

NORTHFIELD

**CONSUMER
CONFIDENCE
REPORT**

JUNE 2016

WATER DEPARTMENT

NORTHFIELD WATER DEPARTMENT

How to Check For a Water Leak

Finding water leaks can save you money in water and sewer bills. These basic steps can be done by the customer before calling in a professional.

1. Turn off all fixtures so that no water is being used. This includes inside and outside appliances and faucets.
2. Check the water meter for water flow activity. There is typically a red needle and a red triangular arrow that turn when water is flowing through the meter. If either of these is moving, then you have a leak somewhere in the house beyond the meter.
3. If the needle and flow arrow are not moving, make a light mark on each and recheck the meter in an hour. If neither has moved then it is unlikely there is a leak. However, if either one has moved, you then can suspect there is a leak.
4. If a leak is suspected, check all faucets, hoses and fixtures for any obvious leaks.
5. Toilets are the leading cause of leaks and high bills in homes. Customers can check for toilet leaks by dropping a few drops of food coloring into the tank. If the food coloring shows up in the bowl after 15-30 minutes, the toilet is leaking. A flapper valve repair kit can be purchased from a local hardware store.
6. Sometimes the toilet can be heard filling when no one is around. These "ghost flushes" are a good sign of a faulty flapper valve that might not show up during a meter inspection. Often the only way to determine if you are experiencing "ghost flushes" is to mark the needle and arrow on the meter, after the last person uses water at night, and recheck the meter before anyone uses water in the morning. If the needle or arrow have moved, and no one has used water then a leaking toilet might be the problem.

Water Leak Table

A small hole or leak in your water line or fixture can result in excessive leakage and high bills. The table below shows some common flow rates (in gallons) at a line pressure of 60 PSI.

Hole Size	Loss Per Day	Loss Per Quarter
1/64"	49.5 gallons	4,450 gallons
1/16"	792 gallons	71,280 gallons
1/8"	3,168 gallons	285,120 gallons
1/4"	12,720 gallons	1,144,800 gallons

NORTHFIELD WATER DEPARTMENT

INTRODUCTION

The Northfield Water Department Consumer Confidence Report contains information about your water system. The report contains Water Quality data that was collected during 2015. This report is required by the State of Vermont as part of the Safe Drinking Water Act.

There are several key areas in the document that are explained in detail. You will receive a Consumer Confidence Report each year that will help you to better understand the quality of Northfield's water and other pertinent information about the system.

The next report will be distributed in June 2017. We hope you will read the information and, if you have any questions, please contact the Utility Office at 1-802-485-5411. Thank you for your continued support.

WATER QUALITY REPORT - 2015

This report is a snapshot of the quality of water that we provided from January 1 through December 31, 2015. This report is designed to inform you about the quality of water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. Included are details about where your water comes from, what it contains, and how it compares to U.S. Environmental Protection Agency (EPA) and state standards.

Public Water System Name: Northfield Water Dept. **Date:** June 1, 2016

WSID #: 5275 **Town:** Northfield

Water Source Information:

Northfield's water sources are:

Vermont Source Type:	Gravel Screened Well
EPA Source Type:	Groundwater, non-purchased
Source Name:	WELL 1 - Drilled 1939 - 400 GPM
Vermont Source Type:	Gravel Screened Well
EPA Source Type:	Groundwater, non-purchased
Source Name:	WELL 2 - Drilled 1946 - 700 GPM
Vermont Source Type:	Gravel Screened Well
EPA Source Type:	Groundwater, non-purchased
Source Name:	WELL 3 - Drilled 1999 - 1000 GPM

Recent sampling indicates that these sources are not under the influence of surface waters.

Source Protection Plan: We have a source protection plan available from our office that provides more information such as potential sources of contamination. The Water Supply Division approved our Source Protection Plan on May 23, 2002. Our system's susceptibility to potential sources of contamination is: road salt, vehicle, or train accidental spill, septic systems, fertilizer, runoff, pesticides, herbicides, and chemicals. Please contact the Utility office (1-802-485-5411) if you notice any chemical or petroleum spills in the source area.

- ★ *Radioactive contaminants*, which can be naturally occurring or the result of mining activity.
- ★ *Organic contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

NORTHFIELD WATER QUALITY DATA

The table below lists all the drinking water contaminants that we detected during the last year. It also includes the date and results of any contaminants that we detected within the past five years if tested less than once a year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk.

Terms and abbreviations - In this table you may find terms with which you might not be familiar. To help better understand these terms we have provided the following definitions:

Maximum Contamination Level Goal (MCLG): The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG’s allow for a margin of safety.

Maximum Contamination Level (MCL): The “Maximum Allowed” is the highest level of a contaminant that is allowed in drinking water, MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology.

Maximum residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health.

Maximum residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. Additional disinfectant may help control microbial contaminants.

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

90th Percentile: Ninety percent of the samples are below the action level. (Nine of ten sites sampled were at or below this level).

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

Parts per million (ppm) or Milligrams per liter (mg/l): (one penny in ten thousand dollars)

Parts per billion (ppb) or Micrograms per liter (µg/l): (one penny in ten million dollars).

Picocuries per liter (pCi/L): a measure of radioactivity in water.

Nephelometric Turbidity Unit (NTU): NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Running Annual Average (RAA): The average of 4 consecutive quarters (when on quarterly monitoring); values in table represent the highest RAA for the year.

