

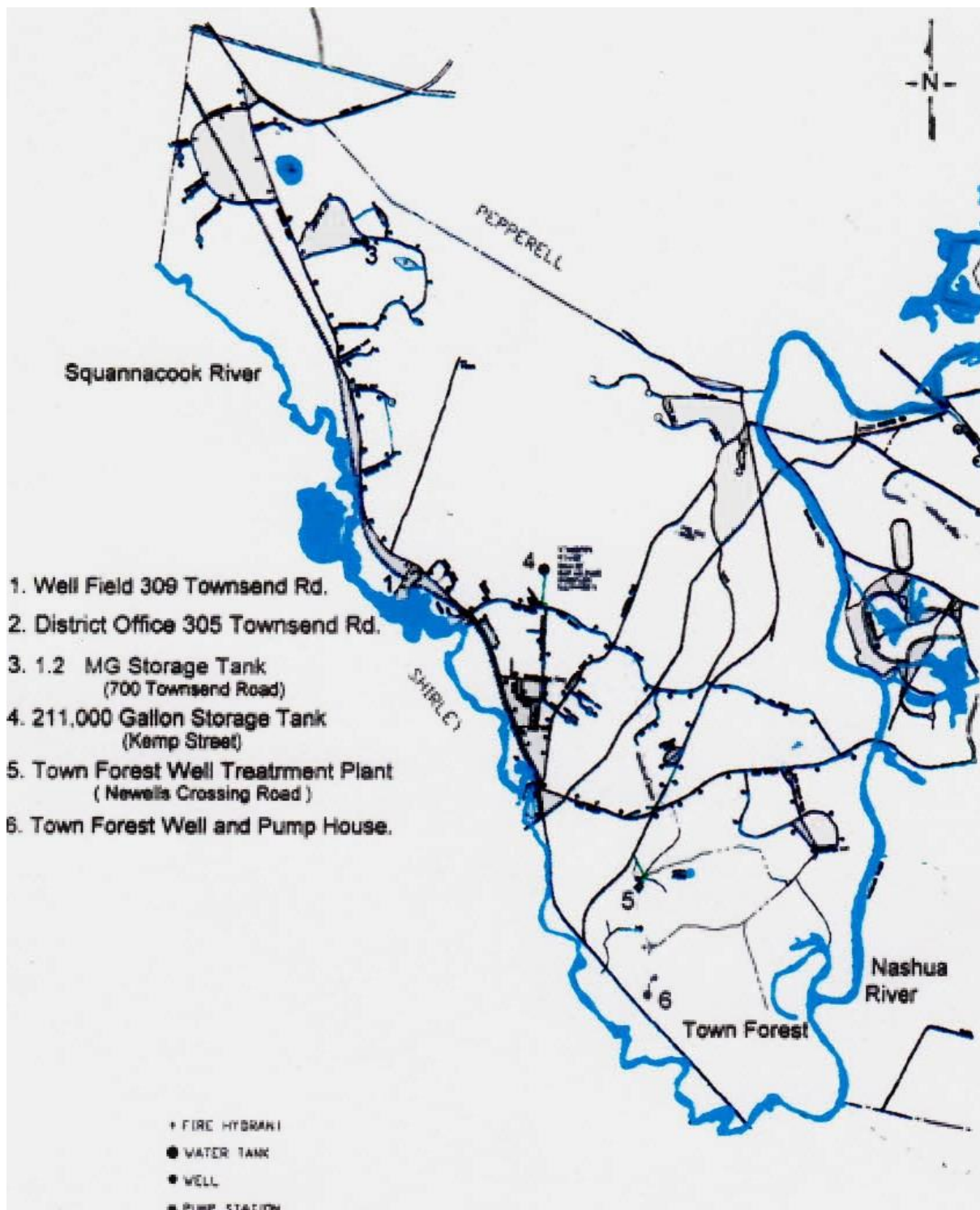
WEST GROTON WATER SUPPLY DISTRICT

Public Water Supply ID # 2115001

Est. 1911



ANNUAL WATER QUALITY REPORT 2015



(not to scale)

PLAN OF WATER DISTRIBUTION SYSTEM

WEST GROTON WATER SUPPLY DISTRICT
 WEST GROTON, MASSACHUSETTS

**West Groton Water Supply District is pleased to present our annual water quality report for 2015.
The following contains information about the District and the quality of the water we provide.**

History

The district was formed in 1911 by Act 641 of the State Legislature. The start of the District was financed by local families who secured a \$25,000.00 bond to install the first 8, 2 ½ inch wells in the well field, the pump station, and a 211,000-gallon storage tank that we still use today. The original pump could only produce 35 gallons per minute.

Where the Water Comes From

West Groton has two sources of water. Well # 1, the original source, now has 47 2 ½ inch wells at 309 Townsend Rd. (**see map**) coupled to a 550 gallon per minute pump that can produce 750,000 gallons per day. Well # 2, the Town Forest Well, located off of West Main Street went on line September 19, 2007 and can produce 650 gallons per minute. During the summer months our current peak daily demand is running at 600,000 gallons per day. West Groton serves 591 residential, 5 agricultural, 2 Institutional, 4 commercial, and 2 municipal accounts for a total of 604 service accounts.

