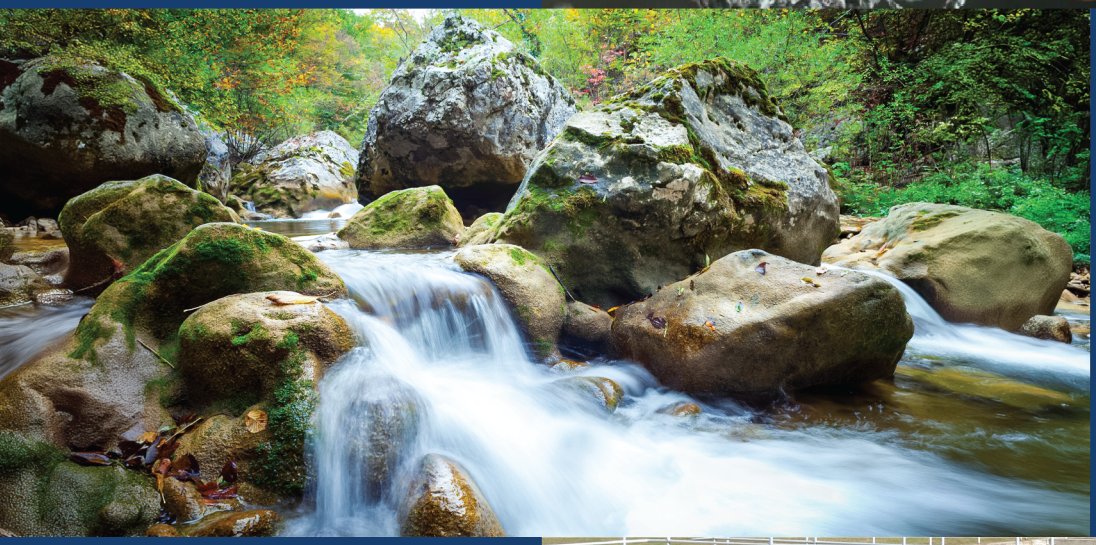
CLEAN WATER



HEALTHY ENVIRONMENT

THRIVING COMMUNITY

2024 WATER QUALITY REPORT

Bedford Regional Water Authority

ABOUT THIS REPORT

On July 1, 2013 the Bedford Regional Water Authority (BRWA) was formed from the former utility department of the Town of Bedford and the Bedford County Public Service Authority. The BRWA now offers a larger regional approach to meeting the communities' water and wastewater needs.

The BRWA supplies customers in the Forest, New London, Boonsboro, Smith Mountain Lake, Bedford, and Stewartsville areas with an annual water quality report. This provides customers and the community with information about the source of the water, what it contains and how it compares to the standards set by regulatory agencies based on data collected during calendar year 2024 unless otherwise stated.

The Water Operations Department of the BRWA is pleased to deliver safe drinking water. As in past years, the BRWA was in full compliance with all state and federal monitoring and reporting requirements.

Please contact the BRWA at (540)586-7679 if a paper copy of this report is desired.

Bedford Regional Water Authority

REACHING OUT TO THE BEDFORD REGIONAL WATER AUTHORITY

If there are any questions about the information contained in this report, or if additional information is desired, please contact:

William (W.T.) Swain, Water Operations Manager
(540)586-7679 ext. 154 or by e-mailing w.swain@brwa.com.

BOARD OF DIRECTORS

The BRWA's Board of Directors, appointed by the member localities, governs the BRWA. Representatives from the BRWA's service area include Donald Barger, Robert Flynn, Jay Gray, Kevin Mele, Michael Moldenhauer, Steve Rush and John Sharp.

Board meetings are held on the third Tuesday of each month at 1723 Falling Creek Road, Bedford, VA 24523. Board meetings are open to the public.

CUSTOMER SERVICE

Customer Service representatives are available:

Monday - Friday
8:30am - 5pm

Address: 1723 Falling Creek Rd.
Bedford, VA 24523

Telephone: (540)586-7679 ext.4
E-mail: customerservice@brwa.com

For water or sewer emergency after hours, call:
(540)586-7679 ext. 9

www.brwa.com

FOLLOW THE BRWA

TABLE OF CONTENTS
2024 WATER QUALITY REPORT

TESTING YOUR WATER

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. All drinking water, including bottled drinking 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 drinking water is available through these sources:

Virginia Department of Health:
(Bedford area) (540)586-7952

Virginia Department of Health:
(Lynchburg area) (434)477-5900

Center for Disease Control and Prevention:
1(800)311-3435 (404)6393311 or (404)639-3312 (TTY)

EPA Safe Drinking Water Hotline:
(800)426-4791

HOW ARE THE STANDARDS SET?

The U.S. Environmental Protection Agency (EPA) sets maximum contaminant levels (MCLs) at very stringent levels. In developing the standards, the EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. The EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

The tables of data on pages 12 - 21 summarize water-testing results from 2024 unless otherwise stated for both regulated and non-regulated substances. Many other primary and secondary contaminants have been analyzed but were either below the instrument's detection limits or below the MCLs.

The BRWA constantly monitors its water supplies for various contaminants to meet all regulatory requirements. Many contaminants or parameters are monitored daily while others are required monthly, quarterly, annually, triannually or longer. The total Trihalomethanes (TTHMs) and Haloacetic acids (HAA5s) were calculated using locational running annual averages.

CRYPTOSPORIDIUM & GIARDIA

Cryptosporidium and Giardia are microscopic organisms that can cause fever, diarrhea, cramps and other gastrointestinal symptoms when ingested. The organisms come from animal and human wastes and are eliminated through water filtration and disinfection.

Though the presence of these organisms is not regulated by the state or federal government, the BRWA has tested for these organisms and has never detected a viable indication of either in the treated drinking water.

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 for 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).

CAUSES OF DISCOLORED WATER?

Fluctuation in water pressure within water systems, such as when water mains break or fire hydrants are used or flushed, can occasionally cause drinking water to be discolored. This discoloration is caused by sediments in pipes mixing with clear water. The sediments occur naturally from the oxidation of iron in pipes.

While discolored water is ordinarily safe to drink, it is best to flush any discolored water from pipes by turning on cold-water faucets in the home or business. Avoid turning on hot-water faucets so the discolored water is not drawn into water heaters.

If there is evidence of a water main break or a leaking fire hydrant, please call (540) 586-7679.

WHAT IS MY WATER HARDNESS?

As water naturally flows over rocks and through the soil, it picks up minerals. The more calcium and magnesium present, the harder the water may be. While water hardness doesn't pose any safety risks, increased mineral build-up or soap residue may be more prominent with harder water. Hardness can be expressed as parts per million (PPM) or grains per gallon (GPG).

PPM	GPG	Rating
0 - 75	0 - 4.3	Soft
76 - 150	4.4 - 8.7	Moderately Hard
151 - 300	8.8 - 17.5	Hard
over 300	17.6 +	Very Hard

HEALTH INFORMATION PERTAINING TO LEAD

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 BRWA is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in the home. Customers have the responsibility for identifying and removing lead materials within the home plumbing to reduce any risk. Before consuming tap water, flush the pipes for several minutes—running the tap, taking a shower, or using appliances such as a washing machine or dishwasher can help. Additionally, using a filter certified by an American National Standards Institute (ANSI) accredited certifier can further reduce lead levels in drinking water.

For concerns about lead and water testing, please contact the BRWA's Water Compliance Supervisor, Ryan Kelly at (504)586-7679. Information on lead in drinking water, testing methods, and steps to minimize exposure is available at https://www.epa.gov/lead.

