ALL ABOUT YOUR WATER

City of Bristol Tennessee

2020 Water Quality Report

If you've ever wondered whether your drinking water is safe, consider this:

More than 2,000 tests for approximately 80 contaminants were conducted on the tap water you water your lawn with, bathe your children and pets in, and drink and cook with. That's a lot of testing – and it goes on every day at the Bristol Tennessee Water System.

In this report, you'll find how Bristol, Tennessee water ranked in the state and in Environmental Protection Agency tests, as well as thousands of our own daily check-ups.

Before the water reaches your home, business or school, the Bristol Tennessee Water Plant takes pristine water from nearby South Holston River, sends it through a strenuous six-step process, then pumps an average of six million gallons of water a day to its customers. You alone use about 100 gallons of water a day! And Bristol, Tennessee serves more than 12,000 water customers and more than 40,000 individuals, including five utility districts.

That's a lot of water. That water seems even more precious when you realize that 97 percent of the Earth's water is salt water and undrinkable; two percent of the planet's water is frozen on the polar caps; and that leaves only one percent for use in our homes and workplaces.

So it's little wonder that we want to protect the water we have – to keep it safe for you, your family and your friends. Keeping Bristol, Tennessee's water clean is our No. 1 job, but we need your help. That's a lot of responsibility. But it's your water, and we will only be satisfied with the best.

BRISTOL 18 56 TENNESSEE

Visit us at www.bristoltn.org

Water, Water, Everywhere!

MORE THAN A DRINK!

Water is everywhere. It is found in every drop we drink and every bite we take. It is in our conversations, activities and even in the movies we watch. Water is much more than hydrogen and oxygen molecules, and it is definitely more than just a drink.

CONSUMED

You cannot avoid water. Just look at the drinks and food you consume. Water is in coffee, orange juice, soda and milk, and it is also essential for the existence of every food group. Without water, we would not have cheese, eggs, bread, meat, fruit or vegetables. Water is essential for our survival. Approximately 75 percent of our bodies are water. Drink at least eight glasses every day to stay hydrated and healthy.

CONVERSED

Water not only keeps us hydrated and healthy, it also serves as a topic of discussion and focus in society. Remember the last time a snow or rain storm occurred? Chances are the event was discussed at the water cooler or over a cup of coffee.

There are also many water clichés used in daily conversations. For example, when you begin a new job, you may be "a little wet behind the ears." Tips to "keep your head above water" include "not making waves" and "staying out of hot water."

You may feel a bit "like a fish out of water" at first, but once "you get your feet wet," you'll catch on! Just "go with the flow," but beware! You may find yourself "up the creek without a paddle" if you tell the boss to "jump in the lake!" Remember, if it doesn't work out, "don't sweat it." In the "river of life, it's only a drop in the bucket."

CASUAL

The entertainment industry has not overlooked water as a subject for movies either. Do you remember these movies about water?

"Aquaman" (2018) Jason Momoa
"The Shape of Water" (2017) Sally Hawkins
"Promised Land" (2012) Matt Damon
"Erin Brockovich" (2000) Julia Roberts
"Chain Reaction" (1996) Keanu Reeves
"The Waterboy" (1998) Adam Sandler
"The Saint" (1997) Val Kilmer
"A Civil Action" (1998) John Travolta
"Waterworld" (1995) Kevin Costner

CRITICAL

The Earth's surface is approximately 75 percent water. This amount has remained virtually the same through the years. In fact, there is no new water on the planet because water is continuously recycled in the Earth's hydrologic cycle. The water molecules you drink today - someone else drank yesterday - and dinosaurs drank many years ago.

The Bristol Tennessee Water System stands in the gap between you and recycled water to make sure your water is clean, acceptable and ready for you to drink.

Where there is no water, there is no life.
Good water provides a good life.
In Bristol, Tennessee, life is good.
For more information, visit www.bristoltn.org.

Bristol Tennessee Water Quality Report - 2020

Is my drinking water safe?
Yes, our water meets all of the health standards of the Environmental Protection Agency (EPA). We have conducted numerous tests for over 80 contaminants that may be in drinking water. As you will see in the chart on the back, only 9 of these contaminants were detected, all of which are at safe levels.

