



## Annual Consumer Confidence Report for Calendar Year 2020 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 2020. During the entire calendar year 2020, 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, pH adjustment 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 routinely 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 accessing the EPA website 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 Vulnerability Assessment Program (VAP) Public Water System Report of NASF source water in December 23, 2019. They reported that our water system is compliant with all State of Nevada and Federal water quality standards. The water system is potentially vulnerable to inorganic compounds (IOC) typically associated natural deposits, fertilizers, septic systems, and asbestos. A full copy of the Vulnerability Assessment is available for viewing at the BSDW, Carson City Office.

#### **\*\*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.

*What can I do to minimize exposure to lead?*

Flush. 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. You may need to flush longer if your building has been shut down or experienced reduced occupancy.

Use Cold Water. Hot water dissolves lead more quickly than cold water, so use cold water to prepare food and drinks.

Clean Your Aerator. Metal debris can be trapped on the aerator screens on water outlets, especially if construction or plumbing work may have occurred in your area. Simply twist off the aerator (may need a wrench and vinegar if there is build-up), carefully tap and clean any debris which may be caught on the filtration screen, and reinstall.

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.

##### **COVID-19**

The transfer of COVID-19 between humans is primarily from the inhalation of droplets containing the virus from other people. It is suspected as occurring from people touching their face with their hands after their hands have touched a contaminated surface. The virus is readily killed by chlorine in water treatment, and is not known to be transmitted through drinking water. Therefore, no sampling and analysis for COVID-19 is conducted in drinking water.

### 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, at (775)426-2829. His email address is [harry.little@navy.mil](mailto:harry.little@navy.mil). He has a copy of the Vulnerability Assessment completed by the Nevada Bureau of Safe Drinking Water dated December 23, 2019 that is referenced above.

## WATER QUALITY TABLES

Presented below are two sets of water quality tables. The first set contains values for the NAS Fallon distribution system and the second set of three tables are values from the City of Fallon. Unless otherwise noted, the data presented in these tables is from testing done in the 2020 calendar year. The tables below list all of the drinking water contaminants that were detected during the most recent tests. 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 presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The tables show that our system met all requirements during the 2020 calendar year. In addition to these data, routine sampling and analyses for residual chlorine and total coliform bacteria are conducted monthly at three locations within NAS Fallon to verify that the drinking water is safe. The data is then reported to the Nevada Department of Environmental Protection - Safe Drinking Water Division on a routine basis. For brevity, those analytical data have not been included in this report.

### \*\*\*How to Read 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 3 parts per billion (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. Notice that results are reported either as parts per million (ppm) or as parts per billion (ppb).

## Naval Air Station Fallon Distribution System Water Quality Data Tables

### Disinfection Byproducts

The chemical compounds listed below are the result of chlorinating the drinking water for disinfection.

<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>
HAA5 (Haloacetic Acids) (ppb)	60	Average 3 Range 3-3	2020	No	By-product of drinking water disinfection by chlorination.
TTHMs [Total Trihalomethanes] (ppb)	80	Average 19 Range 16-22	2020	No	By-product of drinking water disinfection by chlorination.

### Inorganic Contaminants

The inorganic contaminants listed below are for the two items that are commonly evaluated: copper and lead.

<u>Contaminants</u>	<u>MCL 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							
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.

## **CY2020 Consumer Confidence Report (CCR) Language Regarding PFAS**

### **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 industries and consumer products around the globe, including in the United States, since the 1940s. 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 at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

### **Is there a regulation for PFAS in drinking water?**

There is currently no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a 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.

Out of an abundance of caution for your safety, the Department of Defense's (DoD) PFAS testing and response actions go beyond EPA Safe Drinking Water Act requirements. In 2020 the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years.

The EPA's health advisory states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps.

### **Has NAS Fallon tested its water for PFAS?**

Yes. In November 2020, samples were collected from the Centroid and Main base distribution systems.

### **Below MRL**

We are pleased to report that drinking water testing results were below the Method Reporting Limit (MRL) for all 18 PFAS compounds covered by the sampling method, including PFOA and PFOS. This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every three years for your continued protection.

[https://www.cnic.navy.mil/om/base\\_support/environmental/water\\_quality/Testing\\_for\\_Perfluorochemicals.html](https://www.cnic.navy.mil/om/base_support/environmental/water_quality/Testing_for_Perfluorochemicals.html)

[https://www.cnic.navy.mil/regions/cnrsw/om/environmental\\_support/water\\_quality\\_information.html](https://www.cnic.navy.mil/regions/cnrsw/om/environmental_support/water_quality_information.html)

## City of Fallon Distribution System Water Quality Data Tables

The City of Fallon's water treatment plant came on line in April of 2004. Since that time, NASF has received drinking water the City's water treatment plant. The following data table is an excerpt from the [City of Fallon Municipal Water System 2020 Annual Drinking Water Quality Report](#). If you have any questions regarding the City of Fallon's data, or would like a full copy of their report, please contact Mr. Adrian Noriega, City of Fallon Deputy Public Works Director at 775-423-6516.

### Primary Drinking Water Standards (Regulated Contaminants)

The data table below presents the results from testing completed for Primary Drinking Water Standards, which are enforceable standards on regulated contaminants. Contaminants not detected are not listed. All data listed are in parts per million (ppm) except for arsenic which is reported in part per billion (ppb).

#### Inorganic Contaminants

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Water After Treatment	Range		Sample Date	Violation	Typical Source
				Low	High			
Arsenic (ppb)	0	10	8 (average *)	6	10	2020	No	Erosion of natural deposits; runoff from orchards.
Chromium	0.1	0.1	0.005	NA		2019	No	Erosion of natural deposits
Fluoride	4.0	4.0	0.57	NA		2019	No	Erosion of natural deposits
Nitrate as N	10	10	< 0.5	NA		2020	No	Runoff from fertilizer use; erosion of natural deposits
Selenium	0.05	0.05	0.01	NA		2019	No	Erosion of natural deposits

- Note: \* Compliance with arsenic MCL is based on the annual running average. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. However, NAS Fallon complies with the Arsenic Rule because compliance is based on a running annual average.

#### Radioactive Contaminants

This table presents the latest analytical data for radioactive testing conducted by the City of Fallon. Since this testing is much different from traditional wet chemistry analyses, the data is being reported separately.

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

## Secondary Drinking Water Standards

The Secondary Drinking Water Standards are in primarily for aesthetics such as taste and odor in drinking water. These standards are not enforceable, but are guidelines only. Contaminants not detected are not listed.

<u>Contaminants</u>	<u>SMCL</u>	<u>Water After Treatment</u>	<u>Sample Date</u>	<u>SMCL Exceeded</u>	<u>Typical Source</u>
Chloride (ppm)	400	100	2019	No	Runoff/leaching from natural deposits
Magnesium (ppm)	150	0.6	2019	No	Leaching from natural deposits
Manganese (ppm)	0.10	0.015	2019	No	Leaching from natural deposits
pH (pH Units)	6.5-8.5	8.23	2019	No	Acidity indicator
Sulfate (ppm)	500	190	2019	No	Runoff/leaching from natural deposits
Total Dissolved Solids (ppm)	1,000	670	2019	No	Runoff/leaching from natural deposits

### 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