



Our Water is a Precious Resource!
CONSERVE ... Every Drop Counts!

2022 WATER QUALITY REPORT

Sandwich Water District

Cape Cod, Massachusetts
72 Tupper Rd., PO Box 600
Sandwich, Massachusetts 02563-0600
508-888-2775

Dan Mahoney, Superintendent



2022 WATER QUALITY REPORT

This annual report on the quality of the water delivered by the Sandwich Water District contains information about the source of your water, its constituents, and associated health information. We are pleased to report the results of our 2021 water testing and inform you about your drinking water as required by the Federal Safe Drinking Water Act.

Where does my water come from?

**Town of
Sandwich**

The Sandwich Water District serves a winter population of 17,750 and throughout the summer months serves an estimated 23,000 consumers from Groundwater Wells #2 through #11 in 3 pressure zones. Wells #2, #3 and #9 are located at the Boiling Springs Well Field in East Sandwich; Well #7 is located at the Nye Pond Well Field and serve LZ1. Wells #4, #6 and #10 can be found at the Pinkham Road Well Field and serve HZ. Wells #8 is located on Farmersville Road, Well #11 is located at the Bob's Field Well Field. Well #5 is located at the Weeks Pond Well Field and serve LZ2. Well #1 has been off-line since 1976 and was abandoned in 1998.

For additional water supply, interconnections exist between Sandwich and the Bourne Water District, Centerville, Osterville, and Marstons Mills Water District and the Upper Cape Regional Water Supply Cooperative.

***WELL LOCATIONS**

Map not to Scale

The water from each District Well and the Rte 130 Booster Station are treated with Sodium Hydroxide to control corrosion of household plumbing. Wells #2, #3, #5, #7, #8, #9 and #11 are treated with Sodium Hypochlorite (chlorine) for disinfection purposes. Well #8 is treated with sodium hexametaphosphate to sequester Iron. Wells #4, #6, #10 and Rte 130 Booster Station are treated with Zinc Orthophosphate to inhibit tetrachloroethylene leaching from vinyl lined asbestos cement pipe.

The Sandwich Water District maintains an interconnection (Rte 130 Booster Station) with the Upper Cape Regional Water Supply Cooperative (UCRWSC) PWS ID # 4261024 and during 2021 received approximately 42,544,000 gallons of water from the Cooperative. The UCRWSC consists of three groundwater supply wells located on the Massachusetts Military Reservation. A Board of Managers representing four member public water supply systems manages the Cooperative. The member public water supply systems include the Town of Falmouth, Bourne Water District, Mashpee Water District and Sandwich Water District. The Cooperative also has the capacity to supply water to the Otis Air National Guard public water system.

Wells #1, #2 and #3 are located in a forested area of the northeastern portion of the Massachusetts Military Reservation (MMR). The MMR has adopted a Groundwater Protection Plan to prohibit inappropriate activities in the Zone II areas of community public water supply wells. In addition, the creation of the Environmental Management Commission provides oversight over activities on the northern portion of the MMR. For information regarding the Groundwater Protection Plan call Elizabeth Kirkpatrick at 508-968-6696. For information regarding the Environmental Management Commission call Leonard Pinaud at 508-946-2871.

The Sandwich Water District, Public Water System Identification #4261000

The Sandwich Water District is committed to providing consumers with high quality drinking water. Analyses conducted by Ma. DEP certified laboratories are an integral part of ensuring that the water meets or surpasses the state and federal standards for quality and safety. Per the Federal safe drinking water act regulations the Water Quality Information Table below shows only the substances in drinking water that we detected during calendar year 2021 (unless otherwise noted), although the presence of these substances in the water does not necessarily indicate that the water poses a health risk, we feel that it is important that you know exactly what and how much was detected.

Terms and Abbreviations

- MCLG - Maximum Contaminant Level Goal - 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.
- MCL - Maximum Contaminant Level - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible with available treatment technology
- SMCL – Secondary Maximum Contaminate Level – Standards developed to protect the aesthetic qualities of drinking water and are not necessarily health based.
- AL - Action Level - the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- MRDLG – Maximum Residential Disinfectant Level Goal – the level of a drinking water disinfectant below which there is no known or expected risk to health.
- ND - Not Detectable at testing limit
- ppm – parts per million or milligrams per liter
- ppb – parts per billion or micrograms per liter
- pCi/l – picocuries per liter (a measure of radioactivity)
- ppt – parts per trillion or nanograms per liter
- n/a – not applicable
- ORSG – Ma DEP Office of Research and Standards Guidelines

