2020 Annual Drinking Water Quality Report
of
Naval Air Station Whiting Field (NAS Whiting Field)

This report will be mailed to customers only upon request and is also available at Bldg. 1430, NASWF Public Works Department, Environmental Division upon request.

We are pleased to report that our drinking water meets all federal and state requirements.

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Our water source is ground water from three (3) wells. The wells draw from the Sand and Gravel Aquifer. Because of the excellent quality of our water, the treatments required are chlorine for disinfection purposes, fluoride for dental health purposes, and Granular Activated Carbon (GAC) for pre-treatment. Caustic Soda is added as a buffering agent and Aqua Mag is also added as a means to reduce pipe degradation.

In 2020, the Florida Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are seven (7) potential sources of contamination identified for this system with low to moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at https://fldep.dep.state.fl.us/swapp/ or they can be obtained from **Mr. Jonathan Stewart, Physical Scientist, Naval Air Station Whiting Field, Public Works Department (850) 623-7026 or via email at jonathan.a.stewart@navy.mil.**

NAS Whiting Field routinely monitors for contaminants in your drinking water according to Federal and State laws, rules and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2020. Data obtained before January 1, 2020 and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or 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.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum residual disinfectant level or 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 or 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.

Not Detected (ND): Indicates that the substance was not found by laboratory analysis.

Parts per billion (ppb) or Micrograms per liter (µg/l): One part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/l): One part by weight of analyte to 1 million parts by weight of the water sample.

2020 CONTAMINANTS TABLE

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants							
Barium (ppm)	Mar-18	N	0.026	0.0074-0.026	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	Feb18-Apr19	N	0.88	ND-1.1	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Nitrate (as Nitrogen) (ppm)	July-20	N	1.1	0.87-1.1	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	Mar-18	N	0.5	ND-0.5	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	Mar-18	N	44.1	40.4-44.1	N/A	160	Salt water intrusion, leaching from soil

Stage 1 and Stage 2 Disinfectants and Disinfection By-Products							
Disinfectant or Contaminant and Unit of Measurement	**Dates of sampling (mo/yr)**	**MCL or MRDL Violation Y/N**	**Level Detected**	**Range of Results**	**MCLG or MRDLG**	**MCL or MRDL**	**Likely Source of Contamination**
Chlorine (ppm)	Jan-Dec 20	N	0.64	0.45-0.87	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Total Trihalomethanes (TTHM) (ppb)	Aug-20	N	3.7	NA	NA	80	By-Product of drinking water disinfection

Volatile Organic Contaminants							
Contaminant and Unit of Measurement	**Dates of sampling (mo/yr)**	**MCL Violation Y/N**	**Level Detected**	**Range of Results**	**MCLG**	**MCL**	**Likely Source of Contamination**
Tetrachloroethylene (ppb)	Dec-20	N	0.66	ND-0.66	0	3	Discharge from factories and dry cleaners

Radioactive							
Contaminant and Unit of Measurement	**Dates of sampling (mo/yr)**	**MCL Violation Y/N**	**Level Detected**	**Range of Results**	**MCLG**	**MCL**	**Likely Source of Contamination**
Radium 226 + 228 or combined radium (pCi/L)	Mar-18	N	0.929	ND-0.929	0	5	Erosion of natural deposits

Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	**Dates of sampling (mo/yr)**	**AL Exceeded (Y/N)**	**90th Percentile Result**	**No. of sampling sites exceeding the AL**	**MCLG**	**AL (Action Level)**	**Likely Source of Contamination**
Copper (tap water) (ppm)	Jun-Sep 19	N	0.23	0 of 10	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	Jun-Sep 19	N	1.8	0 of 10	0	15	Corrosion of household plumbing systems; erosion of natural deposits

Unregulated Contaminants

Contaminant (Unit of Measurement= ppb)	Dates of sampling (mo/yr)	Level Detected (average)	Range	Likely Source of Contamination
Perfluorobutanesulfonic acid	Nov-20	0.027	ND-0.054	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorohexanoic acid	Nov-20	0.012	ND-0.24	Unknown
Perfluoroheptanoic acid	Nov-20	0.0075	ND-0.15	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorohexanesulfonic acid	Nov-20	0.17	ND-0.34	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorononanoic acid	Nov-20	0.00125	ND-0.0025	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorooctanesulfonic acid (PFOS)	Nov-20	0.037	ND-0.074	Surfactant or emulsifier; used in fire-fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and as a pesticide active ingredient for insect bait traps; U.S. manufacture of PFOS phased out in 2002; however, PFOS still generated incidentally
Perfluorooctanoic acid (PFOA)	Nov-20	0.32	ND-0.64	Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire-fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films

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? [1]

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 Whiting Field tested its water for PFAS?

Yes. In November 2020, samples were collected from NAS Whiting Field Water Treatment Plant.

Based on the sampling results, PFOS AND PFOA tested higher than the EPA HA on November 9, 2020. The results are provided in the table above. Public notification of this sample result was initially provided on December 2, 2020 via "All Hands" Email to NAS Whiting Field tenants and consumers from the Installation Commanding Officer. The EPA HA is the health-based concentration above which action should be taken to reduce exposure to PFOA and PFOS. In accordance with the DoD policy, alternate water is provided until the drinking water is tested and is consistently below the HA. The current status of the NAS Whiting Field drinking water system is that we continue to provide bottled water for on-base use while our Public Works team develops the long-term solution to ensure we have healthy drinking water. NAS Whiting Field is sampling quarterly to monitor the situation, and periodic updates are available on the region website at the link below.

https://www.cnic.navy.mil/regions/cnrse/installations/nas_whiting_field/om/environmental_support/PFAStesting.html

https://www.cnic.navy.mil/om/base_support/environmental/water_quality/Testing_for_Perfluorochemicals.html

At present, no health standards (for example, maximum contaminant levels) have been established for Unregulated Contaminants. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule (UCMR), please call the Safe Drinking Water Hotline at (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. NAS Whiting Field 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.

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:

(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 be the result of oil and gas production and 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. The Food and Drug Administration (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. EPA/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).

"Please DO NOT FLUSH your unused/unwanted medications down toilets or sink drains. More information is available at http://www.dep.state.fl.us/waste/categories/medications/pages/disposal.htm."

We at NAS Whiting Field would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed.