

# Tisbury Water Works

## 2022 WATER QUALITY REPORT



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### Governing Board

Tisbury Board of Water  
 Commissioners  
 David J. Schwab, Chairman  
 Roland Miller • Elmer Silva

### Monthly Meetings

*Open to the public*

First Wednesday of every  
 month, 4:00pm at our  
 office 400 W. Spring St.



*If you wish to speak at a meeting, please call the office in advance to be scheduled on the agenda. Agendas are posted on the Town's website at least 48 hours in advance.*

*We are pleased to present the annual Water Quality Report for 2022 and other helpful information.*

The Safe Drinking Water Act (SDWA) requires that utilities issue an annual "Consumer Confidence" report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. TWW is committed to providing you with the safest and most reliable water supply. A Sanitary Survey is performed periodically by the Massachusetts Department of Environmental Protection (MassDEP) and is available upon request. This survey is conducted to ensure the TWW is following guidelines, policies and regulations as set forth by the MassDEP.

**Informed consumers are our best allies in maintaining safe drinking water.**

### IMPROVING OPERATIONS

We are continuing with the water main replacement project in the West Chop area to improve water quality and enhance fire flow protection. Thank you for your patience during the off-season site work.

For more info about contaminants and their potential affects you can call the EPA's Safe Drinking Water Hotline (SDWH) 1-800-426-4791

Drinking water, included bottled, may reasonably be expected to contain at least some small amounts of contaminants. It doesn't necessarily indicate that the water poses a health risk.

## Where Does Our Water Come From?

The Tisbury Water Works (TWW) receives its water from three supply sources: the Sanborn, Tashmoo and Manter Wells. All sources are groundwater supplied from the Island's sole source aquifer.

An Aquifer is an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, silt or clay) from which groundwater can be extracted. An aquifer is recharged from rainwater and snowmelt, and from lakes and rivers. Groundwater can easily be polluted by seepage from landfills, septic tanks, from leaky underground fuel tanks, and sometimes from fertilizers or pesticides. Once polluted, the water becomes no longer safe to drink. By refusing sources of pollution, our groundwater will continue to be an important natural resource.

The **Sanborn** Well (Well #1), off Edgartown Road, is a 220 foot deep gravel-packed well, in operation since 1952. It is currently capable of pumping 950 gallons per minute (gpm).

The **Tashmoo** Well (Well #2) on W. Spring St., is a 219 foot deep gravel-packed well, in operation since 1965. It is currently capable of pumping 850 gpm.

The **Manter** Well (Well #3) off Old Holmes Hole Road, is a 215 foot deep gravel-packed well, and was put on-line in 2004. It is capable of pumping 1,000 gpm.

There is an emergency interconnection with the Oak Bluffs Water District (OBWD) on Edgartown Rd. This allows TWW to get water from OBWD in an emergency, ensuring a constant supply of water to our customers.



## Some Terms Defined:

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

**Maximum Contaminant Level Goal (MCLG):** the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

**Maximum Contaminant Level (MCL):** the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**Secondary Maximum Contaminant Levels (SMCL):** these standards are developed to protect the aesthetic qualities of drinking water and are not health-based.

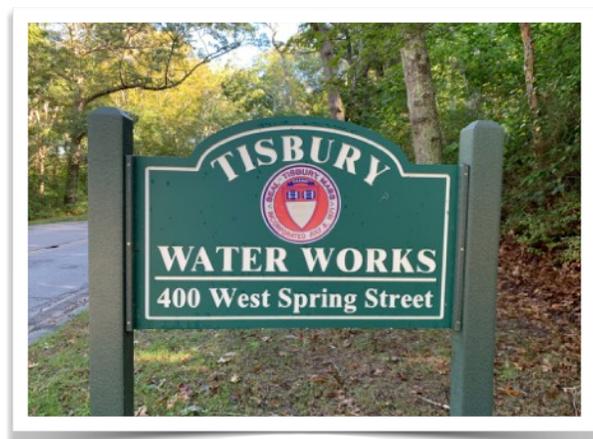
**Massachusetts Office of Research and Standards Guideline (ORS):** this is the concentration of a chemical in drinking water, at or below which, adverse non-cancer health effects are likely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further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

**Total Coliform:** a bacteria that indicates other potentially harmful bacteria may be present.

**90th Percentile:** out of every 10 homes, 9 were at or below this level.

### CROSS CONNECTION CONTROL

Tisbury Water Works recommends the installation of Hose Bibb type vacuum breakers on all outside faucets. This will protect residents from the potential of backflow into their homes and the water system from a hose connection. Studies have shown that hoses are the most commonly unprotected cross connection.



This table shows the results of our water quality analysis. Although we run well over 1,000 different tests throughout the year, the table below lists the only substances that we detected in the water, even in the most minute traces. They are all below the Maximum Contaminant Levels. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals of public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

Contaminants		2022 Water Quality Table					PWSID #4296000		
Regulated Substances	Date Tested	Units	MCL	MCLG	Avg. Detected Level	Range	Major Sources	Violation (Yes/No)	
<b>Inorganic Contaminants</b>									
Barium	2022	ppm	2	2	0.012	n/a	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits;	No	
Nitrate	2022	ppm	10	10	0.340	0.26-0.39	Runoff from fertilizer use; leaching from septic tanks; sewerage; erosion of natural deposits	No	
Asbestos	2022	MFL	7	0	ND	n/a	Asbestos-cement water main pipe.	No	
Sodium- Sanborn Well	2022	ppm	-	20	16.9	n/a	Road run-off and corrosion control chemicals;	No	
Perchlorate	2022	ppb	2		0.067	0.063-0.072	Rocket propellants, fireworks, munitions, flares, blasting agents	No	
<b>Radioactive Contaminants</b>									
Gross Alpha Activity	2021	pCi/L	15	0	-0.037	-0.079 - 0.006	Erosion of natural deposits	No	
Radium 226 & 228	2021	pCi/L	5	0	0.49	0.21 - 0.77	Erosion of natural deposits	No	
<b>Volatile Organic Contaminants</b>									
Tetrachloroethylene (PCE)	2022	ppb	5	0	0.53	ND - 0.59	Lining of asbestos cement water mains	No	
<b>Lead &amp; Copper</b>									
- Tap water samples were collected for lead and copper analysis from 31 homes throughout the service area.									
			AL		90th Percentile		Major Sources		
Lead	2021	ppb	15	0	5.6	ND - 22	Corrosion in household plumbing	No	
Copper	2021	ppm	1.30	1.30	0.305	0.023 - 0.352	Corrosion in household plumbing	No	
<b>Unregulated Substances</b>									
	Date	Units	SMCL	ORSG	Average	Range	Major Sources		
Chloroform	2022	ppb		70	2.2	2.1-2.4	Erosion of natural deposits		
Sulfate	2018	ppm	250		3.3	3.0 - 5.3	Naturally occurring in the environment		
Iron*	2018	ppb	300		350	20-350	Natural and industrial sources as well as aging and corroding distribution systems and household pipes		
Manganese	2020	ppb	50	300	18	7 - 18	Naturally occurring in the environment		
Hardness	2018	ppm			7.4	9.3 - 16.0	As CaCO3		
Alkalinity	2018	ppm			25	24.8 - 47.2	As CaCO3		
<b>Unregulated Contaminants Monitoring Rule - 3</b>									
	Date	Units	SMCL	ORSG	Level	Range	Major Sources		
Chromium (Total)	2014	ppb			0.4	ND - 0.4	Naturally occurring element; used in making steel and other alloys; chromium-6 used in chrome plating, dyes and pigments, leather tanning and wood preservation.		
Chromium (IV)	2014	ppb			0.17	0.12 - 0.17	Natural occurring element; used in cathode ray tube televisions.		
Strontium	2014	ppb			31.6	14.5 - 31.6	Agricultural defoliant or dessicant		
Chlorate	2014	ppb			44	ND - 44			
- Unregulated contaminants are those substances for which the EPA has not established drinking water standards. - The purpose of unregulated contaminants monitoring is to assist the EPA in determining their occurrence in drinking water and whether further regulation is warranted.									
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify any problems that were found during these assessments. During the past year, we conducted a Level 1 and Level 2 assessment of the system. A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system on multiple occasions. We found coliform bacteria in our system on September 20 2022 and November 15 2022.									
In response to detecting coliforms, we chlorinated the storage tanks on 11/16/2022 with 0.5 mg/L of chlorine, and then flushed the distribution system. After flushing and chlorinating, repeat samples came back negative. In addition, we have established a proactive tank disinfection and flushing program to prevent future coliform detects. We continue to monitor the water carefully each month for coliforms and other contaminants.									
* Use of water containing iron at concentrations above the secondary MCL may result in aesthetic issues including the staining of laundry and plumbing fixtures and water with an unpleasant metallic taste and rusty odor.									
<b>KEY TO TABLE</b>		ppm - Parts per Million; corresponds to one penny in \$10,000			ND - Non-detect				
n/a - non applicable		ppb - Parts per Billion; corresponds to one penny in \$10,000,000			pCi/L - Picocuries per Liter				

## Source Waters and Their Potential Contaminants

The sources of drinking water (both tap and bottled) 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 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:

*A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring as a result of urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses. D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems. E) 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, the EPA prescribes regulations which limit the amount of certain contaminants in water provide by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.*

## LEAD IN OUR DRINKING WATER

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. **Tisbury Water Works** 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 it 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 <http://www.epa.gov/ground-water-and-drinking-water>

## Is My Water Treated?

Many drinking water sources in New England are naturally corrosive (e.g. they have a pH of less than 7.0). The water they supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages pipes, but can also add harmful metals such as lead and copper to the water. Therefore it is beneficial to add chemicals that make the water neutral or slightly alkaline.

The Tisbury Water Works adds sodium hydroxide (25% NaOH) to its water to increase the pH levels and control corrosion. Testing throughout the water system has shown that this treatment has been effective at reducing lead and copper concentrations, and has helped to retard the corrosion of iron in our old cast iron mains.

## People At Risk

Some people may be more vulnerable to contaminants in drinking water. Immuno-compromised persons, such as those undergoing chemotherapy, those who have had transplants, and people with HIV/Aids or other immune system disorders; and some elderly or infants can be particularly at risk for infections. One can seek advice from their doctors. The EPA/CDC guidelines for appropriate means to lessen the risk of infection by *Cryptosporidium* are available from calling the Safe Drinking Water Hotline 800-426-4791

## YOUR EMERGENCY CONTACT INFO

In the event of an emergency, it is imperative to quickly get ahold of our water customers.

If you have recently changed your telephone number, mailing address or any other contact information, please go to our website and click “Update Your Customer Contact Information” from the green boxes on the left side. It’s also easy to add an emergency contact for when you’re away from the island, or caretaker/plumber to your call list.

[www.tisburyma.gov/tisbury-water-works](http://www.tisburyma.gov/tisbury-water-works)

## Every Drop Counts!



Water is a natural and precious resource.

*Please do your part to help protect our public water supplies.*



## SWAP (Source Water Assessment and Protection)

The Massachusetts Dept. of Environmental Protection has prepared a SWAP Report for The Tisbury Water Works. The report assesses the susceptibility of public water supplies to contamination and makes recommendations. This report is available on our town’s website:

<https://www.tisburyma.gov/tisbury-water-works/faq/what-our-swap-report>

A susceptibility ranking of high was assigned to all wells in our system by the MassDEP based on the presence of one high threat land use within the water supply protection areas. However our wells and drinking water meets or exceeds all US EPA and MassDEP drinking water quality standards.

Be assured that the Tisbury Water Works has addressed concerns as stated in the last SWAP report. In an effort to protect our drinking water supply we have posted signs like the one pictured to the right to advise people when they have entered the Zone 1 of one of our wells. Please use extra care when in these areas to ensure the protection of our precious resource.



*The elevated water tank on High Point Lane contains 350,000 gallons of drinking water.*