



**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE NEVADA**

24 July 2023

MEMORANDUM FOR NELLIS AIR FORCE BASE

FROM: 99 ABW/CC

SUBJECT: Consumer Confidence Report (CCR)

The Consumer Confidence Report (CCR) is required by the Environmental Protection Agency (EPA) and is distributed to Nellis Air Force Base (NAFB) as our communication to you, the consumer. The drinking water on the installation has been tested and certified as "safe to drink." The information in this report is a snapshot of calendar year 2022 drinking water quality at NAFB. This effort is accomplished in accordance with the EPA's Safe Drinking Water Act (SDWA) which was passed by Congress in 1974. The purpose of the SDWA is to protect public health by regulating the nation's public drinking water supply. The SDWA was amended in 1996 requiring states to develop and implement source water assessment programs for existing and potential threats to the quality of public drinking water. The SDWA amendment includes a summary of the assessment in the water system's annual CCR. States are required to delineate the sources of public drinking water, identify potential contamination sources within the delineated area, assess the water system's susceptibility to contamination and inform the public of the results. The utility advisory board meets on the first Tuesday of April and the first Tuesday of October. These meetings are held at the North Las Vegas City Council Chambers at 1800 Hrs.

Drinking Water Sources

Most of NAFB's drinking water comes from Lake Mead and is supplied by the Southern Nevada Water Authority (SNWA). The water in Lake Mead begins as snowmelt in the Rocky Mountains and arrives via the Colorado River. The Las Vegas Wash also carries storm water and treated wastewater into Lake Mead, which accounts for less than 2% of all the water in the lake. The Virgin River and Muddy River also combine to provide approximately 1.5% of the water in Lake Mead. Lastly, the water NAFB receives from SNWA is supplemented by a small percentage of groundwater from wells on and near the installation. The source of the well water originates from the Las Vegas Valley Aquifer.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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

Lead and Copper Monitoring

There were 62 samples of Lead and Copper for the year 2022 on approved sampling sites.

Lead and copper are regulated by Treatment Technique (TT) that requires systems to control the corrosiveness of their water. If more than 10% of tap-water samples exceed the action level, water systems must take additional steps. For copper the action level is 1.3 parts per million (ppm), and 15 parts per billion (ppb) for lead.

NAFB complied with the 90th percentile EPA guidance during 2022. Building 793 had one sample with slightly elevated lead results and building 781 had one sample with slightly elevated copper results. Resampling for the locations with slightly elevated results was conducted. All follow-up samples were below the action level. Bioenvironmental Engineering has sent out a water flushing recommendations memorandum to dorm residents and facilities that are frequently unoccupied to promote drawing fresh water through the lines to reduce the degradation of quality that comes from water stagnation.

If present, elevated levels of lead and copper can cause serious health problems, especially for pregnant women and young children. Lead and copper in drinking water is primarily from materials and components associated with service lines and home plumbing. SNWA is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Monitoring and Analysis

Every month, technicians from SNWA collect and analyze water samples from the NAFB drinking water system and water treatment facilities. The water is tested at a higher frequency and more extensively than the SDWA and the Nevada Administrative Code requires. The test results are shown in the table accompanying this report.

Additionally, NAFB routinely monitors for disinfectant residual in the distribution system. This measurement tells us whether the installation is effectively disinfecting the water supply. Disinfectant residual is the amount of chlorine present in the water distribution system pipes.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791 or by visiting water.epa.gov/drink/hotline/index.cfm.

Potentially present contaminants in untreated source water include:

- Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban storm runoff and industrial or domestic wastewater discharges.
- Pesticides and herbicides which may come from a variety of sources such as agriculture, urban storm water runoff, and residential use.
- Organic chemical contaminants including synthetic or volatile organic chemicals, which are byproducts of industrial processes, as well as common sources like: gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or the result of industrial activities.

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industrial and consumer products around the globe, including in the U.S., for decades. Due to their widespread use and environmental persistence, most people in the United States have been exposed to certain PFAS. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires.

Is there a federal or Nevada regulation for PFAS in drinking water?

There is currently no federal drinking water standard for any PFAS compounds. In May 2016, the U.S. EPA established a lifetime drinking water health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS.

In Nevada, there is not a PFAS drinking water regulation.

