

**2016 Consumer Confidence Report  
For Calendar Year 2015**



Berlin Water Works  
PWS ID #0231010

**Introduction**

Like any responsible public water system, our mission is to deliver the best-quality drinking water. 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. In the past year, we have installed 3,188feet of new water mains. These investments along with on-going operation and maintenance costs are supported by our current water rates. 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).

**The sources of drinking water** (both tap water and bottled water) include rivers, lakes, streams, ponds, reser-

NOW IT COMES WITH A LIST OF INGREDIENTS.



voirs, 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 stormwater 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 Primary source is water from the East Branch of the Upper Ammonoosuc River that has been flocculated, clarified, filtered, treated and disinfected by chlorination. The pH is raised with Sodium bicarbonate and sodium hydroxide as corrosion inhibitor to minimize lead and copper from the tap water. There is an alternate groundwater source; the Brown Farm Well that was refurbished in 2013, a 1.44 million gallon per day source that can supplement the water needed to the City residents, on an as needed basis. The systems demand average daily flow is 1.462 million gallons per day.

**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, updated on September 26, 2007 are noted below.

- The Ammonoosuc River Raw source, received 0 high susceptibility, 0 medium susceptibility ratings, and 11 low susceptibility ratings
- The Brown Farm Well source received 3 High susceptibility ratings, 2 medium ratings and 7 low susceptibility ratings.

The complete Assessment Report is available for review at Berlin Water Works Office, 55 Willow Street. For more information, call Berlin Water Works at 752-1677 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?** If you have any questions, please contact the Berlin Water Works Office at 752-1677. You are welcome to attend regular meetings of the Board of Water Commissioners held at 12:00 pm on the 3<sup>rd</sup> Wednesday of every month at the 55 Willow Street Office. Commissioners are Lucien Langlois, Michael Caron, Paul Poulin, and Paul Ingersoll.

**Definitions 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.

**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.

**Turbidity:** A measure of the cloudiness of the water. It is monitored by surface water systems because it is a good indicator of water quality and thus helps measure the effectiveness of the treatment process. High turbidity can hinder the effectiveness of disinfectants.

#### 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

*THE FOLLOWING APPLIES if these contaminants are present - see table for detected levels.*

#### 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>

**Radon:** 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.

DETECTED WATER QUALITY RESULTS					
Substance	Level Measured	MCL	MCLG	Meets Limits?	Likely Source
Total Organic Carbon (ppm)	0.89 to 1.60	TT	N/A	YES	Naturally present in the environment.
Turbidity (NTU)	0.02 to .30	TT	N/A	YES	Soil Runoff
Combined Radium 226 +228 (pCi.L)	0.96 to 1.3 9/12/14 & 12/2/14	5	0	YES	Erosion of Natural Deposits
Barium (ppm)	0.0061 9/28/15	2	2	YES	Discharge of Drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	0.20 to 1.50	MRDL 4	MRDLG 4	YES	Water additives used to control microbes
Lead (ppb)	9/28/15 0.0 to 0.419 90 <sup>th</sup> percentile =0.007 ppb	AL=15	0	YES	Corrosion of Household Plumbing systems, erosion of natural deposits
Copper (ppm)	9/28/15 0.0242 to 1.03 90 <sup>th</sup> percentile = 0.467 ppm	AL=1.3	1.3	YES	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Nitrate (as Nitrogen) (ppm)	9/22/15=0.10 12/2/15=0.12	10	10	YES	Run off from Fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Haloacetic Acids (HAA5s) ppb	0.015 to 0.055	60	N/A	YES	By-product of drinking water disinfection with chlorine.
Trihalomethanes (TTHM)(Bromodichloromethane Bromoform Dibromomethane Chloroform) ppb	0.003 to 0.64	100/80	N/A	YES	By-product of drinking water disinfection with chlorine.