Bermuda Water Company™

PWS: AZ04 08-063

Annual Water Quality Report 2019

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 are on file with the Arizona Department of Environmental Quality and are available for public review. You may obtain a copy by contacting the Arizona Source Water Coordinator at (602) 771-4641. This report provides a screening-level evaluation of potential contamination which **could** occur. It does not mean that the contamination **has or will** occur. We can use this information 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.

Assessment Results: low risk to all well sites.

Read Wendy Barnett's letter to see how we've done!

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

Simple Water-saving Tips

Did you know that adding as little as 2% organic material to garden soils can save up to 75% on water use? Desert soils have less than 1% organic material. With lack of rainfall and plant material in the natural landscape, there's little to break down to add nutrients to the soil. Desert soils can benefit from extra organic material. This can be accomplished either by adding compost to vegetable gardens before planting each year, or by using organic mulch rather than rock around trees and shrubs. (Do not use organic mulch around cacti and succulents). Recycled yard waste such as chipped branches, leaves and other garden waste or commercial organic material purchased from local nurseries can be used to improve the soil. If using a drip irrigation system that is under mulch, wet the surface periodically to help it decompose. Organic mulch is not just a pretty top dressing. It is something that should decompose and add organic material to help feed earthworms, microorganisms and plant roots. Up to 60% of organic matter will disappear, so it needs to be replenished once or twice each year. The recommended amount of organic mulch for garden beds is 3 to 4 inches. This will ensure that decomposition continues. The mulch will always look new and fresh, plants and earthworms will be happy, and you will be saving water.

For more information check with your local University Cooperative Extension office.

Message from Wendy Barnett, President

Dear Valued Customer,

I am pleased to share your Annual Water Report for 2019. As your community water utility, this direct communication is part of our continuing effort to emphasize to our customers that we understand "water is local".

Our team is committed to providing safe, reliable and cost effective service to our customers. All of our employees share in our commitment to act with integrity, protect the environment, and enhance the local community.

We are proud to share this report which is based on water quality testing through December 2019. You will find that we supply water that meets or exceeds all federal and state water quality regulations at your tap.

These results don't happen by chance. A dedicated local team of water quality experts is working in the community everyday ensuring that our customers are our top priority and providing the highest quality drinking water and service - now and in the years to come.

Best regards,

Wendy

Visit our website at
www.bermudawateraz.com

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 is low. **You can continue to use and drink water from your tap as usual.** EPA also encourages the public to help keep household plumbing and our nation's water infrastructure operating properly by only flushing toilet paper. **Disinfecting wipes and other items should be disposed of in the trash, not the toilet.**
For more information, visit the CDC at https://www.cdc.gov/coronavirus/2019-ncov/php/water.html and EPA at https://www.epa.gov/coronavirus/coronavirus-and-drinking-water-and-wastewater.

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.

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.

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) - laboratory analysis indicates that the constituent is not present.

Parts per billion (ppb) or micrograms per liter (µg/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.

To access your utility account anytime, anywhere, please register for our customer portal & download
MyUtilityConnect *at* https://connect.myutility.us/connect/

Explore, Learn, and Get Involved

University of Nevada Cooperative Extension
Southern Clark County Nevada Programs
https://www.unce.unr.edu/counties/clark/laughlin/programs/

4-H Youth Development
Master Gardeners
55 Civic Way
Laughlin, NV 89029
702-299-1333
Fax: 702-299-1334

4-H GROWS HERE
University of Nevada Cooperative Extension

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/mohave

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

WATER QUALITY TEST RESULTS

These tables show the results of our monitoring for the period of January 1 to December 31, 2019 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 2019	Human and animal fecal waste
Total Coliform Bacteria	0	0	0	No	Monthly 2019	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	0.37	0	No	2018	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	2.6	0	No	2018	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants

Contaminant	MRDL	MRDLG	Units	Range	Violation (Yes or No)	Running Annual Average Date/Year	Source
Chlorine	4	4	ppm	0.2 – 0.72	No	0.37 / 2019	Water additive used to control microbes

Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Level Detected	Range	Highest RAA	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Haloacetic Acids (HAA)	60	N/A	ppb	1.85	1.8 – 1.9	0	No	2019	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	80	N/A	ppb	10.8	9 - 12	0	No	2019	By-product of drinking water disinfection

Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected/ Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Fluoride	4	4	ppm	2.4 ND to 2.4	No	2019	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	10	10	ppm	6.2 0 .67– 6.2	No	2019	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic	10	0	ppb	8.9 ND – 8.9	No	2019	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	1	ppm	.06 .03-.06	No	2019	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Selenium	50	50	ppb	9.4 ND - 9.4	No	2019	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Radionuclides

Contaminant	MCL	MCLG	Units	Level Detected Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Alpha emitters	15	0	pCi/L	11.7 1 – 11.7	No	2019	Erosion of natural deposits
Combined radium 226 & 228	5	0	pCi/L	1.4 ND – 1.4	No	2019	Erosion of natural deposits
Uranium	20	0	ug/L	2.9 2.9 – 2.9	No	2019	Erosion of natural deposits

Synthetic Organic Chemicals (SOC)

Contaminant	MCL	MCLG	Units	Level Detected& Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Di (2ethylhexyl) phthalate	6	0	ppb	1.5 ND - 1.5	No	8/2019	Discharge from rubber and chemical factories
Picloram	500	500	ppb	0.1 ND - 0.1	No	8/2019	Herbicide runoff

WATER QUALITY TEST RESULTS

These tables show the results of our monitoring for the period of August 1 to December 31, 2019.

UCMR4

Metals	MRL	Units	Level Detected & Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Germanium Total	0.3	pCi/L	0.68 – 1.9	No	February 2019	Naturally present in the environment
Manganese Total	0.4	pCi/L	ND - 140	No	February 2019	Naturally present in the environment

UCMR4 Testing are unregulated contaminants chosen by the EPA every 4 to 5 years. Up to 30 contaminants are chosen and any utility over 10,000 customers are required to sample for these. Samples are taken twice within 6 months and are reported to the EPA. Any detect must be reported on the Consumer Confidence Report.

PFAS Testing

Bermuda Water Company is currently conducting 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 a health advisory level at 70 parts per trillion. For more information visit https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos. Notification has or will be sent to all registered customers of the testing results once completed. Bermuda Water Company is committed to providing safe, reliable, and cost-effective drinking water services to all of our customers.

Violations: NONE

In 2019, Bermuda Water Company performed all required monitoring for contaminants and did not exceed any allowable levels of these contaminants. In addition, Bermuda Water Company received no violations from the Arizona Department of Environmental Quality and was in compliance with their applicable testing and reporting requirements.

Ninguna violación de agua potable fue reportada en el año 2019.

Type / Description	Compliance Period	Corrective Actions taken by PWS

Health Effects Language

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.

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