Bermuda Water Company™

PWS: AZ04 08-063

Annual Water Quality Report 2023

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 Oran Paul, President

Dear Bermuda Water Company (BWC) Customers,

I am pleased to present your Annual Water Quality Report for 2023. 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 2023. 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,

Oran Paul

O. A. P.

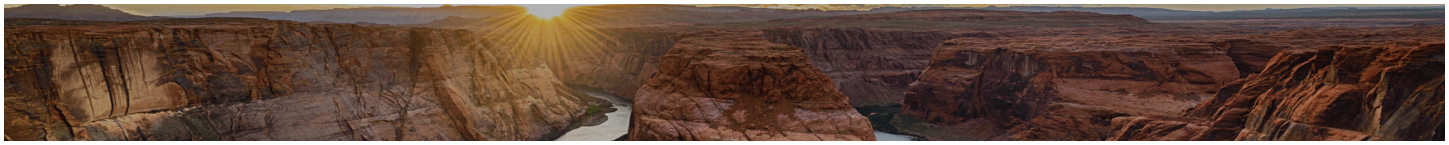
Agua potable de las Bermudas cumple o supera todas estatales y federales las normas de calidad del agua potable

EPA WaterSense

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.

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 to learn more about lead-containing plumbing fixtures.

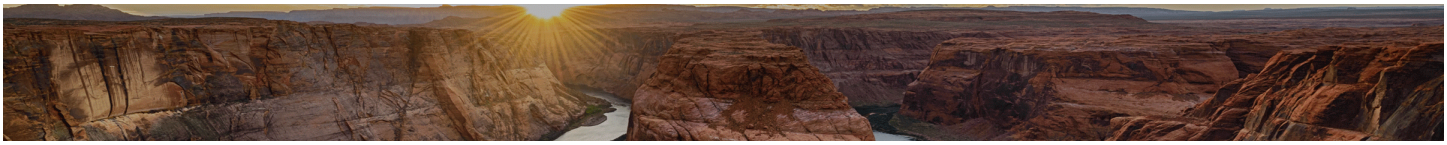
Why Save Water?

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.

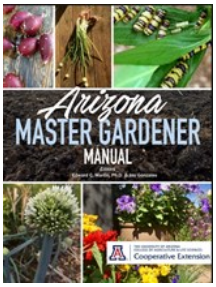
Explore, Learn, and Get Involved

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

WATER QUALITY TEST RESULTS

These tables show the results of our monitoring for the period of January 1 to December 31, 2023 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 2023	Human and animal fecal waste
Total Coliform Bacteria	0	0	0	No	Monthly 2023	Naturally present in the environment

Lead and Copper

Contaminant	AL	ALG	Units	90th 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	0.37 - 0.96	No	0.63 / 2023	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	8.3 7.1-8.3	No	8/2023	By-product of drinking water disinfection
Haloacetic Acids (HAA5)	60	N/A	ppb	2.1 ND-2.1	No	8/2023	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
Arsenic	10	0	ppb	4.8 0-10	No	Quarterly 2023	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
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	5.6 average 0.77-6.4	No	Quarterly 2023	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	ppb	1.86 average ND-8.8	No	12/2021, 9/2022	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
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	4.5-7.1	No	2/21/2023	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.

Unregulated Contaminant Monitoring Rule 5 (UCMR 5)

Availability of Monitoring Data for Unregulated Contaminants for Bermuda Water Company

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those for which USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted. As our customers, you have a right to know that this data is available. If you are interested in examining the results, please contact us at (928) 763-6676 . If you would like more information on the USEPA's Unregulated Contaminants Monitoring Rule (UCMR), please call the Safe Drinking Water Hotline at (800) 426-4791 or visit www.epa.gov/dwucmr. Unregulated contaminants that were detected are provided in the table(s) below:

Unregulated Contaminant Monitoring Rule 5 (UCMR 5) Results

Twenty-nine Per- and Polyfluoroalkyl Substances (In parts per trillion)	Sample Date	Detected Y/N	Average of Results (ppt)	Range of All Samples (Low-High)	Minimum Reporting Level	Analytical Methods
Perfluorobutanesulfonic acid (PFBS)	1/25/23, 7/25/2023, 10/23/23	Y	2.06	ND-5.6	3	EPA 533
Perfluorohexanoic acid (PFHxA)	1/25/23, 7/25/23, 10/23/23	Y	0.19	ND-3	3	EPA 533
Perfluoropentanoic acid (PFPeA)	1/25/23, 7/25/23	Y	1.04	ND-5.1	3	EPA 533
One Metal	**Sample Date**	**Detected Y/N**	**Average**	**Range of All Samples (Low-High)**	**Minimum Reporting Level (ppb)**	**Analytical Methods**
Lithium (ppb)	1/25/23	Y	182.81	80-580	9 µg/L	EPA 200.7, SM 3120 B, ASTM D1976–20

