

2019 Consumer Confidence Report

Lancaster Water Facility

1291010

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.

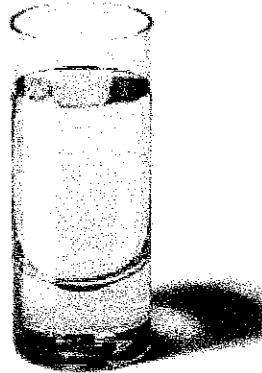
Aging infrastructure presents challenges to drinking water safety, and continuous improvement is needed to maintain the quality of life we desire for today and for the future.

Investments along with on-going operation and maintenance costs are supported by water users. 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 sub-

stances 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.

In order to ensure that tap water is safe to drink, 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.

What is the source of my drinking water?

The Town of Lancaster draws surface water from the Garland Brook / Kilkenny range watershed. This source has been used by Lancaster since 1891 and is a valued and protected resource. Lancaster's water system was upgraded in 1996 with the construction of a Slow Sand Facility, which serves a population of approximately 2,600 people. Lancaster's treatment facility has the potential of producing 750,000 gallons per day. Disinfection of the drinking water is accomplished using sodium hypochlorite solution to produce a residual of 0.20 mg/L at its furthest service point. Another additive to Lancaster's water

supply is the inorganic compound fluoride, which is used as an additive to promote strong teeth. Fluoride is added at a concentration level between 0.6 - 0.8 mg/L for optimum benefit

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

DES 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 7/3/2001, are noted below.

Garland Brook, 0 susceptibility factors were rated high, 0 were rated medium and 11 were rated low.

Note: This information is over 15 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 the Lancaster Town Office. For more information, call 603-788-2824 or visit the DES Drinking Water Source Assessment website at <http://des.nh.gov/organization/divisions/water/dwgb/dwspp/dwsap.htm>.

How can I get involved?

For more information about your drinking water, please call the owner, Edward Samson at 603-788-3391 or the primary operator, Timmy Bilodeau at 603-788-2824. Although we do not have specific dates for public participation events or meetings, feel free to contact us with any questions you may have, or attend the Board of Selectmen meeting 1st and 3rd Monday of the month 7:00 pm.

Violations and Other information: No violations.

Definitions (Include those that pertain to your water system but the definitions in blue are required)

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.

Level I Assessment: A study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

Level II Assessment: A very detailed study of the water system to identify potential problems and de-

termine, if possible, why an E.coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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 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 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>

Fluoride Statement:

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.

LANCASTER WATER TREATMENT FACILITY PWS: 1291010

2019 REPORT (2018 DATA)

ADDITIONAL TESTING

Additional Tests & Secondary MCLs (SMCL)	Results	Date	Treatment technique (if any)	AL (Action Level), SMCL or AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Sodium (ppm)	1.27 mg/L	9/20/18	None	100-250	We are required to regularly sample for sodium

VIOLATIONS

The Town of Lancaster Water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do and what we are doing to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. The locational running annual average (LRAA) is determined by averaging all the samples collected at a particular monitoring location during the previous four calendar quarters. The LRAA standard for Haloacetic Acid 5 (HAA5) is 0.060 mg/L. Testing results for the 3rd quarter of 2018 show that our system exceeded the maximum contaminant level for HAA5 (0.066 mg/l).

The LRAA of HAA5 exceeded the MCL of 0.060 mg/L at one or more of our system's sampling location(s).

The LRAA was **0.016mg/L (2-7-18) 0.028mg/L (5-9-18) 0.065mg/L (8-9-18) 0.153mg/L (11-1-17) (0.066mg/l LRRAA)**

What does this mean?

This is not an emergency. *Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*

What should I do?

It is not necessary to use alternate water; however, if you have specific health concerns, please contact your health care professional. General health related questions may be directed to Dave Gordon of the NHDES Environmental Health Program at (603) 271-4608.

Steps We Are Taking: Due to the source water the Town of Lancaster utilizes (Garland Brook) and the type of treatment provided (Slow Sand Treatment) our treatment options are limited. The higher than usual (quarter IV 2017) HAA5 level is the direct connection to heavy rains and runoff experienced during the first week of November, 2017. We are currently lowering the chlorine levels leaving the facility and limiting water treatment during these conditions (when possible).

We anticipate resolving the problem immediately. For more information, please contact Timmy J. Bilodeau of the Lancaster Water Department at 603-788-2824

Timmy J. Bilodeau 25 Main Street Lancaster, NH 03584.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Lead and Copper

Contaminant (Units)	Action Level	90 th percentile sample value *	Date	# of sites above AL	Violation Yes/No	Likely Source of Contamination	Health Effects of Contaminant
Copper (ppm)	1.3	1.02	1-17-19	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	0.0013	1-17-19	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.

Detected Water Quality Results

Contaminant (Units)	Level Detected*	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Turbidity (NTU)	0.05 Highest Monthly Average 0.03 Yearly Monthly Average 0.44 Highest Single Measurement	TT	N/A	NO	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Radioactive Contaminants

Compliance Gross Alpha (pCi/L)	0.2 9/21/2015	15	0	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)	ND 9/21/2015	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 getting cancer and kidney toxicity.

Combined Radium 226 + 228 (pCi/L)	0.2 9/21/2015	5	0	NO	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						
Antimony (ppb)	ND 9/20/2018	6	6	NO	Discharge from petroleum; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar
Arsenic (ppb)	ND 9/20/2108	10	0	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	(5 ppb through 10 ppb) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. (above 10 ppm) 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.
Barium (ppm)	0.0070 mg/L 9/20/2018	2	2	NO	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.
Beryllium (ppb)	ND 9/20/2018	4	4	NO	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium (ppb)	ND 9/20/2018	5	5	NO	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chlorine (ppm)	1.20 Highest Monthly Average 0.93 Yearly Monthly Average 1.80 Highest Single Measurement	MRDL = 4	MRDLG = 4	NO	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chromium (ppb)	ND 9/20/2018	100	100	NO	Discharge from steel and pulp mills; erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

Cyanide (ppb)		200	200	NO	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	0.78 Highest Monthly Average 0.73 Yearly Monthly Average 1.06 Highest Single Measurement	4	4	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.
Mercury (inorganic) (ppb)	ND 9/20/2018	2	2	NO	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate (as Nitrogen) (ppm)	0.18mg/L 9/20/2018	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.
Nitrite (as Nitrogen) (ppm)	ND 9/20/2108	1	1	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill, and if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium (ppb)	ND 9/20/2018	50	50	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	ND 9/20/2018	2	0.5	NO	Leaching from ore-processing sites; discharge from electronics, glass and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Volatile Organic Contaminants

Haloacetic Acids (HAA) (ppb)	0.016 Low 0.073 High 0.046 Running Annual Average	60	NA	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.
Total Trihalomethanes (TTHM) (Bromodichloromethane Bromoform Dibromochloromethane Chloroform) (ppb)	0.014 Low 0.066 High 0.038 Running Annual Average	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.