Consumer Confidence Report

Emerald Lake Village District

2014

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, 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 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 water supplied by the District is from groundwater sources. It is pumped from eight bedrock wells, all located within the District. The water is pumped from the wells to a 150,000 gallon atmospheric storage tank. The water from well 004 and well 011 is treated to remove fluoride and arsenic. The remaining wells are untreated.

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 2002, are noted below.

Well	High	Medium		Low
001	2	1	9	
004	2	1	9	
006	1	3	8	
007	1	2	9	
008	1	2	9	
009	1	2	9	
011		not rated		
012		not rated		

Note: This information is over 10 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 but we are required to present it in this report.

The complete Assessment Report is available for review at Water System Operators, Inc. For more information, call Keith Gilbert at 428-3525 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?

The Emerald Lake Village District Commissioners meet monthly. An annual election is held for officers. Warrant articles and budgets are voted on at the annual meeting. Meeting dates and times are posted on the bulletin board on the front of the former Meeting House and on the District web site http://www.elvdnh.com. The District has contracted Water System Operators, Inc. to provide trained and certified professional operators. Water System Operators, Inc. can be reached at 428-3525.

Violations and Other information: The District had three violations during 2013. One was for elevated fluoride levels. The fluoride sample was below the Maximum Contaminant Level but above the Secondary Maximum Contaminant Level. One was for failure to send out a required public notice on time. The third was for an acute MCL violation for bacteria. A boil order was issued during July for the bacteria violation. See the violation list in the table below for more details.

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.

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: 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.

Sample Dates: The results for detected contaminants listed below are from the most recent monitoring done in compliance with regulations ending with the year 2013. The State of New Hampshire allows water systems to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Thus some of the data present, though representative, may be more than one year old.

Emerald Lake Village District EPA ID: 1141020

2014
VIOLATIONS

VIOLATIONS	Date of violation	Explain violation	Length of violation	Action taken to resolve	Health Effects (Env-Dw 811.21)
MCL	2/15/2013	Secondary MCL Fluoride		Provided notice in this report.	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.
Failure to provide public notice	6/21/2013	During 2012 a State inspection noted several Significant Deficiencies that need to be corrected. Correction of these issues did not occour within 30 days of the inspection so public notice was required.		Sent public notice	
MCL	7/19/2013	MCL Total Coliform and E.coli for June.	7 days	Issued boil order, flushed system, chlorinated system, resampled until no bacteria were detected for 2 consecutive days	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

DETECTED WATER QUALITY RESULTS

Contaminant (Units)	Level Detected	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Microbiological Contaminants						
Total Coliform Bacteria	8 Positive samples and 6 negative samples in July	No more than 1 positive sample per month	0	Yes	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
E. coli Bacteria	5 Positive samples and 9 negative samples in July	0	0	Yes	Human and animal fecal waste	E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems.
Radioactive Contaminants						
Compliance Gross Alpha (pCi/L)	Range ND – 1.6 Average 0.5 Sampled 2005 & 2008	15	0	No	Erosion of natural deposits	
Uranium (ug/L)	Range 0.1 – 2.0 Average 0.9 Sampled 2005 & 2013	30	0	No	Erosion of natural deposits	
Combined Radium 226 + 228 (pCi/L)	Range ND – 2.1 Average 0.4 Sampled 2005 & 2008	5	0	No	Erosion of natural deposits	
Inorganic Contaminants						
Arsenic (ppb)	Range 0.2 - 7.6 Highest RAA 7.6 Sampled 2013	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	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.

Barium (ppm)	Range ND – 0.006 Average 0.003 Sampled 2011 & 2013	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Chlorine (ppm)	Range ND – 1.34 Average 0.32 Sampled 2013	MRDL = 4	MRDLG = 4	No	Water additive used to control microbes	
Copper (ppm)	90th percentile 0.24 Sampled 2012	AL=1.3	1.3	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
Fluoride (ppm)	Range 0.4 – 2.9 Highest RAA 2.9	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.
Lead (ppb)	90th percentile 2 Sampled 2012	AL=15	0	No	Corrosion of household plumbing systems, erosion of natural deposits	

Volatile Organic Contaminants

Methyl tertiary-butyl ether (MtBE) (ppb)	Range ND – 0.9 Average 0.2 Sampled 2013	13	13	No	A gasoline additive	

ADDITIONAL TESTING

Additional tests (no Primary MCL)	Results	Date	AL (Action Level) or AGQS (Ambient groundwater quality standard)
Chloride (ppm)	Range 1 – 34 Average 9	Sampled 2011 & 2013	
Sodium (ppm)	Range 7 – 21 Average 12	Sampled 2008	
Sulfate (ppm)	Range 9 – 12 Average 10	Sampled 2011 & 2013	AGQS = 500
Zinc (ppm)	Range 0.009 – 0.190 Average 0.083	Sampled 2011 & 2013	