The Department of Defense (DoD) issued a policy in 2020 to monitor drinking water for PFAS at all DoD owned and operated water systems at a minimum of every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HA level of 70 ppt, water systems would 1) take immediate action to reduce exposure to PFOS or PFOA, to include providing alternative drinking water; and 2) undertake additional sampling to assess the level, scope, and localized source of contamination.

What about the EPA's 2022 interim Health Advisories or proposed regulations?

EPA issued interim HA for PFOS and PFOA in 2022. However, these newer levels are below quantifiable limits (i.e., below detection levels). EPA announced a proposed regulation on PFAS drinking water standards for public comment on March 14, 2023. The Department supports EPA taking regulatory actions to address PFAS, including a drinking water standard for PFAS that will apply to all drinking water suppliers once final. DoD respects and values the public comment process on this proposed nationwide drinking water rule and looks forward to the clarity that a final regulatory drinking water standard for PFAS will provide.

In anticipation of this EPA drinking water regulation and to account for emerging science that shows potential health effects of PFOS and PFOA at levels lower than 70 ppt, DoD is evaluating its efforts to address PFAS in drinking water, and what actions we can take to be prepared to incorporate this standard, such as reviewing our current data and collecting additional sampling where necessary. DoD remains committed to communicating and engaging with our communities throughout this process.

Has Nellis AFB tested its water for PFAS?

Yes. In August 2016 (method 537) and December 2020 (method 537.1) samples were collected from Water Tank 561.

PFAS Detected but PFOA/PFOS were below the 2016 EPA HA

We are informing you that PFOA and PFOS were detected but below the 2016 EPA HA. Other PFAS compounds covered by the sampling method were detected above the method reporting limit (MRL) but EPA does not have a HA for these compounds at this time. PFOA and PFOS were below the 2016 EPA HA of 70 parts per trillion, we will continue to monitor the drinking water quarterly.

Other Health Information

While the EPA requires water agencies to monitor for approximately 90 regulated contaminants, the City of North Las Vegas goes above and beyond to monitor for approximately 30 additional, unregulated contaminants. One unregulated contaminant that is closely monitored is cryptosporidium. This naturally occurring organism found in many U.S. source waters can cause gastrointestinal distress. The EPA now requires larger water systems that treat surface water to assure removal of cryptosporidium. The Southern Nevada water system monitors and tests for cryptosporidium in both its source and treated water supplies. Ozonation, used at both SNWA regional water

treatment facilities, is among the most effective processes for destroying microorganisms such as cryptosporidium. The Southern Nevada Water Authority's Microbiology Laboratory is among the few municipal facilities certified by the EPA for cryptosporidium and giardia detection.

Treatment Process

SNWA has advanced water treatment facilities designed to provide water meeting SDWA standards.

All the water drawn from Lake Mead is sent to the Alfred Merritt Smith or the River Mountains water treatment facilities. As it arrives, the water is treated with chlorine and ozone to kill any potentially harmful microscopic organisms. A multistage filtration system is then used to remove particles from the water. As the water leaves the water treatment facility, additional chlorine is added to protect it on the way to the consumer. The water is also treated to prevent corrosion of the pipelines.

Furthermore, the water from base wells is chlorinated by Civil Engineering (CE) Utilities and mixed with the SNWA water. CE Utilities maintains a staff of well-trained professionals who operate and maintain the system daily.

Do I need to take special precautions?

No, in most cases; however, some people may be more vulnerable to contaminants in drinking water than the general population. Some elderly, infants, and Immuno-compromised persons undergoing chemotherapy, who have undergone organ transplants, who have HIV/AIDS, or other immune system disorders can be particularly at risk from infections. These individuals should seek advice about drinking water from a health care provider. EPA and the Centers for Disease Control (CDC) guidelines, on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants, are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or by visiting the EPA hotline website at water.epa.gov/drink/hotline/index.cfm.

Frequently Asked Questions

Is my tap water safe to drink?

Yes, your tap water meets and surpasses all SDWA standards and is safe to drink. Also, the Alfred Merritt Smith Water Treatment Facility has been recognized by the National Partnership for Safe Water for its efforts to ensure the Southern Nevada's municipal water meets these water quality standards. Water samples are taken from the NAFB water distribution system monthly and analyzed to ensure compliance with standards. Additionally, in December 2022 NDEP conducted a sanitary survey of NAFB and concluded the drinking water system and infrastructure met the state's requirement for a Public Water System to adequately deliver safe drinking water to the consumer, this survey is accomplished every three years.