The BRWA maintains over 500 miles of pipes up to and including the lines going to the customer's water meter. Pipe materials in the system can be cast iron, ductile iron or PVC. The BRWA does not know of any lead pipes in its distribution system and cannot control the variety of materials used in plumbing components inside homes and business structures. Customers, especially those in older homes, may have lead plumbing in their homes or pipes that were joined with lead solder. When necessary, the BRWA also treats water with corrosion control substances or adjusts the pH of the water so that pipes in the distribution system and customers' pipes within their homes are protected.

The BRWA is conducting a service line inventory to safeguard the health of the community and its drinking water.

Please take a moment to look at the Inventory Map, located on https://www.brwa.com/service-line-inventory/ and fill out the survey at https://www.surveymonkey.com/r/J8H2TGJ.

Information on lead in drinking water, testing methods and steps to can take to minimize exposure is available from the Safe Drinking Water Hotline or at https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

COPPER

Copper is a nutritionally essential element, but at elevated levels, it can cause gastrointestinal difficulties such as nausea and diarrhea.

TERMS USED IN THIS WATER QUALITY REPORT

Action Level (AL): The concentration of a contaminant that triggers treatment or other requirements that a water system must follow.
Combined Radium: Radium 226 + Radium 228.
E. coli: Bacteria from human and animal fecal waste.
HAA5s: Haloacetic acids.
LRAA: Locational Running Annual Average.
Level 1 Assessment: 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.
Level 2 Assessment: Level 2 assessment means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment.
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.
Maximum Contaminant Level Goal (MCLG): 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.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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
mg/L: Milligrams per liter, also referred to as parts per million.
MRL: Modified Reporting Limit
ND: Analyte was not detected or was below the method detection limit of the laboratory's instrumentation.
NTUs: Nephelometric Turbidity Units; a measure of turbidity.
P/A: Present or Absent.
pCi/L: Picocuries per liter is a measure of the radioactivity in water.
ppb: One part per billion, also referred to as µg/L.
ppm: One part per million, also referred to as mg/L.
ppt: One part per trillion, also referred to as ng/L.
(SMCL) Secondary Maximum Contaminant Level: These are non-mandatory water quality standards for 15 contaminants. The EPA does not enforce these, but, instead, they are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL.
TTHMs: Total Trihalomethanes.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Turbidity: Turbidity has no health effects. However, it can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps,diarrhea and associated headaches.
µg/L: Micrograms per liter, also referred to as parts per billion.
µmhos/cm: Micromhos per centimeter; a measure of conductivity.

Substance	Source of Substance
Alkalinity	Measurement of naturally occurring carbonates
Aluminum	Naturally occurring in the environment; product of industrial processes
Arsenic	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorate	By-product of treating drinking water with chlorine dioxide
Chlorine	Required disinfectant added during treatment process to eliminate bacteria
Chlorite	By-product of treating drinking water with chlorine dioxide
Chromium	Discharge from steel and pulp mills; erosion of natural deposits
Conductivity	Physical property of water
Copper	Corrosion of household plumbing systems; erosion of natural deposits
Corrosivity	Physical property of water that occurs when water reacts with metal
Ethylbenzene	Discharge from petroleum refineries
Fecal Coliforms	Human and animal waste
Fluoride	Erosion of natural deposits; water additive which promotes strong teeth; discharge from aluminum and fertilizer factories
Gross Alpha	Erosion of natural deposits
Gross Beta	Decay of natural and man-made deposits
HAA5s	By-product of drinking water chlorination
HAA6BR	By-product of drinking water chlorination
HAA9	By-product of drinking water chlorination
Hardness	Measurement of naturally occurring hardness metals
Iron	Naturally occurring in the environment
Lead	Natural/industrial deposits, plumbing solder, brass alloy in faucets
Manganese	Naturally occurring in the environment
Organic Carbon (Total)	Decaying natural organic matter (NOM) as well as synthetic sources
Orthophosphate (as P)	Corrosion inhibitor added during treatment process
Radium 226/228	Erosion of natural deposits
Sodium	Naturally occurring in the environment; byproduct of chemical addition at water plants
TTHMs	By-product of drinking water chlorination; byproduct of chemical addition at water plants
Thallium	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Total Coliforms	Naturally present in the environment
Total Nitrate + Nitrite (as N)	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Xylene	Discharge from petroleum factories; discharge from chemical factory
Zinc	Naturally occurring in the environment

GENERAL INFORMATION

The sources of drinking water (both tap 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 can pick up substances resulting from the presence of animals or from human activity. Water from surface sources is treated to make it drinkable while groundwater may or may not require any treatment.

Other substances within source waters may be naturally occurring substances, or may come from:

• Microbial substances, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

• Inorganic substances, 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 substances, 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; and

• Radioactive substances, which can be naturally-occurring or be the result of oil and gas production and mining activities.

USING WATER WISELY

Using water wisely in times of drought is crucial; however, it is always of utmost importance to use this valuable resource wisely.

• Fix leaks in faucets, toilet tanks and outside spigots. A leaky toilet can easily waste up to 200 gallons of water per day.

• Use full washing machine and dishwasher loads to maximize efficiency.

• Do not overwater lawns and gardens. Watering before 10 AM or after 7 PM when temperatures are cooler, minimizes evaporation and maintains the soils moisture for a longer amount of time. Keep in mind, lawns only need 1 to 1.5 inches of water every week or two.

• Turn off the water while brushing teeth to save over two gallons of water.

• Take shorter showers. Shortening shower time to five minutes saves over 15 gallons of water.

• Have a leak? Fix it and let the BRWA know right away. If meter records show a continuous high flow of consumption, the BRWA will notify the customer of a potential leak.

WATER QUALITY BEGINS AND ENDS WITH YOU

Water that enters storm drains often flows directly to local streams and rivers. Please help protect the waterways by:

• Always recycle or dispose of household hazardous waste properly.

• Never pour motor oil, antifreeze or other toxic materials down storm drains, which ultimately return to the waterways.

• Never flush paint thinners, insect sprays, herbicides or other harmful chemicals down the toilet or pour them down the drain.

KEEPING MEDICATIONS OUT OF THE WATER SUPPLY

Pharmaceuticals also pose a risk to entering the waterways through the practice of improper disposal methods, such as flushing unused or expired medications down the toilet.

Unused pharmaceuticals can be kept out of the water supply by ensuring proper disposal methods are followed. Participation in local medication take-back programs is encouraged where available.

The Drug Enforcement Agency (DEA) sponsors national take-back programs in coordination with state and local law enforcement agencies. National take-back programs provide opportunities for the public to surrender expired, unwanted or unused pharmaceuticals and other medications to law enforcement officers for proper disposal.

To find out about future takeback events, visit DEA's website at https://www.dea.gov/takebackday.

Call (540)586-7679 or e-mail communications@brwa.com to get a schedule of the local Household Hazardous Materials Drop-off events.

PREVENTING BACKFLOW & CROSS-CONNECTION

The BRWA utilizes pressurized water distribution systems that are designed to carry water in a certain direction – from the BRWA's distribution system to the consumer. If the water system loses pressure, such as during a water main break, system maintenance or fire hydrant usage/testing, the flow of the water may be reversed.

If a consumer has made a cross-connection or an actual or potential connection between the distribution system and a source of contamination or pollutant, these substances can backflow into the public water system and create a risk to public health.

There are multiple methods and devices known to help prevent backflow from occurring. Some examples include air gaps, barometric loops, vacuum breakers, double check valve assemblies and reduced pressure principle devices.

HOW TO HELP PROTECT DRINKING WATER

The BRWA encourages all customers to assist with identifying potential areas where backflow can occur.

