



Annual Consumer Confidence Report for Calendar Year 2018 on the Quality of Drinking Water for the Naval Air Station Fallon Water System

Is NAS Fallon drinking water safe?

This Annual Consumer Confidence Report presents the results of our drinking water system's quality monitoring for the calendar year January 1st to December 31st 2018. During the entire calendar year 2018, the Naval Air Station Fallon (NASF) drinking water system met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. NASF vigilantly safeguards its drinking water supplies and we are proud to report that our drinking water system did not violate a maximum contaminant level or any other water quality standard.

Where does my water come from?

NASF owns three groundwater wells located outside the installation perimeter. Groundwater from these deep wells comes from the Basalt Aquifer over 500 feet below the surface. Water is drawn from these wells and delivered via pipeline to the City of Fallon-owned water treatment plant, where it is combined with water drawn from the City of Fallon-owned groundwater wells. The City of Fallon owns four groundwater wells, which also tap the Basalt Aquifer, and are located throughout central portions of the city. This combined raw well-water is treated at the City of Fallon Water Treatment Plant to remove arsenic prior to distribution to base personnel and city residents. The arsenic treatment mechanism consists of the addition of ferric chloride (for adsorption) followed by filtration and disinfection.

Why are there contaminants in some drinking water?

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. Contaminants that may be present in source water include:

- *Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;*
- *Inorganic contaminants such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water runoff, and residential uses;*
- *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 storm water runoff, and septic systems; and*
- *Radioactive contaminants, which can be naturally occurring, or that may be the result of oil and gas production or mining activities.*

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. NASF drinking water is tested for 88 water contaminants from the National Primary Drinking Water Regulations (NPDWRs or primary standards) and for 14 from the National Secondary Drinking Water Regulations (NSDWRs or secondary standards). The Food and Drug Administration (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 EPA's Safe Drinking Water Hotline (800-426-4791) or at <http://water.epa.gov/lawsregs/guidance/sdwa/basicinformation.cfm>.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as people undergoing chemotherapy for cancer, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. 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).

Source Water Assessment and its availability

The Nevada Bureau of Safe Drinking Water (BSDW) completed their assessment of NASF source water in May 2006. They reported that our water is most susceptible to contamination from irrigated fields, scrap yards, and a nearby Wastewater Treatment Facility. Additionally, there is arsenic present in the groundwater as the result of naturally occurring deposits. However, the water is treated to remove the arsenic to below the maximum contaminant level at the City of Fallon Water Treatment Plant. A full copy of the assessment is available for viewing at the BSDW, Carson City Office. Please contact the BSDW office at (775) 687-9520 if you are interested in viewing the complete assessment.

****Additional Safe Drinking Water Information****

Lead

While your water meets the EPA's standard for Lead, if present at elevated levels this contaminant 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. Your Water System 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 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 or at <http://www.epa.gov/safewater/lead>.

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 Notification of a Violation

Type	Category	Analyte	Compliance Period
MONITORING, ROUTINE (DBP), MAJOR	MONTHLY	CHLORINE	12/1/2018 - 12/31/2018
MONITORING, ROUTINE, MINOR (RTCR)	MONTHLY	REVISED TOTAL COLIFORM RULE (RTCR)	12/1/2018 - 12/31/2018

Naval Air Station Fallon (NASF) collects more monthly coliform and chlorine residual samples than required by the EPA's Revised Total Coliform Rule. We included five additional sample locations in our (monthly) coliform sampling plan to provide more than the minimum level of required protection. One of the extra locations was not sampled in December 2018 (due to inaccessibility) and, as such, NASF received failure to monitor violations for chlorine residual and coliform. NASF was immediately in communication with the Nevada Division of Environmental Protection's Bureau of Safe Drinking Water to revise our sampling plan. We continue to collect five additional samples each month, but the extra locations are no longer considered to be compliance samples, according to our revised plan. 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 not detected at any of the sampling locations in 2018 and we do not anticipate any adverse health effects resulted from the events leading to the violations. Our water system immediately returned to compliance following collection of coliform-negative samples in January 2019.

Whom can I contact for more information?

If you have any questions regarding the information presented in this report or NASF drinking water in general, please feel free to contact Mr. Harry Little, P.E. at the NASF Public Works Environmental Division, (775) 426-2829.

WATER QUALITY TABLES

Presented below are two water quality tables, one for the NASF distribution system, and the second from the City of Fallon. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the 2018 calendar year. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. The tables below list all 13 (out of 102) of the drinking water contaminants that were detected during the most recent tests. The tables show that our system met all requirements during the 2018 calendar year.