What is the source of my water?
Your drinking water, which is treated surface water, comes from the City of Bristol Tennessee Water System. Our goal is to protect our water from contaminants and we are working with the State to determine the vulnerability of our water source to potential contamination. The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving this water system. The SWAP Report assesses the susceptibility of untreated water sources to potential contamination. To ensure safe drinking water, all public water systems treat and routinely test their water. Water sources have been rated as reasonably susceptible, moderately susceptible or slightly susceptible based on geologic factors and human activities in the vicinity of the water source. The City of Bristol sources rated as reasonably susceptible to potential contamination.
An explanation of Tennessee's SWAP, the Source Water Assessment summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed on line at https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html or you may contact the Water System to obtain copies of specific assessments.

Why are there contaminants in my 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 drinking water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).
Este informe contiene información muy importante. Tradúscalo o hable con alguien que lo entienda bien.

Pharmaceuticals in Drinking Water
Flushing unused or expired medicines can be harmful to your drinking water. Learn more about disposing of unused medicines at: https://www.tn.gov/content/dam/tn/environment/sustainable-practices/documents/opsp_pharm-take-back-locations-master-list.pdf

How can I get involved?
Our City Council meets on the first Tuesday of each month at 7:00 p.m. at the Slater Center, 325 McDowell St., unless indicated otherwise by a public notice in the local newspaper. Please feel free to participate in these meetings.

Is our water system meeting other rules that govern our operations?
The State and EPA require us to test and report on our water on a regular basis to ensure its safety. We have met all of these requirements. Results of unregulated contaminant analysis are available upon request.

Other Information
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:

- 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, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including 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.
- 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 and TDEC prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. The Bristol Water System's water treatment processes are designed to reduce any such substances to levels well below any health concern.

Do I Need To 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 under-gone 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 from their health care providers about not only their drinking water, but food preparation, personal hygiene, and precautions in handling infants and pets. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Lead in 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. The Bristol Water System 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/lead/protect-your-family%23water%23water

Water System Security
Following the events of September 2001, we realize that our customers are concerned about the security of their drinking water. We urge the public to report any suspicious activities observed at any utility facilities, including treatment plants, pumping stations, tanks, fire hydrants, etc. to 423-989-5576.

For more information about your drinking water, please contact the water plant superintendent at 423-989-5576.

Water Quality Data

Unless otherwise noted, the data in this table is from sampling performed during the 2019 calendar year.

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit of Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (RTCR)	No	0.2%		2019		0	TT Trigger	Naturally present in the environment
Finished Water Turbidity[1]	No	0.25	0.02-0.25	Daily 2019	NTU	N/A	TT	Soil runoff
Asbestos	No	BDL		2011	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
Copper[2]	No	90th% =0.180	0.023-0.180	2017	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Flouride	No	0.228 Avg.	0.199-0.260	2019	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead[2]	No	90th% =1.8	BDL-12.0	2017	ppb	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Sodium	No	5.42		2019	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment
TTHM (Total Trihalomethanes)	No	52.00 Avg.	24.7-73.7	Quarterly 2019	ppb	N/A	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	42.63 Avg.	20.9-48.3	Quarterly 2019	ppb	N/A	60	By-product of drinking water disinfection
Total Organic Carbon[3]	No			2019	ppm	TT	TT	Naturally present in the environment
Contaminant	**Violation Yes/No**	**Level Found**	**Range of Detections**	**Date of Sample**	**Unit of Measurement**	**MRDLG**	**MRDL**	**Likely Source of Contamination**
Chlorine	No	1.87 Avg.	1.7-2.1	Daily 2019	ppm	4	4	Water additive used to control microbes

What does this chart mean?

- **MCLG** - Maximum Contaminant Level Goal, or 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, or 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.
- **MRDL** - Maximum Residual Disinfectant Level is the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
- **MRDLG** - Maximum Residual Disinfectant Level Goal is the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **AL** - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **NTU** - Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of five NTU is just noticeable to the average person.