If tap water is really of good quality, why does it taste the way it does?

Water quality and taste are not always mutually inclusive. The taste of the water can be caused by naturally occurring minerals or by chlorine that is used to keep the water safe from bacteria. It is important to remember, quality is best measured by the concentration of contaminants in the water. For NAFB, we have very few contaminants in our drinking water and those present are well within SDWA limits.

Do I need to use a water treatment system or drink bottled water?

No, unless you wish to improve the taste of your water or remove the minerals causing it to be considered "hard". While many people prefer the taste of bottled water, tap water is subject to more stringent quality standards and is monitored and tested more frequently. Additionally, the cost of the average liter of bottled water is more than 1,000 times the same amount of tap water. The Food and Drug Administration (FDA) establishes regulations for contaminants in bottled water; however, these limits do not always coincide with EPA standards. For more information on bottled water quality, call the International Bottled Water Association at 1-800-WATER11 (1-800-92837-11) or by visiting www.bottledwater.org.

How will I be notified if a significant health risk associated with my water quality develops?

This report is considered the appropriate mechanism for notifying the consumer of routine and non-emergency compliance violations. However, certain emergency situations may warrant more active notification efforts, including, but not limited to: additional publications, postings in public places, mass-mailings, or working through other well-established mass-notification systems.

Additional Information and Input

If you would like a copy of this report or have questions, please contact the 57 WG Public Affairs office at 702-652-2750, 57WG.PA.CommunityEngagement@us.af.mil. Questions and comments can also be mailed to the 57 WG Public Affairs office at: 57 WG PA, 4420 Grissom Ave, Bldg 11, St 107, Nellis AFB, NV 89191. The most current source water assessments are available at the BE office for the NAFB wells, and through SNWA for the water that is provided by SNWA.

For additional information on the quality of your water, call SNWA at 702-862-3400 or go to the SNWA website at [http://www.snwa.com/wq/water quality.html](http://www.snwa.com/wq/water%20quality.html). Information on Nevada's Safe Drinking Water Program is available from the NDEP at 775-687-4670. Also, contact BE at 702-653-3316 or usaf.nellis.99-mdg.list.99-omrs-sgpb-all-personnel@mail.mil.

General information for drinking water can be found on the EPA website at www.epa.gov/safewater.

Water Quality Data Tables

The table associated with this report (see attachment) lists the drinking water contaminants detected. The presence of contaminants in the water does not necessarily indicate the water poses a health risk. Unless otherwise noted, the data presented in the tables are from testing completed in the 2022 calendar year. The EPA and the State requires NAFB to monitor contaminants at a different frequency because some concentrations do not change frequently.

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JOSHUA D. DEMOTTS
Colonel, USAF
Commander

