



# 2020 Drinking Water Quality Report

## *Yarmouth Water Department*

99 Buck Island Road • West Yarmouth, MA 02673 • 508-771-7921

Massachusetts Public Water Supplier #4351000

This report is a snapshot of drinking water quality that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. This publication is mandated by the federal public right-to-know regulation requiring community water suppliers to provide specific treated water quality information annually to their customers. Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP). They inspect our system for its technical and managerial capacity to provide safe drinking water to you. Furthermore, your water system is operated by Massachusetts Certified Drinking Water Operators.

### Yarmouth's Water Sources

Within the Town of Yarmouth, there are 24 groundwater wells that draw water from two aquifers or lenses. The Sagamore Lens, which supplies most of the water for Yarmouth, and the Monomoy Lens. Your tap water may come from either of these sources depending upon where you live and the time of year. Emergency water supplies can be achieved through interconnections with the Dennis Water District and the Barnstable Fire District. No emergency water supplies were required in 2020. In addition to the 24 Well Pump Stations (PS) listed in the table to the right, the Town operates three water storage tanks, 2,115 hydrants, 282 miles of main and over 16,000 service connections.

The Yarmouth Water Department is currently able to utilize minimal treatment technologies due to the high quality of our source water. The Department owns and protects over 963 acres of land surrounding well fields and aquifer recharge areas to help ensure continued high quality water sources. We also inspect these areas regularly for any condition that could adversely affect the water quality. In addition, our staff, in conjunction with the Health Department, reviews and comments on local land development plans near our well fields that could impact water quality.

### Is My Water Treated?

Potassium Hydroxide is added for adjusting the pH of your water. We do this to achieve a pH range of 6.8 to 7.5 in an effort to make your water pH neutral or less corrosive.

Name	Location	Source ID
PS 1 Main	Union Street	4351000-01G
PS 1	Higgins Crowell Road	4351000-02G
PS 2	Higgins Crowell Road	4351000-03G
PS 3	Higgins Crowell Road	4351000-04G
PS 4	Long Pond Drive	4351000-05G
PS 5	Long Pond Drive	4351000-06G
PS 6	North Main Street	4351000-07G
PS 7	North Main Street	4351000-08G
PS 8	North Main Street	4351000-09G
PS 9	North Main Street	4351000-10G
PS 10	Forest Road	4351000-11G
PS 11	Kristin Path	4351000-12G
PS 13	Chickadee Lane	4351000-13G
PS 14	Higgins Crowell Road	4351000-14G
PS 15	North Dennis Road	4351000-15G
PS 16	North Dennis Road	4351000-16G
PS 17	Horse Pond Road	4351000-17G
PS 18	Chickadee Lane	4351000-18G
PS 19	Chickadee Lane	4351000-19G
PS 20	Higgins Crowell Road	4351000-20G
PS 21	North Dennis Road	4351000-21G
PS 22	North Dennis Road	4351000-22G
PS 23	Mid-Tech Drive	4351000-23G
PS 24	Higgins Crowell Road	4351000-24G

**Landlords, please forward this important document to your tenants.** Additional copies and more information can be found at [www.yarmouth.ma.us/139/Water](http://www.yarmouth.ma.us/139/Water). If you have questions about this report or are interested in learning more about Yarmouth's water system, call Water & Wastewater Superintendent, Laurie Ruzala, at 508-771-7921. You may also attend the Board of Selectmen meetings. For more information about Board of Selectmen meetings, visit [www.yarmouth.ma.us/65/Selectmen](http://www.yarmouth.ma.us/65/Selectmen).

## Important Information About Drinking 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency (EPA)'s Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap 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 presences 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 stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, and 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants** can be naturally occurring or be the result of oil and gas production, and mining activities.

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/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, the MassDEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug Administration and the MA Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

### New Customer Portal!

The Yarmouth Water Department recently released a new Customer Portal! Through this portal, you can review past water usage trends, monitor current water use, set daily or billing cycle high usage alarms, or create vacation alarms. Please visit [www.yarmouth.ma.us/1887/Customer-Portal](http://www.yarmouth.ma.us/1887/Customer-Portal) for more information!

### Important Definitions

**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.

**Office of Research and Standards Guideline (ORSG):** This is the concentration of a chemical in drinking water at or below which adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**90th Percentile:** Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the action level to determine lead and copper compliance.

**Unregulated Contaminants** are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

**ppm:** parts per million or milligrams per liter (mg/L)

**ppb:** parts per billion or micrograms per liter (µg/L)

## 2020 Water Quality Testing Results

We test our water regularly through a certified laboratory. During 2020 we collected thousands of water samples in the system that were then tested for compliance with federal and state health standards both at the source and throughout the distribution system. State and federal regulators routinely monitor our compliance and testing protocols to assure that we deliver safe drinking water to our customers. The water quality information presented in the tables is from the most recent round of testing done in accordance with the regulations. All results are from samples collected during the last calendar year unless otherwise noted in the tables. Only the detected contaminants are shown.