Remove any known cross-connections or install backflow prevention devices (available at hardware stores) where needed.

If necessary, contact the BRWA to schedule a free assessment to assist in finding and removing any potential cross-connection sources.

Backflow prevention devices installed by a certified plumber should be tested annually or after any repairs.

Questions about backflow prevention?

E-mail communications@brwa.com
or call (540)586-7679.

SMOKE TESTING

The BRWA periodically performs smoke testing of sanitary sewers. These tests involve blowing harmless, simulated smoke into the sanitary sewer system.

The purpose of smoke testing is to find potential sources of unwanted rainwater (inflow) and groundwater (infiltration) in the sanitary sewer system that could lead to high flows during storms and snow melt events. Storm water and ground water entering the sanitary sewer places an unnecessary burden on the pipes and sewage treatment facilities.

Smoke testing aids in locating the following:

• Buildings that have downspouts, cellar, yard or basement drains, and sump pumps connected to the public sewer system

• Points of groundwater or surface water intrusion into the sewer

• Any cross connection between sanitary and storm drains

• Defective sewer connections that could allow sewer gases into a building

For questions about Bedford Regional Water Authority's smoke testing procedure, please call (540)586-7679.

HOW TO FIND AND FIX A LEAKY TOILET

Since most toilet leaks don't create a mess, they often go undetected and unaddressed. Water leaks from the back tank into the bowl and straight down the drain. A moderate toilet leak can waste about thousands of gallons of water in a single month!

Signs of a toilet leak

If a toilet starts running randomly when it hasn't been flushed, there is probably a leak. If uncertain, try putting a couple of drops of food coloring in the back tank. If the water in the bowl turns to color without being flushed, it is leaking.

Most common causes of a toilet leak

High water level in the toilet tank: when the water level is too high, water pours down into the overflow tube and straight into the toilet bowl.

Loose toilet flappers: the flapper is that plastic piece that fits over the valve that leads into the toilet bowl. This causes water to leak into the toilet bowl between flushes.

There is a leak, now what?

Make sure the lift chain is free of kinks and that there isn't any mineral buildup that may stop valves from sealing properly. Use the adjustment screw on the overflow pipe to lower the water level in the tank. Most overflow pipes have a line on them to indicate where the water level needs to be. If valves or the plunger ball isn't properly sealing, replace them. Parts are available at the local hardware store to replace these items.

LEARN MORE

CLASSROOM PRESENTATIONS

The BRWA's outreach staff offers free Standards of Learning (SOL) correlated lessons to students in the service area.

These hands-on programs help students grasp concepts such as the water cycle, watersheds and the amazing properties of water. Students in the upper grades learn about the wastewater treatment process and future careers in the water and wastewater industry. Interested in bringing the BRWA into the classroom? E-mail communications@brwa.com to schedule a visit.

GUEST SPEAKERS

Interested in having a speaker present to a civic league or community group? Learn about water sources, how water is treated and improvements the BRWA is making to the water and wastewater infrastructure. Contact communications@brwa.com for scheduling and information.

TOURS

Tours of treatment facilities and reservoirs are offered to students, civic and community groups. Learn what goes on behind the faucet and how the BRWA treats and delivers the highest quality drinking water to customers. To request a visit, please call (540)586-7679 or e-mail communications@brwa.com

FROG PROGRAM

Sewage collection lines get clogged by items that are flushed down toilets and drains, especially **Fats, Rags, Oil and Grease (FROG)** that get caught and stop up the sewer. In addition to costly repairs, sewer back-ups are messy, foul-smelling and pose a serious public health threat.

As the community continues to grow, so do the demands on public infrastructure. Sewer lines, pump stations, and small grinder pumps are a few examples of the things that the BRWA must provide increased maintenance to in order to combat damages and overflows caused by FROG.

As FROG is disposed of down the toilet or drain it begins to accumulate inside the sewer collection system. As the materials continue to build up, it restricts the flow within the system until it clogs it entirely. This ultimately leads to the damaging of pumps in lift stations, damages to sewage treatment facilities, and sewage spills or overflows.

These items can also contaminate the treated water that is discharged into the rivers, streams, and groundwater. When overflows occur due to FROG, sewage can find its way into the environment. This can lead to problems such as habitat degradation, hypoxia, and algal blooms. By properly disposing of FROG, it can have a significant impact not only on home plumbing and the BRWA's sewer system but the environment as well.

E-mail communications@brwa.com to learn more.

EMERGENCY CONTACT

Get alerted about emergencies and other important community news by signing up for Everbridge, an automated callout system. This system enables the sharing of critical information quickly in a variety of situations, such as severe weather, road closures, missing persons and evacuations of buildings or neighborhoods.

everbridge™

To receive emergency notifications, please visit:
https://member.everbridge.net/892807736723697/new

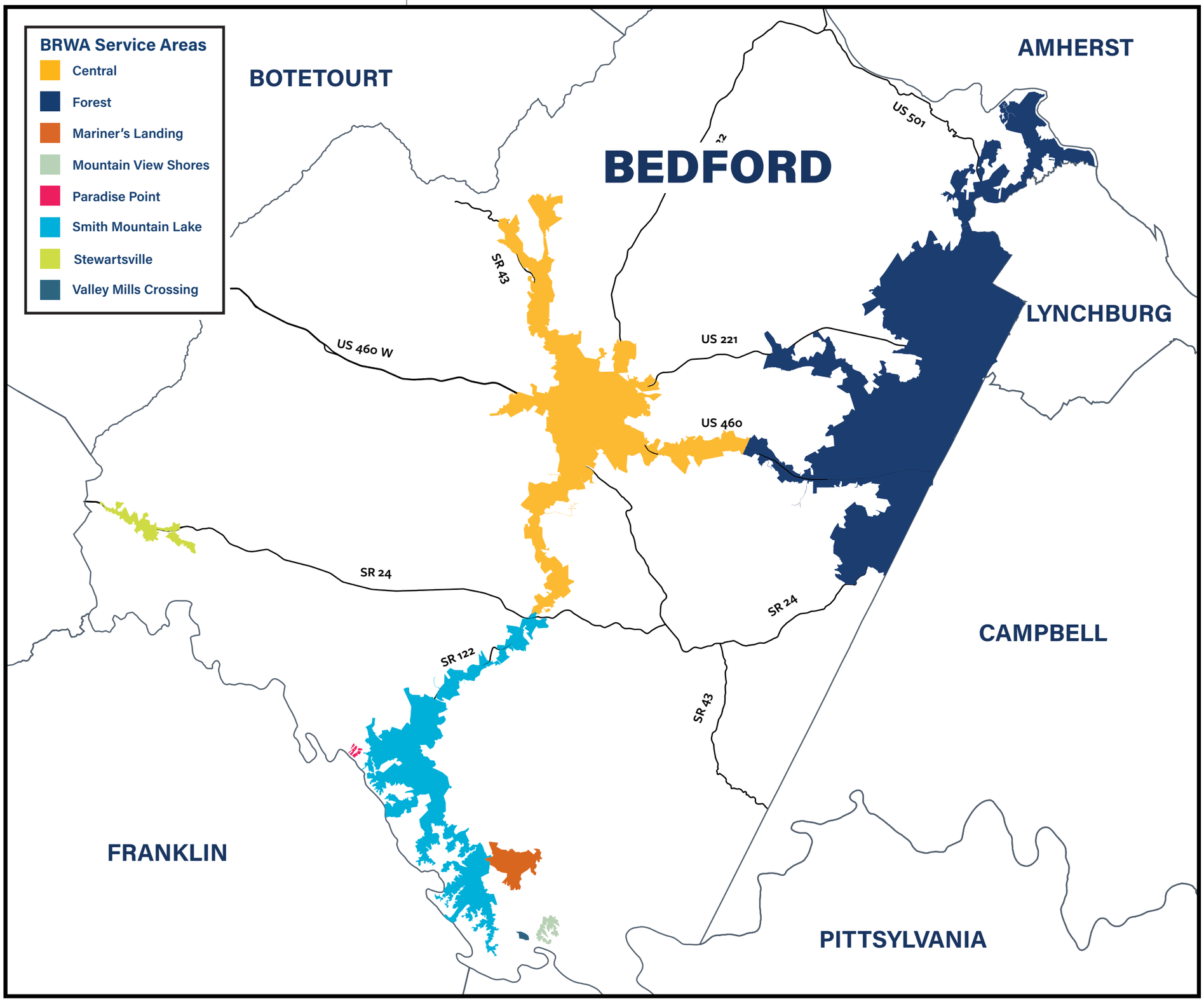
DRINKING WATER SYSTEMS IN BEDFORD COUNTY

