

2019 Consumer Confidence Report

Town of Seabrook Water System

PWS ID# 2111010

Introduction

Like any responsible public water system, our mission is to deliver the best-quality drinking water and reliable service at the lowest, appropriate cost. 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, the Department completed several projects including cleaning and redeveloping Gravel Packed Well No. 7, continuation of the water supply exploration program on Stard Road known as the Fogg property, replacement of the SCADA radio system that provides communication between the treatment plant, wells and storage facilities, and the closure of the Gruhn remediation wells on Route 107 per NHDES guidelines. Green and Company donated 41 acres land known as the Pineo Farm property off Stard Road to the Town for a future wellfield.

Woodcock & Associates Inc. in joint effort with Raftelis Financial Consultants completed the rate study for the water and sewer departments in 2018. The Board of Selectmen adopted a new rate schedule effective January 1, 2019 to close the nearly 2 million dollar operational deficit of the departments which will remove the operational costs from the tax base in 2019.

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).

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 rockwells located in the western part of town. These wells supplied approximately 372 million gallons of water to the Town in 2018. The gravel-packed wells range from 50 to 125 feet deep. The rockwells are 400 to 500 feet deep.

Gravel-Packed Wells 1, 3 and 7 pump water directly into the distribution system and are chlorinated with sodium hypochlorite. Raw water is pumped to the WTF from nine wells consisting of seven bedrock wells and two gravel-packed wells. The WTF process includes greensand filtration for iron, manganese, and arsenic removal and bubble aeration for radon removal. The raw water 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 and the aeration units, 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 add potassium hydroxide for final pH adjustment and optimal corrosion control for customer plumbing.

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 (EPA'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 noted in the Source Assessment Information table.

Note: This information is over ten 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 and RW 2	4	4	4
RW 3	5	4	3
RW 4 and RW 5	5	5	2

GPW – Gravel-packed well; RW – Rockwell

The complete Assessment Report is available for review at the Water Department Office, 550 Route 107. For more information visit the NHDES Drinking Water Source Assessment website at: <http://des.nh.gov/organization/divisions/water/dwgb/dwspp/dwsap.htm>.

How can I get involved?

For more information about this report, or any questions relating to your drinking water, please call George Eaton, Primary Operator, at (603) 474-9921 or send an email to gmeaton@seabrooknh.org. 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 Monday.

Violations and Other Information:

On July 13, 2018, laboratory results showed a positive E. Coli for one sample taken during the routine monthly sampling of the distribution system. After further testing demonstrating the absence of E. Coli and total coliform and inspections of the water system by a representative of the NHDES office and the Water Department, the NHDES concluded that there were no apparent causes for the detection of E. Coli.

Definitions of Table Terms and Abbreviations

The following definitions 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
 pCi/L: picocuries per liter
 ppb: parts per billion
 ppm: parts per million
 ppt: parts per trillion
 RAA: Running Annual Average

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 2018. 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.

System Name: Seabrook PWS ID: 2111010
2019 Report (2018 data)

DETECTED WATER QUALITY RESULTS

Contaminant (Units)	Level Detected	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Microbiological Contaminants						
<i>E. coli</i> Bacteria	1 positive Although <i>E.coli</i> was detected, the system did not violate the <i>E.coli</i> MCL. See explanation in Health Effects of Contaminant.	0	0	NO	Human and animal fecal waste	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. On 7/13/18, a water sample tested positive for <i>E. coli</i> . Further sampling of the water system on 7/14/18 and 7/16/18 showed an absence of <i>E.coli</i> . The NHDES and the Water Department conducted inspections of the water system and found no deficiencies. The NHDES concluded that there were no apparent causes for the detection of <i>E. coli</i> .
Radioactive Contaminants						
Uranium (ug/L)	3.3 One sample	30	0	NO	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Combined Radium 226 + 228 (pCi/L)	1-4 (2016)	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						
Arsenic (ppb)	ND-3.5	10	0	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	(5 ppb through 10 ppb) 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. (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.
Barium (ppm)	0.0191- 0.0299	2	2	NO	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)	0.16 - 0.75 RAA = 0.39	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.

Nitrate (as Nitrogen) (ppm)	ND-1.21	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	(5 ppm through 10ppm) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Volatile Organic Contaminants						
Haloacetic Acids (HAA) (ppb)	3.7-5.0	60	NA	NO	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) (ppb)	19-32	80	N/A	NO	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.

LEAD AND COPPER

Contaminant (Units)	Action Level	90 th percentile	Date	# of sites Above AL	Violation Yes/No	Likely Source of Contamination	Health Effects of Contaminant
Copper (ppm)	1.3	0.53	8/3/18 to 9/5/18	0 of 30 Sites	NO	Corrosion of household plumbing systems	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)	15	3.3	8/3/18 to 9/5/18	0 to 30 Sites	NO	Corrosion of household plumbing systems	(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 deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

ADDITIONAL TESTING

Additional Tests & Secondary MCLs (SMCL)	Results	Date	Treatment technique (if any)	AL, SMCL or AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Sodium (ppm)	37-53	7/23/18		100-250	We are required to regularly sample for sodium