

Consumer Confidence Report

Town of Seabrook Water System

2012

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 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 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 Seabrook water system is supplied by groundwater from five gravel-packed wells and seven rock wells located in the western part of town. These wells supplied approximately 335 million gallons of water to the Town in 2011. The gravel-packed wells range from 50 to 125 feet deep. The rock wells are 500 feet deep.

The gravel-packed wells are chlorinated with sodium hypochlorite or calcium hypochlorite. Some wells with high iron and manganese are treated with polyphosphate to reduce plumbing fixture staining.

The Water Treatment Facility (WTF) utilizes filtration to reduce arsenic, radon, iron and manganese concentrations to levels below regulatory limits. Raw water extracted from the Town's seven rock wells is pumped to the WTF and is treated with sulfuric acid which decreases the pH for optimum iron, manganese and arsenic removal. Sodium hypochlorite promotes oxidation of iron, manganese and arsenic. Ferric chloride absorbs oxidized arsenic. After water passes through the pressure filters, the filtered water flows through two aeration units to remove radon. After aeration, sodium hypochlorite can be added to the water for disinfection. The clearwell, a concrete basin located below the facility, stores the finished water until delivery to the water system. At this point, operators can add potassium hydroxide for final pH adjustment and to provide

corrosion control for customer plumbing, if necessary.

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 assessment for the wells in Seabrook was prepared on June 13, 2000 except for GPW #7 which was prepared on June 10, 2005. These results are shown on the following page.

Note: This information is over eight 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.

Source Assessment Information			
Source Name	Susceptibility Factors		
	Low	Med	High
GPW #1	4	5	3
GPW #2	5	4	3
GPW #3	3	6	3
GPW #4	4	5	3
GPW #7	6	4	2
RW #1	4	4	4
RW #2	4	4	4
RW #3	5	4	3
RW #4	5	5	2
RW #5	5	5	2

GPW – Gravel-packed wells

RW – Rock wells

The complete Assessment Report is available for review at the Water Department office. For more information, call Water Superintendent, Curtis Slayton, at (603) 474-9921 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?

We encourage public interest and participation in our community's decisions affecting drinking water. The Water Superintendent is available during normal business hours at the Seabrook Water Department Office, 550 Route 107 or by calling (603) 474-9921. Also, the Town Manager and Selectmen can be contacted at (603) 474-3311, if additional information is required. The Board of Selectmen/Water Commissioners meets every other Wednesday.

Violations:

1. Arsenic levels above 10 ppb: 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. An arsenic

violation of 19 ppb occurred on a water sample collected at Bedrock Well No. 5 on January 20, 2011. Since the new water treatment facility was placed into service on January 27, 2011 there have been no violations.

2. Total Coliform Violation: 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. An MCL violation for Total Coliform Bacteria occurred on September 15, 2011. Two bacteria samples out of 15 samples taken showed the presence of Total Coliform Bacteria. The MCL states that no more than 1 sample should test positive per month. Repeat samples were taken immediately at the two sites plus upstream and downstream of each site. Water samples were taken from each water supply source. Chlorine levels were increased in the water system. All follow up samples showed the absence of Total Coliform Bacteria. In compliance with NHDES guidelines, a public notice was sent to all customers on October 17, 2011. The length of the violation was one month.

Definitions of Table Terms and Abbreviations

The definitions below are terms used in the Detected Water Quality Results Table.

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.

Abbreviations

ND: Not Detectable at testing limits

NA: Not Applicable

pCi/L: picocuries per liter

ppb: parts per billion

ppm: parts per million

RAA: Running Annual Average

TTHM: Total Trihalomethanes

Sampling Results: The results for detected contaminants listed in the table are from the most recent monitoring done in compliance with regulations ending with calendar year 2011. The DES allows water systems to monitor for some contaminants less than once per year because concentrations of the contaminants do not change frequently. Thus some data present, though representative, may be more than one year old.

Drinking Water Contaminants:

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

Inorganic Contaminants	Units	MCL	MCLG	Max Level Detected	Range	Violation Yes/No	Likely Source of Contaminant
Arsenic	ppb	10	0	19	ND - 19	Yes	Erosion of natural deposits
Barium	ppm	2	2	0.012	0.012 one sample	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (as Nitrogen)	ppm	10	10	1.36	ND – 1.36	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Inorganic Contaminants	Units	MCL	MCLG	90th Percentile	# of Sites Above AL	Violation Yes/No	Likely Source of Contaminant
Copper	ppm	AL=1.3	1.3	0.249 08/06/08	0 out of 30 sites	No	Corrosion of household plumbing systems

Radioactive Contaminants	Units	MCL	MCLG	Average Amount	Range	Violation Yes/No	Likely Source of Contaminant
Compliance Gross Alpha	pCi/L	15	0	0.2	0 – 0.6	No	Erosion of natural deposits
Radon	pCi/L	Unregulated		1340	1340 07/24/08	NA	Erosion of natural deposits
Uranium	ppb	30	NA	2.1	0.9 – 3.6	No	Erosion of natural deposits
Combined Radium (226+228)	pCi/L	5	0	0.7	0.4 – 1.2	No	Erosion of natural deposits

Volatile Organic Contaminants	Units	MCL	MCLG	Max Level Detected	Range	Violation Yes/No	Likely Source of Contaminant
Trichloroethene	ppb	5	0	1.3	ND - 1.3 05/07/11	No	Discharge from metal degreasing sites and other factories
CIS-1,2-Dichloroethylene	ppb	70	70	0.5	ND - 0.5 05/07/11	No	Discharge from industrial chemical factories
Haloacetic Acids (HAA5s)	ppb	60	NA	1.1	ND – 1.1	No	By-product of chlorination
Total Trihalomethanes (TTHMs)	ppb	80	NA	15	1.5 - 15	No	By-product of chlorination

Volatile Organic Contaminants	Units	MRDL	MRDLG	Yearly Running Ave.	Range	Violation Yes/No	Likely Source of Contaminant
Chlorine	ppm	4	4	0.34	0.03 - 0.90	No	Water additive used to control microbes

Microbiological Contaminants		MCL	MCLG	Max Level Detected	Range	Violation Yes/No	Likely Source of Contaminant
Total Coliform Bacteria		> 1 per month	0	2 of 15	0 - 2	Yes	Naturally present in the environment