Having successful partnerships with both Lynchburg Water Resources and the Western Virginia Water Authority (WVWA), the Bedford Regional Water Authority is capable of providing water to residents and businesses over a vast area. These relationships provide access to millions of gallons of treated drinking water to be distributed to customers over a large geographical area.

In conjunction with these partners, the BRWA utilizes five surface water sources and multiple wells to provide drinking water throughout the Piedmont Region.

Having such an abundant supply of water bolsters the community's defense against drought and other emergencies, thus protecting both public health and the environment.

Stoney Creek Reservoir



STEWARTSVILLE CONSECUTIVE SERVICE AREA

The BRWA purchases the water for Stewartsville from the Western Virginia Water Authority. The primary source of drinking water in this area is the Carvins Cove Reservoir.

The Carvins Cove Reservoir is a surface water source nestled within Carvins Cove Natural Reserve, a 12.672-acre watershed near Hollins University in Botetourt County. In addition to receiving water from the watershed, the reservoir is fed from two underground tunnels that carry overflow from Tinker and Catawba Creeks. This surface water source covers 630 acres and stores 6.42-billion gallons of water at full pond.

How is it treated?
Water is withdrawn from the reservoir, oxygenated and treated with chlorine. Water is then aerated to remove unwanted dissolved gases and to oxidize dissolved metals. Next, ferric chloride is used as a coagulant to remove turbitity and organic matter prior to filtration. Finally, fluoride is added to promote strong teeth, sodium hydroxide is added to adjust the pH and reduce corrosivity, zinc ortho-phosphate is used as a corrosion inhibitor, and sodium hypochlorite is added to provide disinfection.

Where does it serve?
Carvins Cove Reservoir provides water to a large demographic ranging from portions of the City of Roanoke and northern / northeastern Roanoke County to the Botetourt area around Exit 150 to Tinkerview and Greenfield.

Data presented as (range) Average.
PWSID# 5019795

A service line inventory has been prepared for Stewartsville Consecutive Service Area and no lead service lines were identified. Access the service line inventory here: https://www.brwa.com/wp-content/uploads/2024/10/Stewartsville-Inventory.pdf.


Waterfall at Carvins Cove taken in 1926.

Interesting Fact:

The first settlement to be built on the 12,000 acres at the base of Mt. Tinker was by a man named William Carvin in July of 1746. He received a land grant for 150 acres along Carvins Creek. Some of this land was devoted to Hollins University, while the rest of the land behind the dam would come to be known as the Happy Valley community. During this time Carvins Cove was not a part of Roanoke County, but a part of Botetourt County, in the city of Hollins. It stayed in the Carvin family's hands until November of 1926 when Roanoke announced that the Virginia company would build an 80 foot dam, costing nearly $700,000 to impound six billion gallons of water for the city.

Being devastated by the Great Depression and a significant drought in 1936, The Virginia Company sold its holdings to Roanoke Water Works for just $1 dollar. By 1946, the dam reached its full capacity filling the pond, now known as Carvins Cove.

Fast forward to 2014, the Western Virginia Water Authority purchased the last remaining privately held piece of real estate in the watershed to protect the reservoir from potential runoff.

Substance	Units	Ideal Goals (EPA's MCLG)	Highest Level Allowed (EPA's MCL)	Violation	Date of Sample	Stewartville Consecutive System Service Area Data Average (range)
Lead and Copper Testing						
Lead	ppb	0	AL = 1.5	no	June - Sep. 2023	0 samples exceeded AL 90th percentile = 0.54 (ND - 0.59)
Copper	ppm	1.3	AL = 1.3	no	June - Sep. 2023	0 samples exceeded AL 90th percentile = 0.04 (0.013-0.050)
Disinfection Method						
Sodium Hypochlorite	ppm	MRDLG = 4	MRDL = 4	no	Monthly	0.30 (0.10 - 0.65)
Disinfection By-Products						
HAA5s	ppb	N/A	60	no	Quarterly	3 (1 - 9)
TTHMs	ppb	N/A	80	no	Quarterly	52 (51 - 54)

Other contaminants (such as coliform bacteria) were examined, but not detected during the entire year.

Microbiological Substances	Units	EPA's MCLG	Highest Level Allowed - EPA's MCL	Violation	Date of Sample	Level Detected
Total Coliforms	P/A	0	Presence of coliform in more than 1 monthly sample	no	Monthly	0 positive monthly

SMITH MOUNTAIN LAKE SERVICE AREA

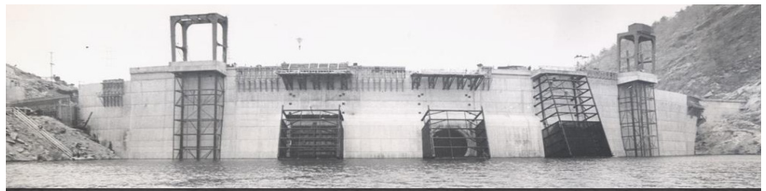
The BRWA has a successful working relationship with the Western Virginia Water Authority (WVWA) to provide treated drinking water from the Smith Mountain Lake Water Treatment Plant to customers in the Westlake Area Water System and to Bedford County customers from Moneta to Forest. This facility, which opened in May 2017, was designed to meet both utilities' joint water needs through the year 2060 as recommended by the Regional Long Range Water Supply Plan.

How is it treated?
Water from Smith Mountain Lake is screened through 500 micron woven mesh stainless steel strainers to remove fine silt and then pumped to the treatment facility. The membrane plant has 216 modules that each have 10,000 membrane filter strands to provide the unique water treatment capability. The membranes can filter out particles larger than 0.02 microns. After filtration, the water is treated with sodium hypochlorite, a required disinfectant, to eliminate bacteria, and then fluoride is added for dental health.

Where does it serve?
Being a regional facility, the Smith Mountain Lake water treatment plant serves customers within Moneta and Franklin County, following north up the 122 corridor to the Town of Bedford and east to New London extending into the Forest area.

Source water assessments of this system was conducted in 2002 by the Virginia Department of Health (VDH). The lake(s) was determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. Please call (540)586-7679 to receive a copy of this report.

Data presented as (range) Average.
PWSID#5019400


On April 21, 1964, water had reached 145 feet deep and rising up the face of Smith Mountain Dam.

Interesting Fact:
Smith Mountain Lake reached "full pond" – that's 795 feet just below the spillway at the Smith Mountain dam, for the first time on March 7, 1966. This project tamed the Roanoke River and formed two lakes - Smith Mountain Lake and Leesville Lake.