Microbial Contaminants								
Fecal Indicator	Highest % Positive in a month	MCL	MCLG	Violation (Y/N)	Possible source of contamination			
Total Coliform Bacteria	2.5	<5%	0	NO	Naturally present in the environment.			
Lead and Copper								
Substance	Date Collected	90 <sup>th</sup> percentile	Action Level	MCLG	# of Sites Sampled	# of Sites above the AL	Possible source of contamination	
Copper (ppm) <sup>1</sup>	Sept, 2019	0.24	1.3	1.3	30	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	
Lead (ppb) <sup>1</sup>	Sept, 2019	1.4	15	0	30	0	Corrosion of household plumbing systems; Erosion of natural deposits	
Inorganic Contaminants, VOC's, Nitrates, Nitrites								
Substance	Date Collected	Highest Detect Level	Range Detected	Average Detected	MCL	MCLG	Violation?	Possible source of contamination
Nitrate (ppm)	2 <sup>nd</sup> quarter 2020	5.7	0.34–5.7	2.41	10	10	NO	Runoff from fertilizer use. Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite (ppm)	1 <sup>st</sup> quarter 2020	1.3	0.11-1.3	0.37	1.0	1.0	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Secondary Contaminants								
Substance	Date Collected	Highest Detect Level	Range Detected	Average Detected	SMCL	OSRG or Health Advisory <sup>2</sup>	Possible source of contamination	
Manganese (ppb)	2 <sup>nd</sup> quarter 2020	910 <sup>3</sup>	0-910	140	50	300	Erosion of natural deposits.	
Unregulated Contaminants								
Substance	Date Collected	Highest Detect Level	Range Detected	Average Detected	ORSG		Possible source of contamination	
Chloroform (ppb)	2 <sup>nd</sup> quarter 2020	5.7	0-5.7	2.27	70		Occurs naturally on Cape Cod. Future studies by MassDEP are planned to determine why.	

<sup>1</sup> Most of the data presented in this table is from testing done during the 2020 calendar year. We monitor for some contaminants less than once per year, because the concentrations for those contaminants are not expected to vary significantly from year to year. As a result, some of our data, though representative, is more than a year old. For those contaminants, the date of the last sample is shown in the table.

<sup>2</sup> EPA and MassDEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects and a one-day and 10-day health advisory of 1000 ppb for acute exposure.

<sup>3</sup> The pump station with the highest level detected was resampled for manganese one month later and the result was 37 ppb. The Department will continue to monitor manganese levels at this location.

## Information About Lead

If present, elevated level 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. Yarmouth Water 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 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Information About Manganese

Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The EPA and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 µg/L (microgram per liter), or 50 ppb. In addition, MassDEP's Office of Research and Standards (ORS) has set a drinking water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese. Drinking water may naturally have manganese and, when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children younger than one year old should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for more than a total of ten days throughout the year. The ORSG differs from the EPA's health advisory because it expands the age group to which a lower manganese concentration applies from children less than six months of age to children up to one year of age to address concerns about children's susceptibility to manganese toxicity.

## Information About Nitrate and Nitrite

Nitrate or Nitrite in drinking water at levels above 10 ppm or 1 ppm, respectively, is a health risk for infants of less than six months of age. High nitrate/nitrite 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.

## Source Water Assessment Program (SWAP)

MassDEP has prepared a SWAP Report for the water supply sources serving our community. The SWAP Report assesses the susceptibility of public water supplies. There are a number of land uses and activities that are potential sources of contamination. The SWAP Report notes the following key issues for our sources; inappropriate activities in Zone I's, residential land uses, hazardous materials, transportation corridors, oil or hazardous material contamination sites, and comprehensive wellhead protection planning. Yarmouth was assigned susceptibility ranking of high. This ranking does not imply that Yarmouth has poor water quality or will have poor water quality in the future. It only draws attention to various activities within the watershed that may be potential sources of contamination. The complete SWAP report is available at the Water Division, Board of Health, and online at [www.mass.gov/service-details/the-source-water-assessment-protection-swap-program](http://www.mass.gov/service-details/the-source-water-assessment-protection-swap-program). For more information, contact Laurie Ruzala, Water & Wastewater Superintendent at 508-771-7921.

## Cross Connection Control Program

A Cross Connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. An attachment called a backflow-prevention device can prevent this problem. Yarmouth Water Department recommends the installation of such devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town!