



## Annual Consumer Confidence Report for 2015 on the Quality of Drinking Water for the Naval Air Station Fallon Water System

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### Is NAS Fallon water safe?

This Annual Consumer Confidence Report shows the results of our water quality monitoring for the period of January 1st to December 31st 2015.

Last year, Naval Air Station Fallon (NASF) drinking water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. NASF vigilantly safeguards its water supplies and we are proud to report that our system has not violated 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 and has 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 summary of the BSDW assessment is attached to this year's report. 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 Information for 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.

## Who 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 Ms. Becky Kurtz at the NASF Public Works Environmental Division, (775) 426-2243.

## Exceptions for Calendar Year 2015

The Stage 2 Disinfection Byproducts Rule (DBPR) as promulgated by the EPA requires NAS Fallon to test for byproducts resulting from the use of chlorine as a disinfectant which prevents water-borne diseases. Disinfection can produce hundreds of by-products when chlorine reacts with organic matter. Two major classes are trihalomethanes (THMs) and haloacetic acids (HAA). NAS Fallon tests for these byproducts once a year in two different locations. Our tests were within safe and normal ranges but the sampling event was to occur in September and samples were actually taken in October. DBPR sampling events at buildings 1001 and 134 were 10 micrograms/liter and 24 micrograms/liter, respectively. See the *Disinfectants and Disinfection By-Products* below for average results of October testing event.

## 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 2015 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 22 (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 2015 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 detected amount of Haloacetic Acids (HAA5) (a by-product of disinfecting your water) is 4.3 ppb. This compares to the MCL of 60 ppb. Because the detected level of HAA5 is less than the MCL, there was no violation of drinking water standards set by the EPA and adopted by the State of Nevada, therefore "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.

**NAS Fallon Distribution System Water Quality Data Table**

<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>		
<b>Disinfectants &amp; Disinfection By-Products</b>							
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)							
*Haloacetic Acids (HAA5) (ppb)	60	4.3 (Average)	2015	No	By-product of drinking water chlorination.		
*TTHMs [Total Trihalomethanes] (ppb)	80	17 (Average)	2015	No	By-product of drinking water disinfection.		
<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>
<b>Inorganic Contaminants</b>			<b>90<sup>th</sup> Percentile</b>				
Copper - action level at consumer taps (ppm)	1.3	1.3	0.19	2014	0	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead – action level at consumer taps (ppb)	0	15	0.001	2014	0	No	Internal corrosion of household plumbing systems; 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 2015 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. James Souba, Fallon City Engineer, at 423-5107.

<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>		
<b>Disinfectants &amp; Disinfection By-Products</b>							
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)							
TTHMs [Total Trihalomethanes] (ppb)	80	16	2015	No	By-product of drinking water disinfection.		
HAA5 (Total Haloacetic Acids)	60	4.6	2015	No	By-product of drinking water disinfection.		
<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water After Treatment</u>	<u>Range Low Hi</u>	<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
<b>Inorganic Contaminants</b>							
Arsenic (ppb)	0	10	8.75 (Average)	7 10	2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Chromium	100	100	1	1 1	2015	No	Discharge from steel and pulp mills; Erosion of natural deposits.
Nitrate [measured as Nitrogen] (ppm)	10	10	0.37	NA	2015	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Fluoride (ppm)	4	4	0.6	NA	2015	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

<u>Contaminants</u>	<u>MCLG</u> or <u>MRDLG</u>	<u>AL</u>	<u>Your</u> <u>Water After</u> <u>Treatment</u>	<u>Sample</u> <u>Date</u>	<u># Samples</u> <u>Exceeding</u> <u>AL</u>	<u>Exceeds</u> <u>AL</u>	<u>Typical Source</u>
<b>Inorganic Contaminants</b>							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.29	2015	0	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead – action level at consumer taps (ppb)	0	15	3	2015	0	No	Internal corrosion of household plumbing systems; erosion of natural deposits.

<u>Contaminants</u>	<u>SMCL/</u> <u>MCLG</u>	<u>Your</u> <u>Water After</u> <u>Treatment</u>	<u>Sample</u> <u>Date</u>	<u>SMCL</u> <u>Exceeded</u>	<u>Unit</u>
<b>Secondary Contaminants</b>					
Total Dissolved Solids (ppm)	1000	680	2015	No	mg/L
Alkalinity, Bicarbonate	n/a	170	2012	n/a	mg/L
Alkalinity, Total	n/a	170	2012	n/a	mg/L
Calcium	n/a	1.8	2012	n/a	mg/L
Chloride	400	94	2015	No	mg/L
Iron	0.6	0.11	2015	No	mg/L
Langelier Index	n/a	105	2012	n/a	LANG
Magnesium	150	0.59	2015	No	mg/L
Manganese	0.1	0.016	2015	No	mg/L
Odor	3	1	2015	No	TON
pH	8.5	8.2	2015	No	mg/L
Sodium	200/20	230	2015	Yes	mg/L
Sulfate	500	170	2015	No	mg/L

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Terms & abbreviations used in this report:

- **Maximum Contaminant Level Goal (MCLG)**: the “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG’s allow for a margin of safety.
- **Maximum Contaminant Level (MCL)**: the “Maximum Allowed” MCL 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.
- **Action Level (AL)**: the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Treatment Technique (TT)**: a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **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.
- **Maximum Residual Disinfectant Level Goal (MRDLG)**: the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG’s do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Non-Detects (ND)**: laboratory analysis indicates that the constituent is not present.
- **Parts per Million (ppm)** or milligrams per liter (mg/l)
- **Parts per Billion (ppb)** or micrograms per liter (µg/l)
- **Million Fibers per Liter (MFL)**: million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **Nephelometric Turbidity Unit (NTU)**: nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5
- **Running Annual Average (RAA)**: arithmetic average of the quarterly averages of four (4) consecutive quarters of monitoring.
- **90<sup>th</sup> Percentile**: The EPA established an action level of 1.3 mg/L (1300 ppb) for copper based on the 90th percentile level of tap water samples. This means no more than 10 percent of your samples can be above either action level (AL). If copper levels are found above the action levels, it does not signal a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment (CCT), source water monitoring/treatment, public education, and lead service line replacement.
- **Secondary Contaminants**: National Secondary Drinking Water Regulations are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. For further information regarding these secondary contaminants, please refer to the EPA web page: <http://water.epa.gov/drink/contaminants/secondarystandards.cfm>
- **Secondary Maximum Contaminant Level (SMCL)**: the “Maximum Allowed” MCL for secondary standards for drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology. They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor.
- **TON**: A value indicative of the maximum dilution which can be made of a sample with its odor remaining detectable. A higher TON indicates a stronger odor.