The project ultimately flooded thousands of acres, mostly rural farmland, and involved hundreds of workers to accomplish an engineering feat whose dam centerpiece towers 225 feet and is wedged into the gorge of its namesake mountain.

Substance	Units	Ideal Goals (EPA's MCLG)	Highest Level Allowed (EPA's MCL)	Violation	Date of Sample	Smith Mtn. Lake System Data (range) Average
Regulated Substances						
Barium	ppm	2	2	no	Feb. 2024	0.0294
Chromium	ppb	100	100	no	Feb. 2024	1.3
Fluoride	ppm	4	4	no	Monthly	0.57(0.00 - 1.00)
Nitrate + Nitrite	ppm	10	10	no	Feb. 2024	0.29
Turbidity	NTU	TT = 0.30	TT < 95% = 0.30	no	Daily	0.179 (0.096 - 0.50)
Disinfection Method						
Sodium Hypochlorite	ppm	MRDLG = 4	MRDL = 4	no	Daily	1.42 (0.21 - 3.48)
Radioactive Substances						
Gross Alpha	pCi/L	0	15	no	July 2021	0.8
Combined Radium	pCi/L	0	5	no	July 2021	0.8
Unregulated and Secondary Substances | EPA's SMCL |						
Chloride	ppm	N/A	250	no	Feb. 2024	11.7
Sodium	ppm	N/A	N/A	no	^Feb. 2024	9.3
Sulfate	ppm	N/A	250	no	Feb. 2024	8.8

^ This meets the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water, which is established for those individuals on a "strict" sodium intake diet.

Other contaminants (such as coliform bacteria) were examined, but not detected during the entire year.

A service line inventory has been prepared for Smith Mountain Lake Service Area and no lead service lines were identified. Access the service line inventory here: https://www.brwa.com/wp-content/uploads/2024/10/BRWA-Inventory.pdf.

CENTRAL SERVICE AREA

Customers within the New London and Forest areas may be supplied with water from Smith Mountain Lake or the Pedlar Reservoir, with additional supplies coming from the James River during periods of greater demand. The Town of Bedford's primary source of drinking water is the Stoney Creek Reservoir accompanied by Smith Mountain Lake.

How is it treated?

Water from both the Pedlar Reservoir and the James River are currently treated at the College Hill Water Treatment Plant, located in Lynchburg City and the Abert Water Treatment Plant, located in Bedford County. The water system includes seven primary pressure zones with several additional small zones, two water treatment plants, nine water storage tanks, and several pump stations. Overall treatment capacity is 14-million gallons a day.

Water from the Stoney Creek Reservoir is fed through a series of waterlines to the Central Water Treatment Plant on Turkey Mountain where it is treated using a conventional sand filtration system. An aluminum-based polymer is added to the raw lake water along with lime. Once mixed, the chemicals cause microscopic contaminants in the water to clump together. Larger particles will then settle out in two large settling basins while the clear water then flows through the sand filters. Once filtered, the water is treated with hydrated lime for pH adjustment, phosphate for corrosion control, Sodium Hypochlorite for disinfection, and fluoride for dental health.

Where does it serve?

Having a partnership with Lynchburg Water Resources, the BRWA is capable of providing water from Lynchburg to a vast area consisting of the town of Bedford, Forest, New London, Smith Mountain Lake, and Boonsboro areas.

What is unregulated contaminant monitoring (UCMR5)?

Unregulated contaminants are those for which the EPA has not established drinking water standards. As such, there is no MCLG or MCL established for the following unregulated contaminants.

Substance	Units	Ideal Goals (EPA's MCLG)	Highest Level Allowed (EPA's MCL)	Violation	Date of Sample	Central (Combined) Service Area Data Average (range)
Regulated Substances						
Barium	ppm	2	2	no	July 2024	0.021
Copper	ppm	1.3	1.3	no	July 2024	0.0035
Fluoride	ppm	4	4	no	Monthly	0.70 (0.63 - 0.78)
Nitrate + Nitrite	ppm	10	10	no	July 2024	0.17
Turbidity	NTU	TT = 0.30	TT < 95% = 0.30	no	Daily	0.16 (0.08 - 0.46)
Lead and Copper Testing						
Lead	ppb	0	AL = 1.5	no	June - Sep. 2023	1 sample exceeded AL 90th percentile = 2.2 (ND - 20.7)
Copper	ppm	1.3	AL = 1.3	no	June - Sep. 2023	0 samples exceeded AL 90th percentile = 0.176 (0 - 1.29)
Disinfection Method						
Sodium Hypochlorite	ppm	MRDLG = 4	MRDL = 4	no	Daily	0.89 (0.69 - 2.09)
Disinfection By-Products						
HAA5s	ppb	N/A	60	no	Quarterly	56 (29 - 56)
TTHMs	ppb	N/A	80	no	Quarterly	56 (28 - 56)
Radioactive Substances						
Gross Alpha	pCi/L	0	15	no	May 2020	<0.33
Combined Radium	pCi/L	0	5	no	May 2020	0.2
Unregulated and Secondary Substances		EPA's SMCL				
Aluminum	ppm	N/A	0.05 - 0.2	no	July 2024	0.054
Chloride	ppm	N/A	250	no	July 2024	10.9
Nickel	ppm	N/A	N/A	no	July 2024	0.00021
Sodium	ppm	N/A	N/A	no	^July 2024	7.9
Total Organic Carbon	ppm	TT	TT	no	Monthly	.99 (0.75 - 1.25)

^ This meets the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water, which is established for those individuals on a "strict" sodium intake diet.

Data presented as (range) Average.
PWSID# 5019052


Stoney Creek Reservoir

The UCMR program provides the EPA and other interested parties with nationally representative data on the occurrence of particular contaminants in drinking water, the number of people potentially being exposed and an estimate of the levels of that exposure. In accordance with SDWA, EPA takes into consideration the occurrence data from UCMR5 and other sources, along with the peer reviewed health effects assessments, to aid in determining where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.

General information is available on the UCMR web page or by calling the Safe Drinking Water Hotline at 1(800)426-4791.

Why was the UCMR developed?

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years the EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs).

UCMR5 Analyte	Units	Date of Sample	Highest Level (EPA's MRL)	Central Combined Service Area Data Average	Hazard Index (HI)**
PFBA	ng/L	Aug. 2022	N/A	0	
PFOS	ng/L	Aug. 2022	4	0	
PFPeA	ng/L	Aug. 2022	N/A	0	
PFHpA	ng/L	Aug. 2022	4	0	
PFHxA	ng/L	Aug. 2022	N/A	0	
PFOA	ng/L	Aug. 2022	4	0	
PFHxS	ng/L	Aug. 2022	10	0	0
PFNA	ng/L	Aug. 2022	10	0	
PFBS	ng/L	Aug. 2022	2,000	0	
HFPO-DA*	ng/L	Aug. 2022	10	0	

* Known as the GenX chemicals
** The analytes of concern (PFHxS, PFNA, PFBS & HFPPO-DA) are calculated to find the HI which should be less than the MCL of 1.0

Microbiological Substances	Units	EPA's MCLG	Highest Level Allowed - EPA's MCL	Violation	Date of Sample	Level Detected
Total Coliforms	P/A	0	5% of monthly samples are positive (40 sample required)	no	Monthly	*1A (2) positive monthly June 2024 *1B (1) positive monthly July 2024 *1C (1) positive monthly Aug 2024 *1D (6) positive monthly Sept 2024 *1E (3) positive monthly Oct 2024
E. Coli	P/A	0	A routine sample and a repeat sample are total coliform positive; and one is also E. Coli positive	no	Monthly	1 positive sample on July 03, 2024

*1A This was found to be due to customer plumbing. *1B This was found to be due to customer plumbing. *1C This was found to be from a fan that was on.
*1D This was found to be due to to customer plumbing and the sample bottles used. *1E This was found to be due to the sample bottles used

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. As can be seen in the table above, the BRWA found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, it is required to conduct assessments to identify problems and to correct any problems that are found.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems. As can be seen in the table above, the BRWA found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, it is required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

CENTRAL SERVICE AREA

Source water assessments of this system was conducted in 2003 by the Virginia Department of Health (VDH). The reservoir(s) was determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. Please call (540)586-7679 to receive a copy of this report.