- **BDL** - Below Detection Level is when laboratory analysis indicates that the contaminant is not present at a level that can be detected.
- **Parts per million (ppm) or milligrams per liter (mg/L)** - explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in $10,000.
- **Parts per billion (ppb) or micrograms per liter (µg/L)** - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- **MFL** - Million Fibers per Liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **RTCR** – Revised Total Coliform Rule went into effect on April 1, 2016 and replaces the MCL for total coliform with a Treatment Technique Trigger for a system assessment.
- **TT** - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

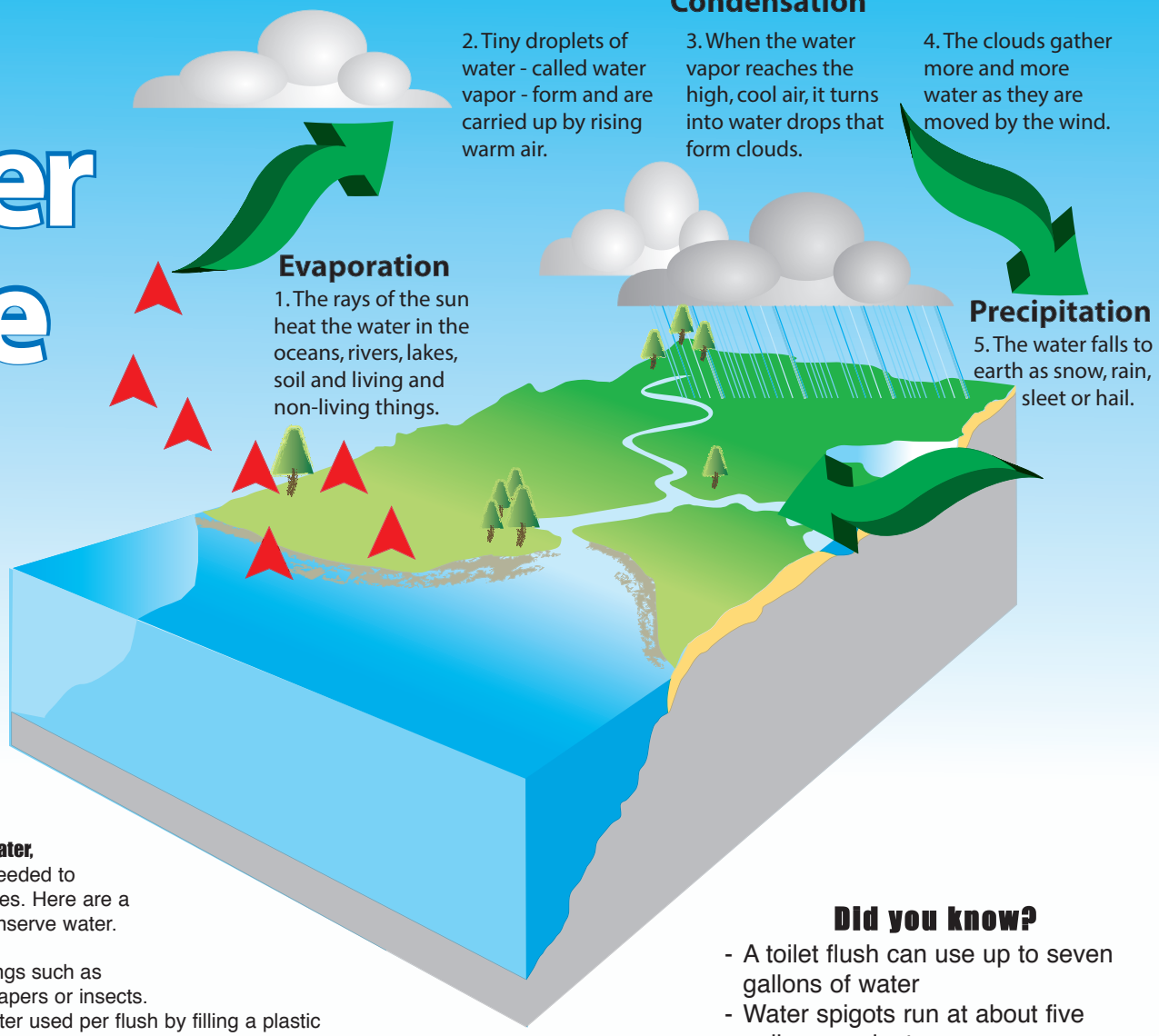
[1]100% of samples collected were below the turbidity limit. [2]During the most recent round of Lead and Copper testing, 0 of the Lead samples exceeded the action level of the 30 households sampled. [3] The treatment technique requirements for Total Organic Carbon removal were met.

