.59	removal ratio	Naturally present in the environment
(Compliance) Gross Alpha	2005	NO	15	0	2	0-2	pCi/L	Erosion of natural deposits
Combined Radium	2005	NO	5	0	0.7	.1-7	pCi/L	Erosion of natural deposits
Turbidity ³	2006	YES ⁴	TT	NA	2.05	NA	NTU	Soil runoff
Chlorodibromomethane	2006	NA	NA	NA	0.9	NA	ppb	
Chloroform	2006	NA	NA	NA	34	NA	ppb	
Bromodichloromethane	2006	NA	NA	NA	8.2	NA	ppb	
Regulated Substances	Year Sampled	Violation	MCL	MCLG	Amount Detected (90 th %tile)	Homes above action level		
Copper ⁵	2006	NO	Action Limit=1.3	1.3	0.2	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead ⁵	2005	NO	Action Limit=15	0	5	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits;

¹Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

²The value reported under Amount Detected for Total Organic Carbon (TOC) is the lowest ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value greater than one indicates that the water system is in compliance with the TOC removal requirements.

³Turbidity is a measurement of the cloudiness of the water. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfection.

⁴Any measurement in excess of 1 is a violation unless otherwise approved by the state. Also 83% of a month's samples were below the TT value of 0.3 NTU, so a value less than 95% constitutes a TT violation.

⁵Tap water samples were collected for lead and copper analyses from 47 homes throughout the service area.

Table Definitions:

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

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

NA: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter)

ppm (parts per million): One part substance per million parts water (or milligrams per liter)

removal ratio: A ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed.

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