A service line inventory has been prepared for the Central Service Area and five service lines were found to contain lead. Access the service line inventory here: https://www.brwa.com/service-line-inventory/.

Lead

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 BRWA is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in household plumbing. Identifying and removing lead-containing materials within household plumbing, along with taking preventative measures, can help reduce potential health risks. Before consuming tap water, flushing the pipes for several minutes—running the tap, taking a shower, or using appliances such as a washing machine or dishwasher can help. Additionally, using a filter certified by an American National Standards Institute (ANSI) accredited certifier can further reduce lead levels in drinking water.

For concerns about lead and water testing, please contact the BRWA's Water Compliance Supervisor, Ryan Kelly at (504)586-7679. Information on lead in drinking water, testing methods, and steps to minimize exposure are available at https://www.epa.gov/lead.

Stoney Creek Dam

Interesting Fact:

Originally built in 1954, rehabilitation and reconstruction of the Stoney Creek Dam began in 2011.

This immense project called for a budget of nearly seven million dollars and consisted of erecting new sidewalls, parapet walls, cut-off walls, spillway crest, and chute slab overlay (approximately 2,900 cubic yards of reinforced concrete); overtopping protection on the downstream side of the existing dam embankment consisting of 10,000 cubic yards of roller-compacted concrete; sand blanket drain; stone trench drains including 2,500 linear feet of PVC perforated and solid pipe; 20,000 cubic yards of excavation and backfill; rip rap channels; water line relocation; sheet piling; pressure injected grout; piezometers.

The rehabilitation and reconstruction of the Stoney Creek Dam was completed in the Spring of 2012 and has since been named "Most Improved Dam" by Virginia Lakes and Watersheds Association Dam Safety Committee.

Assessments

a. During the past year, the BRWA was required to conduct (1) Level 1 assessment. (1) Level 1 assessment was completed. In addition, (1) corrective action was required and completed.

b. During the past year (1) Level 2 assessment was required to be completed for the waterworks. (1) Level 2 assessment was completed. In addition, (1) corrective action was required and completed.


Helm Street Tank

COMMUNITY WELL SYSTEMS

MOUNTAIN VIEW SHORES

The BRWA also owns an independent water system located within the Mountain View Shores subdivision that uses three wells as its source. The BRWA maintains the aforementioned distribution system that serves many within this localized community.

How is it treated?

Water serving the Mountain View Shores subdivision is sourced from three groundwater wells and is distributed throughout the community from a 100,000-gallon water tank via distribution piping.

Water from these wells is filtered using greensand pressure filters and treated with Sodium Hypochlorite, soda ash and a blended phosphate product prior to entering the distribution system.

Where does it serve?

These three groundwater wells serve all of those living within any of the four sections of the Mountain View Shores subdivision or from the intersection of Trading Post Road and Capewood Drive south.

Source water assessments of this system was conducted in 2018 by the Virginia Department of Health (VDH). The well(s) was determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. Please call (540)586-7679 to receive a copy of this report.

Substance	Units	Ideal Goals (EPA'S MCLG)	Highest Level Allowed (EPA's MCL)	Violation	Date of Sample	Mountain View Shores Service Area Data Average (range)
Regulated Substances						
Arsenic	ppb	0	10	no	Oct. 2022	1.4
Barium	ppm	2	2	no	Oct. 2022	0.0014
Chromium	ppb	100	100	no	Oct. 2022	2.7
Fluoride	ppm	4	4	no	Oct. 2022	ND
Nitrate + Nitrite	ppm	10	10	no	July 2024	0.38
Lead and Copper Testing						
Lead	ppb	0	AL = 1.5	no	June - Sep. 2022	0 samples exceeded AL 90th percentile = 3.8 (0.33 - 6.2)
Copper	ppm	1.3	AL = 1.3	no	June - Sep. 2022	1 sample exceeded AL 90th percentile = 1.2 (0.077 - 1.49)
Disinfection Method						
Sodium Hypochlorite	ppm	MRDLG = 4	MRDLG = 4	no	Daily	0.98 (0.58 - 1.56)
Disinfection By-Products						
HAA5s	ppb	N/A	60	no	Oct. 2022	ND
TTHMs	ppb	N/A	80	no	Oct. 2022	2.3
Radioactive Substance						
Gross Alpha	pCi/L	0	15	no	Mar. 2024	2.41
Combined Radium	pCi/L	0	5	no	Mar. 2024	1.356
Unregulated and Secondary Substances						
Sodium	ppm	N/A	N/A	no	^Oct. 2022	79.4

^ This is above the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water, which is established for those individuals on a "strict" sodium intake diet.

A service line inventory has been prepared for Mountain View Shores and no lead service lines were identified. Access the service line inventory here: https://www.brwa.com/wp-content/uploads/2024/10/Mountain-View-Shores-Inventory.pdf.

Other contaminants (such as coliform bacteria) were examined, but not detected during the entire year.

Data presented as (range) Average.
Mountain View Shores
PWSID# 5019685

Microbiological Substances	Units	EPA's MCLG	Highest Level Allowed - EPA's MCL	Violation	Date of Sample (Mountain View Shores)	Level Detected
Total Coliforms	P/A	0	Presence of coliform in more than 1 monthly sample	no	Monthly	0 positive monthly

VALLEY MILLS CROSSING

The BRWA also owns an independent water system located within the Valley Mills Crossing subdivision that uses one well as its source. The BRWA maintains this distribution system that serves those who reside within the Valley Mills Crossing subdivision.

How is it treated?

Water serving the Valley Mills Crossing subdivision is sourced from one groundwater well and is distributed throughout the community via a 15,000-gallon water tank and distribution piping.

Water from this groundwater well is disinfected with Sodium Hypochlorite prior to entering the distribution system.

Where does it serve?

This groundwater well serves all of those living within the Valley Mills Crossing subdivision or from the intersection of Saunders Point Road and Mill Lake Road west.

Source water assessments of this system was conducted in 2002 by the Virginia Department of Health (VDH). The well(s) was determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. Please call (540)586-7679 to receive a copy of this report.

A service line inventory has been prepared for Valley Mills Crossing and no lead service lines were identified. Access the service line inventory here: https://www.brwa.com/wp-content/uploads/2024/10/Valley-Mills-Crossing-Inventory.pdf.