Unregulated Contaminants

Unregulated Contaminants	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit of Measurement	MCLG	MCL	Likely Source of Contamination
Bromochloroacetic Acid	No	1.58	0.753-2.07	2019	PPB	N/A	N/A	
Bromodichloroacetic Acid	No	2.12	1.24-3.98	2019	PPB	N/A	N/A	
Dichloroacetic Acid	No	15.98	9.84-21.4	2019	PPB	N/A	N/A	
Monochloroacetic Acid	No	0.39	BDL**-2.09	2019	PPB	N/A	N/A	
Trichloroacetic Acid	No	26.1	14.1-37.2	2019	PPB	N/A	N/A	
Total Organic Carbon	No	1330	1200-1580	2019	PPB	N/A	N/A	

*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 the occurrence of unregulated contaminants in drinking water and whether further regulation is warranted. For additional information call the Safe Drinking Water Hotline at (800) 426-4791. **BDL for Monochloracetic Acid was any value <2.0 PPB

The Water Cycle



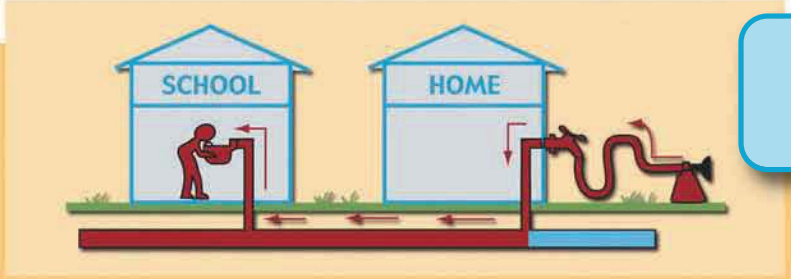
Household water conservation not only saves water, it saves energy too: Energy needed to heat water and run appliances. Here are a few things you can do to conserve water.

- Don't use the toilet for things such as tissues, gum wrappers, diapers or insects.
- Reduce the amount of water used per flush by filling a plastic laundry detergent bottle with water and place it in the tank
- Routinely check your toilet for hidden leaks.
- Shorten your shower time.
- Don't leave water running while brushing your teeth or shaving.
- Make sure the dishwasher is fully loaded before turning it on.
- Wash full loads of laundry, and set your water level according to the load size.
- Check all faucets in the house once or twice a year for pesky leaks.

Did you know?

- A toilet flush can use up to seven gallons of water
- Water spigots run at about five gallons a minute
- Showers use three to eight gallons a minute
- Leaks can soak up hundreds or thousands of gallons a day

Think about water – and when you do – think about conserving it.



HELP US PROTECT YOUR DRINKING WATER…

You may not realize that things you do around your home every day may affect the safety of your drinking water – and your neighbors' and schools' drinking water. You can help.