Detected Contaminants in NORTHFIELD WATER DEPT

Disinfection Residual	RAA	Range	Unit	MCL	MCLG	Typical Source
Chlorine	0.556	0.140 – 0.940	Mg/l	4.0	4.0	Water additive to control microbes

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2015				

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Fluoride	10/07/2015	1.9	0 – 1.9	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	04/15/2015	0.7	0.7 – 0.7	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium	03/06/2013	0.564	0.564-0.564	pCi/L	5	0	Erosion of natural deposits
Radium-226	03/06/2013	0.365	0.365-0.365	pCi/L	5	0	Erosion of natural deposits
Radium-228	03/06/2013	0.199	0.199-0.199	pCi/L	5	0	Erosion of natural deposits

Disinfection Byproducts	Monitoring Period	LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2015	9	2 - 2	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Date	90 th Percentile	95 th Percentile	Range	Unit	AL	Sites over AL	Typical Source
Copper	2011 to 2013	0.074	0.08	0- 0.096	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead	2011 to 2013	10	13	0 - 17	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits

Violation(s) that occurred during the year

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. The below table lists any drinking water violations we incurred during 2015. A failure to perform required monitoring means we cannot be sure of the quality of our water during that time.

Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year 2015			

ADDITIONAL INFORMATION

The Northfield Water System continues to provide chlorination to the water supply. We add fluoride to our water supply to promote public health through the prevention of tooth decay. There are three (3) chemicals added to your water supply:

1. **Corrosion Control:** The well water is low in pH, which results in the leaching of lead and copper from the customers' plumbing and thus deposits those contaminants in the water. In order to eliminate the lead and copper, a very small amount of caustic soda is added to the water. Our recent sampling results indicate that this treatment is working. We also recommend that you let a faucet run until the water is cold each morning. This will eliminate the water that has set in the plumbing during the night and assure you that the water is fresh.
2. **Fluoride:** A small amount of fluoride (approximately 1 ppm) is added to the water in order to promote dental health and strong bones.
3. **Chlorine:** the water supply is chlorinated at an average rate of 0.5 ppm.

These treatments have been approved and are monitored by the State of Vermont Water Supply Division.

Health information regarding drinking water

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 microbiological contaminants are available from EPA's Safe Drinking Water Hotline (1-800-426-4791).

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline.

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. The Northfield Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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>.

Public Notice - Uncorrected Significant Deficiencies: The system is required to inform the public of any significant deficiencies identified during a sanitary survey conducted by the Water Supply Division that have not yet been corrected. For more information, please refer to the schedule for compliance in the system's Temporary Operating Permit.

Date Identified	Deficiency	Facility
N/A	No Significant Deficiencies	Distribution System

Distribution information

The fluoride level in our community drinking water is 0.7 to 1.0 mg/L, which is well below EPA's current standard of 4 mg/L to protect against adverse health effects. In fact, our fluoride level is below EPA's secondary level of 2 mg/L, which was set to protect against cosmetic dental effects that can occur from excess fluoride consumption.

Community water fluoridation is the process of adding fluoride to public water supplies to reach an optimal level of 0.7-1.0 parts per million to protect people against tooth decay.

Community water fluoridation is supported by the American Dental Association (ADA), the American Medical Association (AMA), the U.S. Public Service and the U.S. Centers for Disease Control and Prevention (CDC). Community water fluoridation has dramatically reduced child cavity rates and tooth decay where it has been implemented. Local residents can be assured that we will continue to take the necessary steps to protect public health.

Source Protection

The Town of Northfield owns thirty (30) acres around the wells and this offers a considerable amount of protection to the source. However, other activities in the surrounding area can affect the water. Some of these include septic systems, chemicals, oil storage, floor drains, etc. The Source Protection Plan was updated in June 2013. The plans for the Vermont Routes 12 and 12A Sewer Line Extension Project, which is designed to protect the Wellfield, is on hold at this time but the importance of this project to the future of Northfield cannot be overemphasized. We have an incredible supply of high quality water that must be protected.

Improvements

Northfield's water quality and quantity remains high. Water testing is done continuously by the four (4) trained operators that work for the utilities. We are in full compliance with all state and federal (EPA) safe drinking water rules.

Fire hydrants are flushed twice each year in the spring and fall. Main line valves are exercised and evaluated for ease of operation and leaks.

The Water Department completed two (2) major water projects in 2015. Twenty-four hundred feet (2400') of eight inch cast iron water main on Central Street was replaced with a 12 inch ductile iron water main. This project completed the installation of the major transmission mains from the Garvey Hill Reservoir that was started in 2002. Those projects included the new one million gallon Garvey Hill reservoir and associated piping from Bond Auto to that reservoir. The North Phase from Bond Auto on North Main Street through Northfield Falls was completed in 2008. The West Phase from the Common, down Wall Street, Pleasant Street, Union Street, and Cross Street was completed in 2010. The South Phase from Central Street to Terrace Drive on Vermont Route 12 and to the Wellfield on Vermont Route 12A was completed in 2012

The other project that was completed in 2015 was a new eight inch ductile iron water main on King Street. This line replaced a four inch cast iron water line installed in 1906. This will greatly increase fire protection on King Street and improve water flow to the municipal swimming pool.

Water Department personnel replaced eight hundred feet (800') of 8" ductile iron pipe on Water Street this year, replacing pipe that was installed in 1906. Another one thousand feet (1000') is planned for 2016. These upgrades represent roughly 50% replacement of the one hundred and ten (110) year old cast iron pipe installed in 1906.

The employees of the utilities which include the Water Department, Sewer Department, and Electric Department would like to thank the Selectmen and Utility Commissions for their support this past year. Should you have any questions, please do not hesitate to contact Utility Superintendent Patrick DeMasi at 1-802-485-7355. As always, thank you for your support and cooperation.