



Brook Village Condominiums

2019

PWS ID: #2037007

REPORT ON WATER QUALITY

This report is a snapshot of the quality of the drinking water that we provided last year. The statistics in this report are based on testing done throughout 2019 and prior years. We hope you will find it helpful to know the sources of your water and the process by which safe drinking water is delivered to your home.

Where Does My Water Come From?

Brook Village Condominiums is located in Boxboro, MA and receives its water from three bedrock wells. There are two wellhouses, the Swanson and Spencer Wellhouses. The larger of the two wellhouses contains treatment and pumping equipment for all three of our wells after they have been manifolded together. It also protects a 15,000-gal. steel atmospheric storage tank located in the basement and covered by earth. The apartment complex uses an average of 7 million gallons per year.



Maintaining Water Quality

Brook Village Condominiums continuously strives to produce the highest quality water possible to meet or surpass every water quality standard. We monitor both our sources and distribution system very closely. The standards we operate under were enacted by the U.S. Congress as the Safe Drinking Water Act in 1974 and were amended in 1986 and 1996.

In order to ensure 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. Food and Drug Administration (FDA) and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Opportunities to Participate

Any matters that concern your drinking water supply or issues you would like to see addressed can be presented at the regularly scheduled meeting of the trustees, association or board. If your concerns need immediate attention feel free to contact our current Certified Operator, WhiteWater, Inc., at 1-888-377-7678.

Water Treatment

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we treat it to remove several contaminants.

Brooks Village Condominiums' water contains elevated levels of sediment, iron, manganese and hardness which is a common occurrence in New England. Sediment, iron and manganese are nuisance parameters that will cause discoloration of plumbing fixtures and clothes. Hard water is undesirable because it prevents soap from cleaning efficiently. An insoluble residue (scale) is deposited inside pipes, boilers and hot water tanks, reducing efficiency and length of service.

To improve water quality, the water from the two Swanson pump house wells (01G and 02G) are manifolded together and go to the Spencer treatment building. The Spencer well (03G) combines with the Swanson line inside the basement of the Swanson treatment room. The combined line is injected with sodium hypochlorite (for iron and manganese oxidation), prior to the two green sand filters that are in parallel. Treated water then goes into a 15,000 gallons storage tank then the two booster pumps, pump to distribution.

The water quality of our system is constantly monitored by us and the MassDEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required.

Brook Village Condominiums

The water system at Brook Village Condominiums is operated and maintained by WhiteWater, Inc. If you have any questions about this report, please contact Chris Culberson at 1-888-377-7678



Additional copies of this report are available upon request and at www.whitewateronline.com

DISTRIBUTION SYSTEM WATER QUALITY

This report summarizes only those items detected during sampling - not all contaminants that are monitored.

Microbial Results	Highest # Positive in a Month	Total # Positive	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	0	1	0	No	Naturally present in the environment
E. Coli	N/A	0	*	0	No	Human and animal fecal waste
*Compliance with Fecal Coliform / E. Coli MCL is determined upon additional repeat testing.						

Total 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.

Lead & Copper	Date(s) Collected	90th Percentile of Sample	Action Level	MCLG	# of Sites sampled	# of Sites Above Action Level	Exceeds Action Level?	Possible Source of Contamination
Lead (ppb)	9/9/19-9/25/19	10	15	0	10	1	No	Corrosion of household plumbing systems
Copper (ppm)		0.166	1.3	1.3		0	No	Corrosion of household plumbing systems

TESTING FOR 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. **Brook Village Condominiums** 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>.

Key to Tables

- ppm – Parts per million, corresponds to one penny in \$10,000
- ppb – Parts per billion, corresponds to one penny in \$10,000,000
- pCi/L – Picocuries per liter (a measure of radioactivity)
- ND – Not detected
- n/a – not applicable
- RAA –Running annual average
- TT—Treatment technique

SOME TERMS DEFINED

Action Level (AL): 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 Level (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.

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.