PFAS Testing

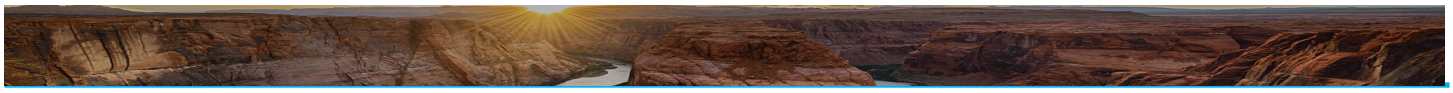
Your drinking water was sampled for the presence and concentration of 29 different per- and polyfluoroalkyl substances, some known by the acronyms PFAS, PFOA, PFNA, PFHxS, PFBS, and GenX, a group of contaminants in the final stages of becoming regulated by the EPA. PFAS are man-made chemicals that are resistant to heat, water, and oil. They have been used since the 1940s to manufacture various consumer products, including fire-fighting foam and stain resistant, water-resistant, and nonstick items. Many PFAS do not break down easily and can build up in people, animals, and the environment over time. Scientific studies have shown that exposure to certain PFAS can be harmful to people and animals, depending on the level and duration of exposure. The table below includes detections of PFAS from 2023 sampling which may duplicate results reported in the above UCMR 5 Results table:

To learn more about this group of chemicals, we encourage you to read the ADEQ-provided "PFAS 101 Fact Sheet" and to visit the ADEQ website at https://www.azdeq.gov/pfas-resources.

Per- and Polyfluoroalkyl Substances	Highest Level Detected	Range of All Samples	MCL
PFOA (in parts per trillion)	2.6	ND-2.6	4.0 ppt
PFOS (in parts per trillion)	2.4	ND-2.4	4.0 ppt
PFNA (in parts per trillion)	ND	N/A	10*
PFHxS (in parts per trillion)	3.1	ND-3.1	10*
PFBS (in parts per trillion)	8.1	ND-8.1	N/A*
GenX (in parts per trillion)	ND	N/A	10*
Calculated Hazard Index (HI)	0.35		1 (no units)
Perfluoroheptanoic acid (PFHpA)	1.2	ND-1.2	N/A
Perfluorohexanoic acid (PFHxA)	3	ND-3	N/A
Perfluoropentanoic acid (PFPeA)	5.8	ND-5.8	N/A

*EPA is proposing a Hazard Index MCL to limit any mixture containing one or more of PFNA, PFHxS, PFBS, and/or GenX Chemicals. The Hazard Index considers the different toxicities of PFNA, GenX Chemicals, PFHxS, and PFBS. For these PFAS, water systems would use a hazard index calculation to determine if the combined levels of these PFAS in the drinking water at that system pose a potential risk and require action (Source: EPA Fact Sheet: Understanding the PFAS National Primary Drinking Water Proposal Hazard Index).

EPA anticipates finalizing the rule in 2024. We will take appropriate actions to meet new regulations. **Our focus will remain, as always, on supplying our customers with quality, reliable water service**. For the latest PFAS results, visit our website at www.bermudawateraz.com and click Water Quality Reports under Water Safety. For more information visit https://www.epa.gov/pfas.



Violations

In 2023, Bermuda Water Company performed all required monitoring for contaminants and did not exceed any allowable levels of these contaminants. See the following table for violations received from the Arizona Department of Environmental Quality for late reporting of samples. Two reporting violations (Dos violaciones reportadas):

Type / Description	Compliance Period	Corrective Actions taken by PWS
Reporting: Monitoring routine MRDL (Maximum Residual Disinfectant Level).	1st quarter 2023	Failed to submit MRDL report on-time; report submitted on 4/11/2023.
Reporting: Monitoring Monthly RTCR (Revised Total Coliform Rule).	July 2023	Failed to submit RTCR report on time; report submitted on 8/28/23.

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 2.2 mg/l as of the 2/28/24 sampling at one well on Joy Lane east of Mountain View.

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. We are continuing to monitor fluoride levels. We will inform you if they exceed the limit of 4 mg/l.