Water System Needs and Improvements

The District priority is to upgrade some of the oldest parts of the distribution system. The Kemp Street Tank is nearing the end of its usable life and will need replacement within the next 15 years. The Townsend Road well field has been prioritized as the next project for rehabilitation. By doing this upgrade, it will insure the District has clean, reliable water for many years to come.

Organization

The District is governed by a three-member Board of Water Commissioners that meet the second Tuesday of each month at 7:00 PM at the District Office located at 305 Townsend Rd. Any one who has business with the Board or simply wishes to attend is welcome to do so. However, due to limited seating, please call ahead so we can move the meeting to a larger location if needed. The Board is elected by the water takers for alternating 3-year terms. One Commissioner is elected at each Annual Meeting held the first Tuesday in April at the District Office at 305 Townsend Rd. West Groton at 7 pm. The current Board Members are Douglas DeNatale, Emmett Risdon, and Robert Blood.

Staff:

Superintendent & General Manager Paul W. Curtin
Advisor / Back-up Operator Gordon K. Newell
Clerk / Treasurer Diana M. Cole
Office Assistant Lisa M. Dearth

Emergency Information

Emergencies, such as leaks or no water, can be reported to the District's office at 978-448-3711 or after hours at (978-337-5265). If you do not reach anyone, call the Groton Police at 978-448-5555. PLEASE DO NOT CALL THE POLICE UNLESS IT'S AN EMERGENCY and you have tried the other numbers first. For general help or information call 978-448-3711 and leave a clear message and phone number. Your call will be returned during normal office hours. (**Please do not call the Groton Water Dept.**)

Water Quality

The water provided by West Groton is of very high quality, and meets or exceeds all Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) standards for safe drinking water. Due to lower demand and our new well, we no longer experience problems with iron and manganese. To prevent mineral deposits, West Groton treats the water with Sodium Hexametaphosphate. We also add Caustic Soda to adjust pH. This also helps prevent the Lead and Copper used in household plumbing from being dissolved into the water.

Water Quality Testing

West Groton currently tests for over 90 different contaminants in its water according to a sampling schedule set up by the DEP to assure the water is safe. Testing is done for bacteria each month at nine different sites in the system. We conduct Lead & Copper Sampling every 3 years and the results are very good. These results can be seen in the table of this report.

Cross Connections

We also have an active Backflow Prevention Program that prevents non-potable or unapproved water from entering our system. A cross connection occurs when any (potable safe for drinking) water supply line is directly or indirectly connected to any other source of water. Non-potable water or even chemicals can end up in your drinking water as a result of back pressure or backsiphonage. Back pressure occurs when the pressure in the unapproved source or equipment is greater than the pressure in the drinking water system. Backsiphonage occurs when the pressure in the drinking water line drops due to routine occurrences such as main breaks, fires, system flushing, or periods of high demand. Contaminants are then drawn into the drinking water supply line. Outside faucets with garden hoses are the most common source of residential cross connections. The garden hose creates a potential hazard when lying on the ground or submerged in non-potable water such as puddles, swimming pools, or when attached to chemical sprayers for applying fertilizers or weed killers. Other residential sources can be private wells, lawn irrigation systems, dish washers and other non-protected appliances connected to the household plumbing. If you would like information about Residential Backflow Prevention, please contact Paul Curtin for assistance.

In commercial buildings, examples of cross connections are holding tanks, cooling towers, heating equipment, air conditioning units, sprinkler systems, and post-mix beverage machines.

As an owner of any unprotected or inadequately protected cross connection, you have the responsibility to maintain your premises so that the drinking water supplied to your home or business is not contaminated through cross connection and that it is not permitted to affect your surrounding neighborhood. Serious illnesses have been caused by cross connections and can be prevented with proper backflow protection.

There are a few simple steps all property owners or tenants can take to protect themselves.

- Survey your home or business to be sure you haven't created a cross connection.
- Install hose bibs on all faucets that can have a hose attached.
- Business owners please notify the Water District prior to adding any new equipment.
- Have all plumbing changes done by a licensed plumber.

If you have any questions or would like further information on cross connection, please call the West Groton Water Supply District and speak to Paul Curtin or call the DEP Drinking Water Program in Boston at 617-292-5770.

Health Risk Information

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 *EPA's* Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone an organ transplant, 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 (800-426-4791).

Arsenic-While your drinking water meets EPA's standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost 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.

Lead- “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. West Groton Water Supply 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 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 <http://www.epa.gov/safewater/lead>.

Sources of Contamination

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, 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas productions, mining, and farming.

Pesticides and herbicides - 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) - 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 - 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 DEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Massachusetts Department of Public Health (DEH) regulations, establish limits for contaminants in bottled water that must provide the same protection for public health.

Definitions

MCL = maximum contamination level. The highest level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG = maximum contamination 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.