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



SUMMARY OF FINISHED WATER CHARACTERISTICS

<u>Regulated Contaminants</u>	Date(s) Collected	Highest Result	Range Detected	MCL	MCLG	Violation	Possible Source of Contamination
Inorganic Contaminants							
Arsenic (ppb)	6/18/18	1	n/a	10	-	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	6/8/18	0.11	n/a	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (ppm)	4/2/19	0.70	n/a	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate (ppb)	8/22/17	0.117	n/a	2	N/A	No	Rocket propellants, fireworks, munitions, flares, blasting agents
Radioactive Contaminants							
Gross Alpha (pCi/L)	4/20/18	9.4	n/a	15	0	No	Erosion of natural deposits
Radium 226 & 228 (combined) (pCi/L)	4/20/18	2.25	n/a	5	0	No	Erosion of natural deposits
Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ppb)	2019	12	n/a	80	-	No	By-product of drinking water chlorination
Haloacetic Acids (HAAs) (ppb)	2019	3.7	n/a	60	-	No	By-product of drinking water chlorination
Residual Chlorine (ppm)	2019	0.46	0.00-0.76	4	4	No	Water additive used to control microbes
<u>Unregulated Contaminants</u>	Date(s) Collected	Result or Range Detected	Average	SMCL	ORSG or Health Advisory	Possible Source of Contamination	
Inorganic Contaminants							
Sodium (ppm)	6/8/18	280	-	-	20	Natural sources; runoff from use as salt on roadways	
Sulfate (ppm)	6/8/18	37	-	250	-	Natural sources	
Sodium is a naturally-occurring common element found in soil and water. It is necessary for the normal functioning of regulating fluids in human systems. Some people, however, have difficulty regulating fluid volume as a result of several diseases, including congestive heart failure and hypertension. The guideline of 20 mg/L for sodium represents a level in water that physicians and sodium sensitive individuals should be aware of in cases where sodium exposures are being carefully controlled. For additional information, contact your health care provider, your local board of health or the Massachusetts Department of Public Health, Bureau of Environmental Health Assessment at 617-624-5757.							
<u>Secondary Contaminants</u>	Date(s) Collected	Result or Range	Average	SMCL	ORSG or Health Advisory	Possible Source of Contamination	
Manganese (ppb)	2019	ND-152	56.25	50	300	Erosion of natural deposits, leaching from plumbing materials	
*US EPA and MassDEP have established health advisory levels for manganese to protect against concerns of potential neurological effects.							
Manganese is a naturally occurring mineral found in rocks, soil and groundwater and surface water. The USEPA and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 0.05 mg/L (50 micrograms per liter (ug/L) or 50 parts per billion (ppb)). At levels, greater than 0.05 mg/L, the water may appear brown, taste unpleasant and may leave black stains on bathroom fixtures and laundry. While manganese is part of a healthy diet, it can be harmful if consumed in large concentrations.							
EPA has also set a health guideline for lifetime exposure to manganese in drinking water of 0.3 mg/L (300 ppb). EPA considered this level to be a protective limit for adults from potential neurological effects over a lifetime of exposure. For short-term 10-day exposures, EPA advises that levels in drinking water be below 1 mg/L (100 ppb). Infants and children less than 3 years of age should consume drinking water with manganese levels below 0.3 mg/L (300 ppb), or preferably as low as possible. This recommendation is based on concerns about effects to the nervous system that are more likely to occur in younger children, and because formula-fed infants/children already receive adequate manganese as an added essential nutrient in their formula. Formula fed infants or children may consume more manganese than the rest of the family if the manganese fortified formula is prepared with water that also contains manganese. In addition, young children appear to absorb more but excrete less manganese than older children. See: http://www.epa.gov/safewater/ccl/pdfs/reg_determine1/support_ccl_magnese_dwreport.pdf .							



Typical Hose Bibb Vacuum

Cross Connection Control and Backflow Protection in your water system

A Cross Connection means any actual or potential physical connection or arrangement between a pipe conveying potable water from a public water system and any non-potable water supply, piping arrangement or equipment including, but not limited to, waste pipe, soil pipe, sewer, drain, other unapproved sources. Brook Village Condominiums recommends the installation of Hose Bibb type vacuum breakers on all outside faucets. This will protect all residents from the potential of backflow into their homes and the potable water system from a hose connection. Studies have shown that hoses are the most commonly unprotected cross connection. The MassDEP and Brook Village Condominiums require the physical separation between the public water supply to your home and a private well used for irrigation or other purposes, these instances will be monitored for compliance. For more information please contact WhiteWater at 888-377-7678.

Source Water Protection

The MassDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply source serving the Brook Village Condominiums. The report assesses the susceptibility of public water supplies to contamination and makes recommendations.

This report is available from the MassDEP website: <http://www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2037007.pdf>. If you have any questions, please contact WhiteWater, Inc., at 1-888 377-7678.

A susceptibility ranking of **moderate** was assigned to all wells in our system by the MassDEP and they meet all US Environmental Protection Agency (EPA) and MassDEP drinking water quality standards.

Be assured that the Brook Village Condominiums in concert with its certified operator, WhiteWater, Inc., is addressing the concerns as stated in the SWAP Report and welcomes your input to our planning. If you have any questions, please contact WhiteWater, Inc., at 1-888 377-7678.

SHOULD SOME PEOPLE 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 (800)426-4791.

FOR YOUR INFORMATION

In order to ensure that tap water is safe to drink, the Department of Environmental Protection (MassDEP) and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided to public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All 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).

Where to go for more information

Massachusetts Department of Environmental Protection (MassDEP)
<http://www.mass.gov/eea/agencies/massdep/water/drinking/>



SOURCE WATER CHARACTERISTICS

The sources of drinking water in the United States (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. These contaminants can also come from gasoline storage, 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.