WATER QUALITY INFORMATION TABLE – 2021 DATA

Contaminant	MCLG	MCL	Highest Result or Average	Range of Detections	Violation	Typical Source in Drinking Water
Organics						
Tetrachloroethylene (PCE)* (ppb)	0	5	0.9	ND – 1.88	No	Leaching from vinyl-lined transite water mains
PFAS6**** (ppt)	0	20	19	ND – 34	No	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings or fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foam.
Disinfectants and Disinfection Byproducts						
Chlorine (Free) (ppm)	4	4	.045	.03 – .06	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	n/a	60	1	ND – 1.8	No	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	n/a	80	4	ND – 7.3	No	By-product of drinking water disinfection
Radionuclides						
Gross Alpha (pCi/l)	n/a	15	0.24	-1.16 – 0.24	No	Erosion of natural deposits
Radium-226 (pCi/l)	n/a	5	0.36	0 – 0.36	No	Erosion of natural deposit
Radium 228 (pCi/l)	n/a	5	0.93	-0.01 – 0.93	No	Erosion of natural deposit
Unregulated						
Perfluorohexanoic acid**** (PFHxA) (ppt)	n/a	n/a	1.2	ND - 2	No	Man-made chemical (See PFAS6 above)
Perfluorobutanesulfonic acid**** (PFBS) (ppt)	n/a	n/a	1.9	ND – 4	No	Man-made chemical (See PFAS6 above)
Chloroform (ppb)	n/a	70	2.2	ND – 2.2	No	By-product of chlorination, May be naturally occurring
Manganese** (6/18/2020) (ppb)	50	300	49	ND – 49	No	Mineral that naturally occurs in rock and soil
Sodium *** (3/30/2020) (ppm)	n/a	20****	47	21 – 47	No	Erosion of natural deposits, road salt run-off
Inorganics						
Nitrate (ppm)	10	10	2.8	0.1 – 2.8	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
Perchlorate (data from 2020) (ppb)	2	2	ND	ND – ND	No	By-product of Blasting additives
Lead and Copper Sampling						
Lead (data from 2020) (ppm)	0.015	AL=0.015	0.0048	1 out of 30	No	Corrosion of household plumbing systems
Copper (data from 2020) (ppm)	1.3	AL=1.3	0.236	0 out of 30	No	Corrosion of household plumbing systems
Microbiological						
Coliform (colonies present)	0	>5%	0	0 out of 36	No	Naturally occurring in the environment

NOTES:

*PCE was detected in the distribution system at an annual average of 0.9 parts per billion, which is below the limit set by the U.S. Environmental Protection Agency (EPA). This substance leaches into the water from vinyl lined transite water pipe.

**These are unregulated contaminants. According to EPA Secondary Drinking Water Regulations (SMCL) for Manganese is 50 ppb. US EPA and MassDEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects. Results compiled from Unregulated Contaminant Monitoring Rule (UCMR4)

*****A note about Sodium** - Sodium is not a regulated parameter, but the EPA has a guidance level of 20 ppm. High levels of salt intake may be associated with hypertension in some individuals.

**** **PFAS** - On October 2, 2020, MassDEP published its PFAS public drinking water standard of 20 nanograms per liter (ng/L) (or parts per trillion (ppt) – for the sum of the concentrations of six specific PFAS, which MassDEP abbreviates as “PFAS6.” The MCL is an enforceable standard, set at a level that is safe to drink for an entire lifetime. The Sandwich Water District conducted the required PFAS sampling of all the District’s public water supply wells starting in April 2021 and again in July 2021. All results from April and received in May were below the reporting limit. The results from July and received in August, were also below the reporting limit with the exception of Well 9 which indicated PFAS6 was detected at a level of 5 ppt. This detection required a confirmation sample be taken within 14 days and was completed in August. The confirmation sample results, received in September indicated PFAS6 was detected at 33.6 ppt. MassDEP Regulations require the original and confirmation sample results be averaged and is 19.3 ppt which is below the Maximum Contaminant Level. In November Wells 2&3 also tested positive for small amounts of PFAS6 (2.6 ppt). Although not a violation, as precautionary measures Sandwich Water District removed Well 9 from service in August and 2&3 in November. The affected wells were all in District low zone 1 and will remain offline as we investigate the source of the PFAS and develop a mitigation plan. Please visit our website <https://www.sandwichwater.com> for more details and updates.