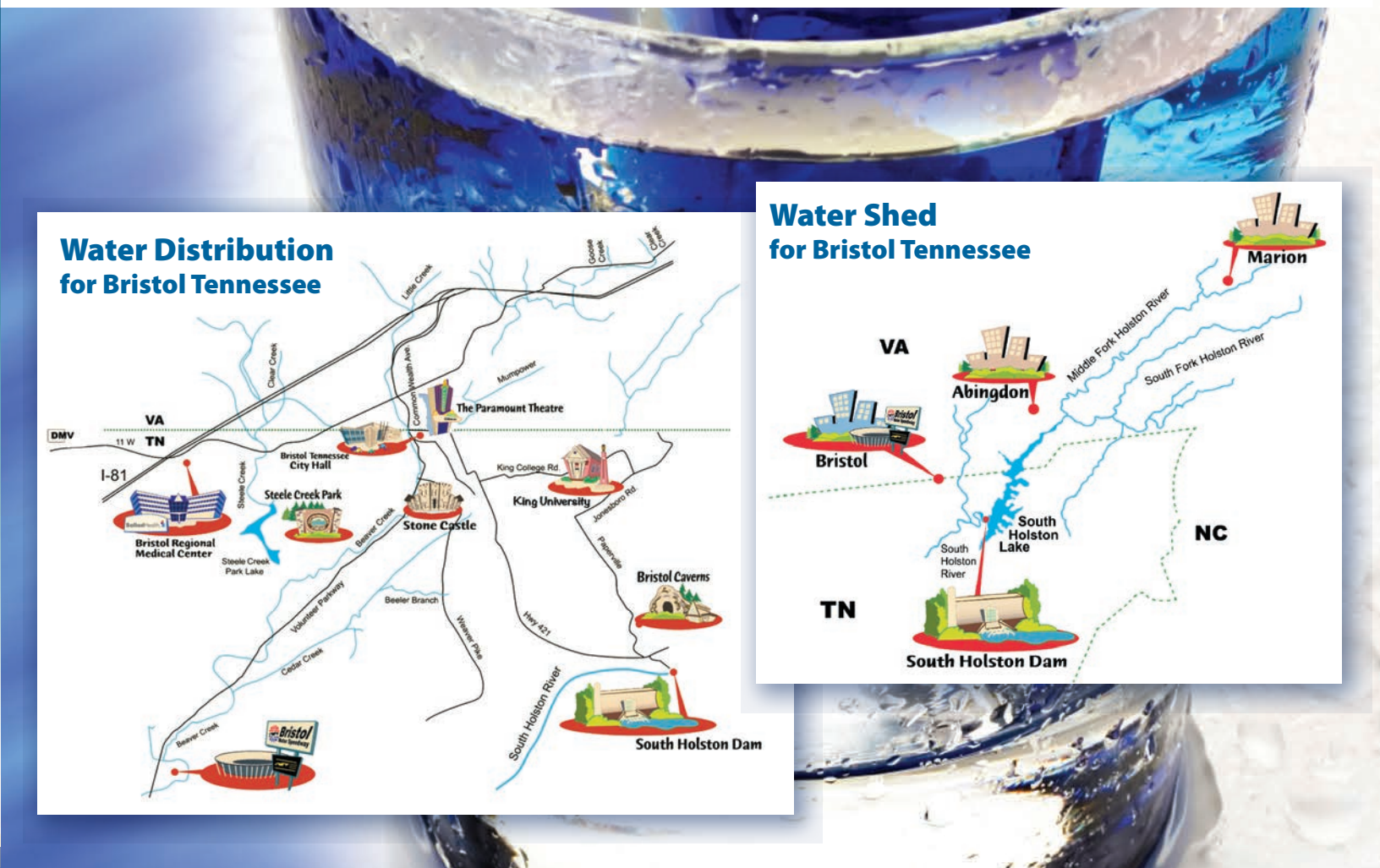
NEVER:
- Submerge hoses in buckets, pools, tubs or sinks full of dirty water or water containing chemicals
- Attach spray insecticides or fertilizers to your hose without a backflow prevention device
- Let unclean water or water containing chemicals sit in your tub or sink where it may be pulled back into water lines

WHY? If water pressure drops somewhere in the water system – because of a break in the line or an accident involving a fire hydrant or water line – "backflow" could draw the chemicals or unclean water back into your pipes or the drinking water supply at your local school or hospital.

To prevent backflow problems at your home or business, you can have a plumber install a check valve or vacuum breaker. These are inexpensive measures that provide invaluable protection for your water.

City of Bristol Tennessee
P.O. Box 1189
Bristol, TN 37621-1189

PRSRT. STD.
US POSTAGE
PAID
PERMIT #44
BRISTOL, TN



Water Distribution
for Bristol Tennessee

Water Shed
for Bristol Tennessee