



## Annual Water Quality Report 2022

### Bermuda Water Company Customers:

Your drinking water *meets or surpasses* all federal and state drinking water standards.

Our goal is to deliver safe, clean water to our customers at a reasonable cost.

Bermuda Water is supplied by groundwater pumped from nine wells located within our service area, including south Bullhead City, Fort Mojave, and north Mohave Valley. Our water is pumped out of the Lake Mohave Basin which is one of nine basins located in northwestern Arizona.

Source Water Assessments provide a screening-level evaluation of potential contamination which could occur. It does not mean that the contamination has or will occur. This information can be used to evaluate possible needs to improve our current water treatment capabilities and prepare for any possible future contamination threats. This can also help us ensure continued water quality.

Bermuda Water Company did not receive a Source Water Assessment Plan because the public water system was either inactive at the time or did not exist. Further source water assessment documentation can be obtained by contacting ADEQ.

***Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.***

### Message from Seán Twomey, President

Dear Bermuda Water Company (BWC) Customers,  
I am pleased to present your Annual Water Quality Report for 2022. Transparency, health, and safety are key priorities in our company’s efforts to provide a high-quality, reliable water supply. Included in this report are details about where your water comes from, what it contains, and how it compares to regulatory standards.

**We are proud to share this report which is based on water quality testing through December 2022. We continually strive to supply water that meets and/or exceeds all federal and state water quality regulations at your tap.**

Treating and maintaining a safe and reliable water supply is not only hard work, but it is rewarding. Our team of local water experts are proudly dedicated to providing safe, reliable, and cost-effective service every day. This commitment includes acting with integrity, protecting the environment, and enhancing the local community.

Best regards,

Seán Twomey

### COVID-19 Response

According to the Centers for Disease Control and Prevention (CDC) and the US Environmental Protection Agency (EPA), the virus that causes COVID-19 has not been detected in drinking water. Conventional water treatment methods that use disinfection, such as those provided by Bermuda Water Company, should remove or inactivate the virus that causes COVID-19 as they do for other pathogens.

**Based on current evidence, the risk to water supplies remains low. Customers can continue using and drinking tap water as usual.**

The EPA also encourages the public to help keep household plumbing and our nation’s water infrastructure operating properly by only flushing toilet paper. **Disinfecting or other sanitary wipes, including those labeled as “flushable” and other non-toilet paper items, should NOT be flushed in toilets.** For more information, visit the CDC at <https://stacks.cdc.gov/view/cdc/85879> and EPA at <https://www.epa.gov/coronavirus/coronavirus-and-drinking-water-and-wastewater>.

Visit our website at: <https://www.myutility.us/bermudawateraz>

**EPA Wants You To Know:**

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. 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 human activity.

Contaminants that may be present in source water include:

- A) *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B) *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- C) *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- D) *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.
- E) *Radioactive contaminants*, which can be naturally-occurring or the result of oil and gas production and mining activities.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that 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. 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. USEPA/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).

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. Bermuda Water Company 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. Do not boil your water to remove lead. Excessive boiling makes the lead more concentrated – the lead remains when the water evaporates. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. If you are concerned about lead in your drinking 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Water that remains stationary within your home plumbing for extended periods of time can leach lead out of pipes joined with lead-containing solder as well as brass fixtures or galvanized pipes. Flushing fixtures has been found to be an effective means of reducing lead levels. The flushing process could take from 30 seconds to 2 minutes or longer until it becomes cold or reaches a steady temperature. Faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. Consumers should be aware of this when choosing fixtures and take appropriate precautions. Visit the NSF Web site at [www.nsf.org](http://www.nsf.org) to learn more about lead-containing plumbing fixtures.

Agua potable de las Bermudas cumple o supera todas estatales y federales las normas de calidad del agua potable



**WaterSense**  
partner since  
October 11,  
2019

**We ask that all our customers help us protect our water sources which are the heart of our community, our way of life and our children’s future.**

**Why Save Water?**

According to a [2014 Government Accountability Report](#), 40 out of 50 state water managers expect water shortages under average conditions in some portion of their states over the next decade.