Attachment:
Nellis AFB Consumer Confidence Report Table, 2023

NAFB 2023 CCR TABLE																			
REGULATED CONTAMINANTS	UNIT	MCL (EPA Limit)	MCLG (EPA Goal)	NELLS AIR FORCE BASE DISTRIBUTION SYSTEM ⁽¹⁾			WELL 2 ⁽¹⁾			WELL 8 ⁽¹⁾			RESERVOIR #82 ⁽¹⁾			ALFRED MERRITT SMITH WATER TREATMENT PLANT ⁽¹⁾			POSSIBLE SOURCES OF CONTAMINATION
				MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	
Alpha Particles	pCi/L	15	0				ND ⁽²⁾	ND ⁽²⁾	N/A	9 ⁽²⁾	9 ⁽²⁾	N/A	Well Monitoring Only	ND	ND	N/A	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation.		
Arsenic	ppb	10	0	Entry Point Monitoring Only			2	2	N/A	3	3	N/A	2	2	3 ⁽³⁾	1	Erosion of natural deposits		
Barium	ppm	2	2				0.1	0.1	N/A	0.1	0.1	N/A	Well Monitoring Only	0.1	0.1	0.1	Erosion of natural deposits; discharge from metal canneries; discharge of drilling wastes		
Bromate	ppb	10	0				Treatment Plant Monitoring Only			Treatment Plant Monitoring Only			Treatment Plant Monitoring Only			Corrosion of household plumbing systems; erosion of natural deposits			
Copper ⁽⁴⁾	ppm	1.3 ⁽⁵⁾ (Action Level)	1.3	1.1 (80th % value)	0.19	1.4 ⁽⁶⁾	0.7	0.7	N/A	0.6	0.6	N/A	Well Monitoring Only	0.7	0.8	0.7	Erosion of natural deposits; water additive ⁽⁷⁾		
Fluoride	ppm	4.0	4.0	0.7	0.7	0.7	ND	2.3	0.8 ⁽⁸⁾	ND	2.3	0.8 ⁽⁸⁾	Distribution System Monitoring Only				Water additive used to control microbes		
Free Chlorine Residual	ppm	4.0 ⁽⁸⁾ (MRDL)	4.0 ⁽⁸⁾ (MRDLG)	0.8 ⁽⁹⁾	ND	2.3	ND	45	31 ⁽¹⁰⁾	ND	45	31 ⁽¹⁰⁾	Distribution System Monitoring Only				By-product of drinking-water disinfection		
Haloacetic Acids	ppb	60	N/A ⁽⁶⁾		ND	16 ⁽⁶⁾							Distribution System Monitoring Only				Corrosion of household plumbing systems; erosion of natural deposits		
Lead ⁽⁴⁾	ppb	15 ⁽⁶⁾ (Action Level)	0	3 (80th % value)	N/D	16 ⁽⁶⁾							Distribution System Monitoring Only				Runoff from fertilizer use; leaching from septic tanks, sewerage; erosion of natural deposits		
Nitrate (as Nitrogen)	ppm	10	10	Entry Point Monitoring Only	0.5	0.5	N/A	0.4	N/A	0.4	0.4	N/A	Well Monitoring Only	0.3	0.4	0.3	Erosion of natural deposits; discharge from mines; component of petroleum		
Selenium	ppb	50	50		2	2	N/A	1	N/A	1	1	N/A	Well Monitoring Only	2	3	2	By-product of drinking-water disinfection		
Total Trihalomethanes	ppb	80	N/A ⁽⁶⁾	37	85	70 ⁽¹⁰⁾							Distribution System Monitoring Only						
Turbidity	NTU	55% of the samples <0.3 NTU ⁽¹¹⁾	N/A		Treatment Plant Monitoring Only			Treatment Plant Monitoring Only			Treatment Plant Monitoring Only			100% of the samples were below 0.3 NTU. The maximum NTU was 0.07 on December 10, 2022.			Soil runoff		
Uranium	ppb	30	0	Entry Point Monitoring Only	2 ⁽²⁾	2 ⁽²⁾	N/A	1 ⁽²⁾	N/A	1 ⁽²⁾	1 ⁽²⁾	N/A	Well Monitoring Only	3	4	4	Erosion of natural deposits		

Footnotes:

- Some Safe Drinking Water Act (SDWA) regulations require monitoring from the distribution system, while other SDWA regulations require monitoring at the entry points to the distribution system. (Alfred Merritt Smith WTP, River Mountains WTP, and NAFB Reservoirs and Wells).
- Annual monitoring not required, data from 2020.
- This value is the highest running annual average (RAA) reported in 2022. Reports are filed quarterly.
- Samples are collected from the NAFB customers' taps.
- Lead and copper are regulated by a Treatment Technique (TT) that requires systems to control the corrosiveness of their water. If more than 10% of tap-water samples exceed the action level, water systems must take additional steps. For copper the action level is 1.3 ppm, and for lead it is 15 ppb.
- Maximum values greater than the Action Level are allowable as long as the 80th percentile value is less than the Action Level.
- By state law, the Southern Nevada Water Authority (SNWA) is required to fluoridate the municipal water supply. This law is not applicable to groundwater.
- Chlorine is regulated by MRDL, with the goal stated as a MRDLG.
- Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants. Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (60 ppb); chloroform (70 ppb). Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (20 ppb); monochloroacetic acid (70 ppb). Bromoacetic acid and dibromoacetic acid are regulated with this group but have no MCLGs.
- This value is the highest locational running annual average (LRAA) reported in 2022. Reports are filed quarterly.
- Turbidity is regulated by a Treatment Technique (TT) requirement - 95% of all samples taken after filtration each month must be less than 0.3 NTU. Maximum turbidity cannot exceed 1.0 NTU.