Substance	Units	Ideal Goals (EPA'S MCLG)	Highest Level Allowed (EPA's MCL)	Violation	Date of Sample	Valley Mills Crossing Service Area Data Average (range)
Regulated Substances						
Barium	ppm	2	2	no	Oct. 2021	0.03
Cyanide	ppm	0.2	0.2	no	Oct. 2022	ND
Nitrate + Nitrite	ppm	10	10	no	Oct. 2024	1.4
Lead and Copper Testing						
Lead	ppb	0	AL = 1.5	no	June - Sep. 2023	0 samples exceeded AL 90th percentile = 3.45 (1.1 - 3.50)
Copper	ppm	1.3	AL = 1.3	no	June - Sep. 2023	0 samples exceeded AL 90th percentile = 0.79 (0.09 - 1.43)
Disinfection Method						
Sodium Hypochlorite	ppm	MRDLG = 4	MRDL = 4	no	Daily	0.85 (0.40 - 1.51)
Disinfection By-Products						
HAA5s	ppb	N/A	60	no	Aug. 2022	2.67
TTHMs	ppb	0	80	no	Aug. 2022	3.13
Radioactive Substances						
Gross Alpha	pCi/L	0	15	no	April 2023	0.9
Combined Radium	pCi/L	0	5	no	April 2023	0.291
Unregulated and Secondary Substances| EPA's SMCL |						
Hardness	ppm	N/A	N/A	no	Monthly	50 (23 - 94)
pH	pH units	N/A	6.5 - 8.5	no	Daily	6.4 (5.9 - 6.8)
Sodium	ppm	N/A	N/A	no	^Oct. 2021	9.4

^ This meets the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water, which is established for those individuals on a "strict" sodium intake diet.

UCMR5 Analyte	Units	Date of Sample	Highest Level (EPA's MRL)	Central Combined Service Area Data Average	Hazard Index (HI)**
PFPeA	ng/L	Sept. 2024	N/A	1.5	
PFHxA	ng/L	Sept. 2024	N/A	1.1	
PFHxS*	ng/L	Sept. 2024	10	0	
PFNA*	ng/L	Sept. 2024	10	0	0
PFBS	ng/L	Sept. 2024	2,000	0	
HFPO-DA*	ng/L	Sept. 2024	10	0	

* Known as the GenX chemicals
** The analytes of concern (PFHxS, PFNA, PFBS & HFPPO-DA) are calculated to find the HI which should be less than the MCL of 1.0

Other contaminants (such as coliform bacteria) were examined, but not detected during the entire year.

Data presented as (range) Average.
Valley Mills Crossing PWSID#5019875

Microbiological Substances	Units	EPA's MCLG	Highest Level Allowed - EPA's MCL	Violation	Date of Sample (Valley Mills Crossing)	Level Detected
Total Coliforms	P/A	0	Presence of coliform in more than 1 monthly sample	no	Monthly	0 positive monthly

PARADISE POINT ESTATES

The BRWA has operated the Paradise Point Estates water system since 2021. Water is drawn from a 400-foot-deep well and then treated with Sodium Hypochlorite for disinfection. Water chemistry is also balanced to prevent the corrosion of any pipes in the distribution system.

Source water assessments of this system was conducted in 2020 by the Virginia Department of Health (VDH). The well(s) was determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. Please call (540)586-7679 to receive a copy of this report.

A service line inventory has been prepared for Paradise Point Estates and no lead service lines were identified. Access the service line inventory here: https://www.brwa.com/wp-content/uploads/2025/03/Paradise-Point-Estates_10-4-24.pdf.

Substance	Units	Ideal Goals (EPA'S MCLG)	Highest Level Allowed (EPA's MCL)	Violation	Date of Sample	Paradise Point Estates Service Area Data Average (range)
Regulated Substances						
Barium	ppm	2	2	no	May 2023	0.0876
Chromium	ppb	100	100	no	May 2023	5.2
Nitrate + Nitrite	ppm	10	10	no	Feb. 2024	3.2
Lead and Copper Testing						
Lead	ppb	0	AL = 1.5	no	June - Aug. 2024	0 samples exceeded AL 90th percentile = 1.044 (0.32 - 1.50)
Copper	ppm	1.3	AL = 1.3	no	June - Aug. 2024	0 samples exceeded AL 90th percentile = 0.07356 (0.124 - 0.78)
Disinfection Method						
Sodium Hypochlorite	ppm	MRDLG = 4	MRDL = 4	no	Daily	0.66 (0.33 - 0.94)
Disinfection By-Products						
HAA5s	ppb	N/A	60	no	Aug. 2024	4
TTHMs	ppb	N/A	80	no	Aug. 2024	6
Radioactive Substance						
Gross Alpha	pCi/L	0	15	no	March 2019	ND
Combined Radium	pCi/L	0	5	no	March 2019	0.2
Unregulated and Secondary Substances						
Sodium	ppm	N/A	N/A	no	^May 2023	67

UCMR5 Analyte	Units	Date of Sample	Highest Level (EPA's MRL)	Central Combined Service Area Data Average	Hazard Index (HI)**
PFBA	ng/L	Sept. 2024	N/A	1.6	
PFOS	ng/L	Sept. 2024	4	0	
PFPeA	ng/L	Sept. 2024	N/A	7.2	
PFHpA	ng/L	Sept. 2024	4	0.7	
PFHxA	ng/L	Sept. 2024	N/A	6.2	
PFOA	ng/L	Sept. 2024	4	0.8	
PFHxS	ng/L	Sept.2024	10	0	0.00085
PFNA	ng/L	Sept. 2024	10	0	
PFBS	ng/L	Sept. 2024	2,000	1.7	
HFPO-DA*	ng/L	Sept. 2024	10	0	

* Known as the GenX chemicals
** The analytes of concern (PFHxS, PFNA, PFBS & HFPPO-DA) are calculated to find the HI which should be less than the MCL of 1.0

^ This exceeds the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water, which is established for those individuals on a "strict" sodium intake diet.

Other contaminants (such as coliform bacteria) were examined, but not detected during the entire year.

Data presented as (range) Average.
Paradise Point PWSID#5019735

Microbiological Substances	Units	EPA's MCLG	Highest Level Allowed - EPA's MCL	Violation	Date of Sample	Date of Sample (Paradise Point)	Level Detected
Total Coliforms	P/A	0	Presence of coliform in more than 1 monthly sample	no	Monthly	Monthly	0 positive monthly

PARTNERING ORGANIZATION
WATER DATA

City of Lynchburg 2024 Raw data for Consecutive Systems

			Level Detected						
Substance	**Units**	**Violation**	**Water from Abert Filtration Plant**	**Water from College Hill Filtration Plant**	**AL**	**MCLG**	**MCL**	**MDRL**	**Likely Source of Contamination**
Inorganic Contaminants									
Chlorine	ppm	no	Range: 0.15 - 2.91 Highest Average: 1.39		-	-	-	4	Water additive to control microbes
Nitrate + Nitrite (as Nitrogen)	ppm	no	0.12	0.14	-	10	10	-	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Fluoride	ppm	no	Average: 0.68 Range: 0.07 - 0.87	Average: 0.67 0.10 - 0.81	-	4	4	-	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (results from 2024)	ppb	no	90th percentile value = 2 0 samples above action limit Range: 0-4		15	0	-	-	Corrosion of household plumbing systems, erosion of natural deposits
Copper (results from 2021)	ppb	no	90th percentile value = 45 0 samples above action limit Range: 2-124		1300	1300	-	-	Corrosion of household plumbing systems, erosion of natural deposits
Barium	ppm	no	0.012	0	-	0	2	-	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Microbiological Contaminants									
Turbidity	NTU	no	0.10 (highest level) 100% <0.3	0.08 (highest level) 100% <0.3	-	N/A	TT	-	Soil runoff
No single sample can be greater than 1 NTU. At least 95% of the samples taken every month must be less than 0.3 NTU									
Disinfection By-Products									
Trihalomethanes (TTHM)	ppb	no	Range: 18 - 71 Highest Average: 59		-	N/A	80	-	By-product of drinking water disinfection
Haloacetic Acids (HAA)	ppb	no	Range: 20 - 60 Highest Average: 49		-	N/A	60	-	By-product of drinking water disinfection
Radioactive Contaminants									
Gross beta mrem/yr (results from 2024)	mrem/yr	no	0.8	0	-	0	*50	-	Erosion of natural deposits
**EPA considers 50 mrem/yr to be the level of concern for beta particles*									
Disinfection By-Product Precursors									
Total Organic Carbon % removal	-	no	Range: 40 - 68 Lowest Average: 46		-	N/A	TT	-	Naturally present in the environment

