

# Consumer Confidence Report Hillsborough Water Works 2015

## 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 provided by the Hillsborough Water Works is from Loon Pond, a surface water supply. The source water at Loon Pond is protected by State Rule Env-Ws 386, the Rules for Protecting The Purity Of Regulated Watersheds. The water is treated by slow sand filtration. Water flows by gravity through three sand filter beds. Each filter consists of a sand bed approximately four feet deep and support gravel over perforated under-drain. Flow from the filters is treated with UV and sodium hypochlorite along with ammonia, for disinfection. The treated water enters the clearwell, which serves to provide chlorine contact time. After the clearwell potassium hydroxide is added, for pH adjustment. Water system storage is provided by a 1-

NOW IT COMES WITH A  
LIST OF INGREDIENTS.



million gallon tank.

## 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 during 2002, are noted below.

• Loon Pond: No susceptibility factors were rated high, two were rated medium, and

eleven were rated low.

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 Joe Damour 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 Hillsborough Water Works is managed by the Hillsborough Water and Sewer Commission. The Commissioners are: Christopher Sieg, Herm Wiegelman and Peter Mellen. The Commissioners meet on the fourth Tuesday of every month, at the Hillsborough Water Department office on Church Street. The Water department can be reached at 464-3877 extension 229. Hillsborough Water Works 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 system had four violations during 2014 all for Disinfection Byproducts (TTHM & HAA in table). See violation list in table below. An \$820,000 upgrade to the Treatment Plant was completed in June of 2014 to address the violations. Sampling since the completion of the project shows levels within required amounts.

## 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

## 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>

# System Name: Hillsborough Water Works ID: 1141010

2015

## DETECTED WATER QUALITY RESULTS

Contaminant (Units)	Level Detected	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
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### Microbiological Contaminants

Turbidity (NTU)	Range=0.12-0.30 Highest Monthly Average=0.24 All readings below Turbidity limit of 1.0 Sampled 2013	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.
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### Radioactive Contaminants

Compliance Gross Alpha (pCi/L)	Range=0.2-0.7 Average=0.4 Sampled 2007	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.
Combined Radium 226 + 228 (pCi/L)	Range=0.1-0.6 Average=0.4 Sampled 2007	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

Barium (ppm)	0.005 Sampled 2014	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.
Chlorine (ppm)	Range=0.13-0.81 Average=0.46 Sampled 2014	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.

Copper (ppm)	90 <sup>th</sup> Percentile= 0.14 Sampled 2013	AL=1.3	1.3	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)	90 <sup>th</sup> Percentile = 8 Sampled 2013	AL=15	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.

### Volatile Organic Contaminants

Haloacetic Acids (HAA) (ppb)	Range=13.8-141 Highest Quarterly RAA=110 Sampled 2014	60	NA	Yes	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 Dibromomethane Chloroform) (ppb)	Range= 5.5-172.8 Average=44.30 Sampled 2014	100/80	NA	Yes	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.

### Additional Testing

Additional Tests & Secondary MCLs (SMCL)	Results	Date	AL (Action Level), SMCL or AGQS (Ambient groundwater quality standard)
Chloride (ppm)	6	Sampled 2014	
Manganese (ppb)	9	Sampled 2014	AGQS = 840
Sodium (ppm)	5	Sampled 2014	
Sulfate (ppm)	3	Sampled 2013	AGQS = 500

### Violations

VIOLATIONS	Date of violation	Explain violation	Return to Compliance
MCL/Sample Average Violation -HAA5 (Total)	10/1/2014		
MCL/Sample Average Violation-HAA5 (Total)	7/1/2014		
MCL/Sample Average Violation-TTHM	7/1/2014		