- Each American uses an average of 88 gallons of water a day at home.
- We can all use at least 20 percent less water by installing water-efficient fixtures and appliances.
- The average family spends more than \$1,000 per year in water costs but can save more than \$380 annually from retrofitting with WaterSense labeled fixtures and ENERGY STAR certified appliances.

**WaterSense labels products that are 20 percent more water-efficient and perform as well as or better than standard models.**

**The Safe Drinking Water Act** was passed in 1974 due to congressional concerns about organic chemical contaminants in drinking water and the inefficient manner by which states supervised and monitored drinking water supplies. Congress’ aim was to assure that all citizens served by public water systems would be provided high quality water. As a result, the EPA set enforceable standards for health-related drinking water contaminants. The Act also established programs to protect underground sources of drinking water from contamination.

**Understanding This Report:** In order to help you understand this report, we want you to understand a few terms and abbreviations that are contained in it.

**Action level (AL)** - Action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Maximum contaminant level (MCL)** - The maximum contaminant level is 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.

**Maximum contaminant level goal (MCLG)** - The "goal" is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** - (mandatory language) 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)** - (mandatory language) 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.

**Minimum Reporting Limit (MRL)** - Minimum at which results are required to be reported.

**Non-Detects (ND)** - Analysis or test results indicate the constituent is not detectable at minimum reporting limit.

**Parts per billion (ppb) or micrograms per liter (ug/L)** - one part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

**Parts per million (ppm) or milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of radioactivity in the water.

**Running Annual Average (RAA)** - Calculated running average of the contaminant levels detected.

Based on certain criteria, some systems may be allowed to monitor for regulated contaminants less often than once a year. In this case, the table will include the date and results of the most recent sampling.

*MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.*

#### **If You Have Questions Or Want To Get Involved?**

Please contact Bermuda Water at (928) 763-6676 to learn more about what you can do to help protect your drinking water sources, any questions about the annual drinking water quality report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

## **Explore, Learn, and Get Involved**

Extension  
University of Nevada Reno  
<https://extension.unr.edu/clark-laughlin.aspx>  
4-H Youth Development  
Master Gardeners  
55 Civic Way  
Laughlin, NV 89029  
702-299-1333  
Fax: 702-299-1334



**EXTENSION**  
College of Agriculture,  
Biotechnology & Natural Resources

University of Arizona Cooperative Extension  
takes the science of the University to the people of  
Arizona through programs, publications, classes,  
events and one-on-one teaching.

<https://extension.arizona.edu/master-gardener>

4-H Youth Development  
Master Gardeners  
101 E Beale St.  
Kingman, AZ 86401-5808  
928-753-3788



*To access your utility account anytime, anywhere, please register for our customer portal & download  
[My Utility Account at https://account.myutility.us](https://account.myutility.us)*

## WATER QUALITY TEST RESULTS

*These tables show the results of our monitoring for the period of January 1 to December 31, 2022 unless otherwise noted.*

### Microbiological Contaminants

Contaminant	MCL	MCLG	Number of Positive Samples	Violation (Yes or No)	Sample Date	Likely Source of Contamination
E-coli	0	0	0	No	Monthly 2022	Human and animal fecal waste
Total Coliform Bacteria	0	0	1	No	Monthly 2022	Naturally present in the environment

### Lead and Copper

Contaminant	AL	ALG	Units	90 <sup>th</sup> Percentile	Number of Sites over AL	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Copper	1.3	1.3	ppm	0.25	0	No	8/2021	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	2.1	0	No	8/2021	Corrosion of household plumbing systems, erosion of natural deposits