Reading the tables

The tables on the following pages show contaminants (and their regulatory limits) detected in your drinking water. *Contaminants not detected are not listed.*

To view data about the water delivered to your home or office, look at the tables and find the column “Your Water After Treatment.” Compare this data with the maximum allowable amount of each contaminant, found in the column labeled “MCL, TT, MRDL, SMCL, or AL.” For example, the average detected amount of Haloacetic Acids (HAA5) (a by-product of disinfecting your water) is 5.0 ppb. This compares to the MCL of 60 ppb. Because the detected level of HAA5 is less than the MCL, there is no violation of drinking water standards set by the EPA and adopted by the State of Nevada. Therefore, a “No” was placed in the “Violation” column of the table.

The “Terms and Abbreviations” section at the end of this report defines the terminology used in the following tables.

Naval Air Station Fallon Distribution System Water Quality Data Tables

<u>Contaminants</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water After Treatment</u>	<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>		
Disinfectants & Disinfection By-Products							
(There is convincing evidence that, for public health, disinfectant addition is necessary for microbial contaminants control.)							
HAA5 (Haloacetic Acids) (ppb)	60	Average 5.0 Range 4.4 – 5.6	2018	No	By-product of drinking water disinfection by chlorination.		
TTHMs [Total Trihalomethanes] (ppb)	80	Average 24 Range 21 - 28	2018	No	By-product of drinking water disinfection by chlorination.		
<u>Contaminants</u>	<u>MCLG Or MRDLG</u>	<u>AL</u>	<u>Your Water After Treatment</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>
Inorganic Contaminants							
Asbestos – fiber > 10 micrometers (MFL)	7	7	< 0.2	2016	0	No	Decay of asbestos cement in water mains; erosion of natural deposits
Copper - action level at consumer taps (ppm)	1.3	1.3	0.19	2014	0	No	Building plumbing systems corrosion; erosion of natural deposits; leaching of wood preservatives.
Lead – action level at consumer taps (ppb)	0	15	1	2014	0	No	Building plumbing systems corrosion; erosion of natural deposits.

Water Quality Data from the City of Fallon

The City of Fallon's new water treatment plant came on line in April of 2004. Since that time, NASF has been receiving treated water from the new plant. The following water quality data table is an excerpt from the [City of Fallon Municipal Water System 2018 Annual Drinking Water Quality Report](#). If you have any questions regarding this data, or would like a copy of this report in its entirety, please contact Mr. Brian Byrd, City of Fallon Public Works Director at 775-217-5990.

<u>Contaminants</u>	<u>or MRDLG</u>	<u>TT, or MRDL</u>	<u>Water After Treatment</u>	<u>Range</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			
Regulated Contaminants								
Arsenic (ppb)	0	10	7.75 (Average)	6	9	2018	No	Erosion of natural deposits; runoff from orchards.
Chromium (ppm)	0.1	0.1	0.001	NA		2018	No	Erosion of natural deposits
Fluoride (ppm)	4.0	4.0	0.5	NA		2018	No	Erosion of natural deposits
Nitrate [measured as Nitrogen] (ppm)	10	10	0.34	NA		2018	No	Runoff from fertilizer use; erosion of natural deposits

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water After Treatment</u>	<u>Range</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	1.04	ND		2016	No	Erosion of natural deposits.
Beta/photon emitters (pCi/L)	0	50	5.9	ND		2008	No	Decay of natural and manufactured deposits.
Combined Radium 226 and 228 (pCi/L)	0	5	0.241	NA		2016	No	Erosion of natural deposits.

<u>Contaminants</u>	<u>SMCL</u>	<u>Your Water After Treatment</u>	<u>Sample Date</u>	<u>SMCL Exceeded</u>
Secondary Contaminants				
Chloride (ppm)	400	88	2018	No
Copper (ppm)	1.0	0.001	2018	No
Iron (ppm)	0.6	0.07	2018	No
Magnesium (ppm)	150	0.5	2018	No
Manganese (ppm)	0.1	0.007	2018	No
pH (pH Units)	6.5 – 8.5	7.68	2018	No
Sodium (ppm)	NA	230	2018	NA
Sulfate (ppm)	500	180	2018	No
Total Dissolved Solids (ppm)	1,000	630	2018	No

Terms & abbreviations used in this report:

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goals (MCLGs) as feasible using the best available treatment technology. These are enforceable standards.
- **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. This is not enforceable.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **Secondary Maximum Contaminant Level (SMCL):** Secondary standards are established as a guideline by the State to assist public water systems in managing drinking water aesthetic considerations such as color, odor, and taste. Secondary standards are not enforced by the EPA, and are not considered to be a health risk at the SMCL. Above the SMCL these constituents may cause poor taste, color/clarity or odor, though the water is safe to drink.
- **Maximum Residual Disinfection Level Goal (MRDLG):** 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.
- **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.
- **NA:** Not available/applicable
- **ND:** Non detect
- **ppb:** Parts per billion or micrograms per liter
- **ppm:** Parts per million or milligrams per liter
- **pCi/L:** Picocuries per liter (a measure of radiation)
- **TON:** Threshold Odor Number
- **MFL:** Million fibers per liter