AL = action level. The concentration of a contaminant that, 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. Compliance is determined by comparing this number to the action level.

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (ug/l)

pCi/l = picocuries per liter (a measure of radioactivity)

Unregulated contaminants – Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted. For some of these substances, the Massachusetts Office of Research and Standards (ORS) has developed state guidelines or secondary MCLs.

SMCL= secondary maximum contaminant level. These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

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

The following tables list those things that were detected in the water even though there was no violation or expected effect on health at these levels. **Also note the testing date because some tests are not required annually.**

(NEXT TEST SCHEDULED SEPT. 2016)

Lead and Copper	Date Collected	90 TH percentile	Action Level	MCLG	# of sites sampled	# of sites above AL	Exceeds AL (Y/N)	Possible Sources
Lead (PPB)	09/21/13	1	15	0	10	0	N	Corrosion of household plumbing
Copper (PPM)	09/24/13	0.21	1.3	1.3	10	0	N	Corrosion of household plumbing

Note. In the Results Column below, TFW is Town Forest Well and TRWF is the Townsend Rd. Well Field

Inorganic Contaminants	Date (s) collected	Highest result or highest RAA*	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Nitrate TRWF	04/15/15	0.49	0.49	10	10	N	Runoff from fertilizer use; leaching from septic tanks; natural deposits
TFW	04/15/15	0.1	0.1	10	10	N	
Iron TRWF	11/3/15	0.032	0.032	0.3	0.3	N	Erosion of natural deposits.
TFW	11/3/15	ND	ND	0.3	0.3	N	
Radioactive Contaminants (Next test 2017)							
Radium 226 (pCi/L) TFW	04/12/12	0.1	0-0.2	5	0	N	Decay of natural and manmade deposits.
Radium 228 (pCi/L) TFW	04/12/12	0.0+/-0.7	0-0.2	5	0	N	Decay of natural and manmade deposits.
Disinfection Contaminants							
Total Trihalomethanes (TTHMs) (ppb)	Annually	ND	ND	80	-	N	Byproduct Of drinking water chlorination.
Chlorine (ppm)	Monthly	0.03	0.01-0.04	4	4	N	Water additive used to control microbes.

RAA* = Highest running annual average of the four consecutive quarters.

Unregulated/Secondary Contaminants	Date Collected	Range Detected	Average	SMCL	ORSG	Possible Sources
Sulfate (PPM) TRWF TFW	11/3/15	6.7	6.95	250	-	Natural Sources
	11/3/15	7.2		250		
Sodium TRWF TFW	04/15/15	10.3	9.55	-	20	Natural sources; runoff from road salt
	04/15/15	8.8				

Source Water Assessment and Protection (SWAP)

The SWAP report is compiled by the DEP to help water suppliers and their consumers better understand the risks of contamination to each well site. Copies of the complete report are available at the District office. The over all ranking of susceptibility to contamination to the Townsend Rd. Well Field is **high** based on the presence of the abandoned rail line, Townsend Rd. residential activity, and the Hollingsworth & Vose paper mill, down river from the wells, which stores and generates hazardous waste. The Water District has purchased two properties adjacent to this well site for added protection. We have an active daily inspection plan and ongoing educational efforts.

Water Conservation

West Groton Water continues to encourage conservation as a means to protect your water supply and the environment for the generations to come. The District is currently permitted to withdraw 98.55 million gallons per year. The usage in 2015 was 73 million gallons, far below our permit. However, as a result of receiving a new well permit for the Town Forest Well, all water takers will have to comply with an outside watering restriction starting on May 1st and going thru Sept. 30th of each year. The Board of Commissioners has approved the Water Restriction Bylaw that will limit nonessential outside water use to **2 days per week** between the hours of **12 midnight till 9 AM**. **No outside water use is permitted between 9AM and 5PM** except **hand held** watering of plants and flowers only, **no lawn watering**. Watering of lawns can resume at **5PM until midnight**, for each of your two permitted days in order to comply with the DEP's Water Management Permit. Addresses ending with **even #s 0, 2, 4, 6, or 8** may water **Tuesday** and **Saturday**, while addresses ending with **odd #s 1, 3, 5, 7, or 9** may water on **Wednesday** and **Sunday**.

The following are some useful tips to conserve household water use:

- Don't use the toilet for trash disposal.
- Install low flow toilets or retrofit older units with water displacement devices.
- Check toilets for leaks with a few drops of food coloring placed in the tank. If coloring appears in the bowl without flushing, you may have a leak that can double your water bill.
- Install water saving shower heads. Also use flow restrictors on all sink faucets.
- Limit showers to 3-5 minutes. A short shower uses less water than a bath.
- Fill a container with drinking water each morning and place it in the refrigerator instead of running the water until it gets cold each time you want a drink.
- Don't let the water run while brushing your teeth or while shaving.

Following these simple tips can greatly reduce your water use and result in a substantial financial savings.

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"The West Groton Water Supply District is an equal opportunity provider, and employer."