### Disinfectants

Contaminant	MRDL	MRDLG	Units	Range	Violation (Yes or No)	Running Annual Average Date /Sample Year	Source
Chlorine	4	4	ppm	0.30 - 0.84	No	0.53 / 2022	Water additive used to control microbes

### Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Highest Level Detected / Range	Violation (Yes or No)	Sample Date/ Year	Likely Source of Contamination
Total Trihalomethanes (TTHM)	80	N/A	ppb	3.6 ND-3.6	No	8/2022	By-product of drinking water disinfection

### Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected/ Range	Violation (Yes or No)	Sample Month/ Year	Likely Source of Contamination
Fluoride	4	4	ppm	ND-1.2	No	9/2022	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	10	10	ppm	0.98-6.5	No	3/2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic	10	0	ppb	1.3-11	No	2/2022	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	ppm	0.039-0.063	No	9/2022	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Sodium	3000	N/A	ppm	54-470	No	9/2022	Erosion of natural deposits

### Radionuclides

Contaminant	MCL	MCLG	Units	Level Detected Range	Violation (Yes or No)	Sample Month/Year	Likely Source of Contamination
Uranium	30	0	ug/L	14.1 1.9-14.1	No	9/2/2022	Erosion of natural deposits

### Health Effects Language

**Total Coliform Bacteria** - Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

**Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

**Arsenic** – While your drinking water meets EPA’s standard for arsenic, it does contain low levels of arsenic. EPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

## PFAS Testing

Bermuda Water Company continues efforts to conduct statewide drinking water testing for Per- and Polyfluoroalkyl Substances (PFAS). These man-made compounds are used in the manufacturing of products resistant to water, grease or stains including firefighting foams, cleaners, cosmetics, paints, adhesives and insecticides. PFAS can migrate into the soil, water, and air and is likely present in the blood of humans and animals all over the world. The Environmental Protection Agency (EPA) has established health advisory levels for GenX, PFBS, PFOA, and PFOS, and has proposed enforceable limits. We are reviewing the proposed MCLs to evaluate the impact on our operations and on the communities we serve. **Our focus will remain, as always, on supplying our customers with safe and reliable water.**

For the latest PFAS results, visit our website at [www.bermudawateraz.com](http://www.bermudawateraz.com) and click Water Quality Reports under Water Safety. For more information visit <https://www.epa.gov/pfas>.

Bermuda Water Company is committed to providing safe, reliable, and cost-effective drinking water services to all our customers.

## Violations

Two monitoring violations (tuvimos dos ocurridas violaciones de monitoreo):

Type / Description	Compliance Period	Corrective Actions taken by PWS
<b>Monitoring:</b> EPDS 006 Nitrates. Sample was not taken due to well being down for repair.	4th Quarter of 2022	Will sample nitrates from the well once it goes back online.
<b>Monitoring:</b> EPDS 006 Arsenic. Sample was not taken due to well being down for repair.	4th Quarter of 2022	Will sample arsenic from the well once it goes back online.
EPDS 006 Arsenic. Sample was taken on time but lab reported results late.	3rd Quarter of 2022	No corrective actions needed.
EPDS 006 Nitrate. Sample was taken on time but lab reported results late.	3rd Quarter of 2022	No corrective actions needed.
RTCR samples. Samples were taken on time but lab reported results late.	August 2022	No corrective actions needed.

Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

## PUBLIC NOTICE

### Elevated Fluoride Levels Detected in Bermuda Water Company

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis).

The drinking water provided by Bermuda Water Company has a natural fluoride concentration of 2.5 mg/l at one well on Joy Lane east of Mountain View. This well is only used as a backup well.

Dental fluorosis in its moderate or severe forms, may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the US Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of this cosmetic dental problem.

For more information, please contact Bermuda Water Company at 928-763-6676. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP. This information is also available on our website at [www.bermudawateraz.com](http://www.bermudawateraz.com). We are continuing to monitor fluoride levels. We will inform you if they exceed the limit of 4 mg/l.