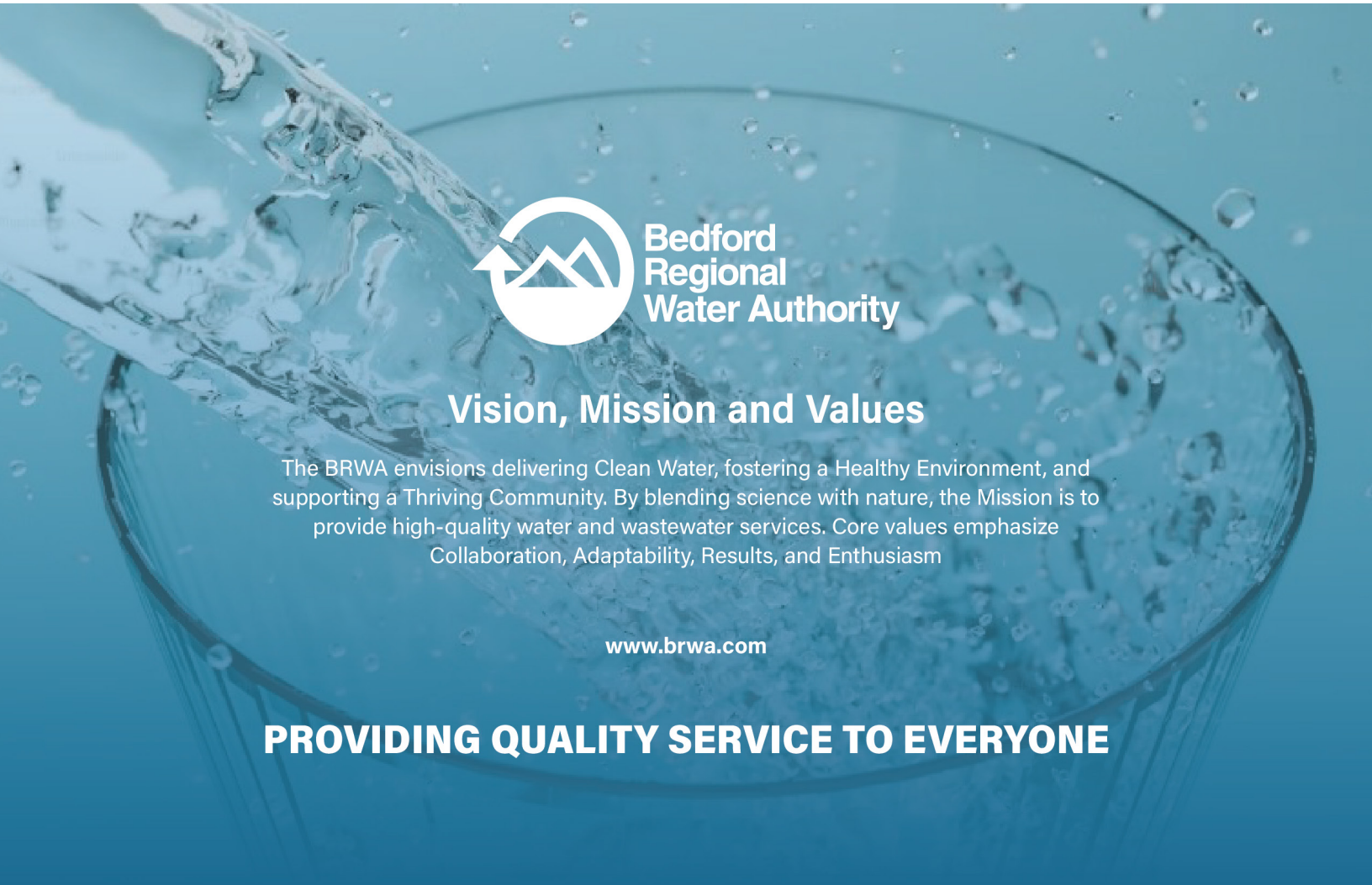
Unregulated Substance	Units	Abert	College Hill	Typical Source
Sodium	mh/L	7.2	7.2	Natural deposits and road salt

UCMR5 results available upon request.

Western Virginia Water Authority 2024 Calendar Year Data

				CARVINS COVE DATA		
Substance	**Units**	**Ideal Goals (EPA'S MCLG)**	**Highest Level Allowed (EPA's MCL)**	**Date Collected**	**Violation**	**Carvins Cove Average of Levels Detected (range)**
Regulated Substances						
Barium	ppm	2	2	5/7/2024	no	0.05
Fluoride	ppm	4	4	5/7/2024	no	0.62
Total Nitrate & Nitrite (as N)	ppm	10	10	8/12/2024	no	ND
Turbidity	NTU	TT	0.3	2024	no	0.26
Radioactive Contaminants						
Gross Alpha	pCi/L	0	15	2/21/2023	no	ND
Gross Beta	pCi/L	0	50	2/21/2023	no	ND
Radium 228	pCi/L	0	5	2/21/2023	no	ND
Combined Radium	pCi/L	0	5	2/21/2023	no	0.64
Lead and Copper Testing						
Lead	ppb	0	AL = 15	2022	no	0 of 50 samples exceeded the AL 90th percentile = ND Range (ND - 10.2)
Copper	ppm	1.3	AL = 1.3	2022	no	0 of 50 samples exceeded the AL 90th percentile = 0.38 pm Range (0.02 - 0.64)
Disinfectants and Disinfection By-Products						
Chlorine	ppm		4	2024	no	(ND - 1.57) 1.0
HAA5s	ppb	0	60	2024	no	(ND - 61) 53
TTHMs	ppb	0	80	2024	no	(4 - 73) 54
Unregulated and Secondary Substances						
Alkalinity	ppm	unregulated		2024	no	(33 - 42) 39
Hardness (Total)	ppm	uregulated		2024	no	(42 - 60) 53
Iron	ppm		0.3	5/7/2024	no	0.024
Manganese	ppm		0.05	5/7/2024	no	ND
Orthophosphate (as P)	ppm	unregulated		2024	no	(0.81 - 087) 0.84
pH	pH units		6.5 - 8.5	2024	no	(7.42 - 7.47) 7.45
Sodium	ppm	unregulated		5/7/2024	no	5.9
Zinc	ppm		5	5/7/2024	no	ND
Microbiological Substances						
Total Coliform	P/A	0	Presence of coliform bacteria in >5% of monthly samples	Monthly	no	0
E.coli	P/A	0	A routine and a repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive.	Monthly	no	0

BEDFORD REGIONAL WATER AUTHORITY
1723 Falling Creek Road
Bedford, VA 24523



Bedford Regional Water Authority

Vision, Mission and Values

The BRWA envisions delivering Clean Water, fostering a Healthy Environment, and supporting a Thriving Community. By blending science with nature, the Mission is to provide high-quality water and wastewater services. Core values emphasize Collaboration, Adaptability, Results, and Enthusiasm

www.brwa.com

PROVIDING QUALITY SERVICE TO EVERYONE