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, radio-active material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination. 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What is potentially in the source water?

The following contaminants may be present in source water before treatment.

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants, such as salts and metals, 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, may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Radioactive contaminants, can be naturally occurring or be the result of oil and gas production and mining activities.

Organic chemical contaminants, include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Is tap water safe for everyone to drink?

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. Contact EPA's Safe Drinking Water Hotline for more information about contaminants and potential health effects; and EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants: 1-800-426-4791.

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. The Sandwich Water District 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 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 <http://www.epa.gov/safewater/lead>.

What is being done to ensure that my tap water is safe to drink?

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

How can I learn more about water issues?

You are welcome to attend the Board of Water Commissioners meetings held at the Sandwich Water District Office, 72 Tupper Road, Sandwich, MA. The Board meetings are usually scheduled for the second Thursday of each month at 5:00 p.m. and the Annual Water District Meeting is scheduled for the third Monday in May.

**For more information on the
Sandwich Water System contact:
Daniel H. Mahoney, Superintendent
Sandwich Water District
508-888-2775 or visit
www.sandwichwater.com**

**Sandwich Board of Water Commissioners
Richard W. Anderson, Chairman
Peter S. Thomas, Commissioner
Peter D. Howell, Commissioner**

In 2021, the Sandwich Water District...

- maintained full compliance with all Federal and State regulations.
- SWD maintains a system total of approximately 146 miles of water main.
- withdrew 653.891 million gallons of water from all sources.
- withdrew the maximum daily amount of water on June 6th, 2021: 4.306 million gallons.
- The Sandwich Water District provides water to 7,253 metered service connections.
- The Sandwich Water District maintains a total of 1333 hydrants to provide fire protection service.

WATER CONSERVATION TIPS

The lack of precipitation can cause serious water supply shortages for communities on Cape Cod. Please conserve water—both indoors and outdoors—so sufficient supplies will be available to serve homes and businesses, maintain adequate water supply pressure, and provide fire protection.

- Water your lawn and garden only when they need it.
- Plant drought-resistant trees and plants.
- Water during the cool parts of the day, generally early in the morning.
- Place mulch around trees, shrubs and flowers to retain moisture.
- Don't run the hose while washing your car.
- Use a broom, not a hose, to clean driveways and sidewalks.
- Turn off the water while shaving or brushing your teeth.
- Take shorter showers.
- Use dishwashers and washing machines only for full loads.
- Keep a bottle of drinking water in the refrigerator so you don't run the tap when you want a cold drink
- Repair leaks in pipes, hoses, faucets and toilets
- Install low flow shower heads and faucet aerators

Go to the following link for additional Conservation Tips

<http://www.mass.gov/eea/agencies/massdep/water/watersheds/nonpoint-source-pollution-education-car-washing.html>

PROTECT YOUR DRINKING WATER FROM CROSS CONNECTIONS

A cross connection occurs whenever a potable drinking water line is directly or indirectly connected to a piece of equipment or piping containing non-potable water. In the event of a backflow incident, through either backpressure or back-siphonage, an unprotected cross connection in your home could cause the water system within your home and also within the water distribution system in the street to become contaminated.

The outside water tap and garden hose tend to be the most common cross connection in the home. The garden hose becomes a hazard when connected to a chemical sprayer for weed killing and fertilizer applications. This cross connection can be easily protected by purchasing a small device known as a vacuum breaker. Vacuum breakers can be purchased at your local hardware store and are very inexpensive and easy to install. The vacuum breaker should be installed on all your outside faucets.

Other potential cross connections can occur on lawn irrigation systems and fire protection systems. For more information on cross connections, please feel free to contact the Sandwich Water District.

2022 HAZARDOUS WASTE COLLECTION

For information on the 2022 Hazardous Waste Collection visit, www.loveyourlocalwater.org or please contact Cape Cod Cooperative Extension @ 1-800-319-2783, website www.capecodextension.org.

The improper disposal of hazardous materials can cause serious contamination to water supplies and the environment. As residents of Cape Cod we all can contribute to protecting our natural resources through proper waste disposal.

Do not pour hazardous wastes or paints down any septic systems, private or public drains, on the ground or into waterways. Safe disposal of materials through the Hazardous Waste Collection Program will help to keep to our drinking water and our community pollution-free.