

2016 Annual Drinking Water Quality Report NAS Pensacola Saufley Field

We're very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

Emerald Coast Utility Authority (ECUA) has 26 wells distributed throughout its service area that pump water from the Sand-and-Gravel Aquifer. In general, Saufley Field Water System customers receive water from ECUA wells closest to our system. As such, the water delivered to customers is usually a blend of water from more than one well. Each well is considered a separate treatment plant, where water quality parameters are adjusted to comply with operating standards. Granular Activated Carbon (GAC) filters are installed on eleven (11) wells for iron or organic contamination removal. Calcium Hydroxide (lime) is added for pH adjustment; Phosphoric Acid is added for corrosion control in the distribution system, and Chlorine is added for disinfection. Fluoride is added at select wells, as a source of fluoride treatment.

In 2016, the Florida Department of Environmental Protection performed a Source Water Assessment on ECUA. The assessment was conducted to provide information about potential sources of contamination in the vicinity of their wells. There are 37 potential sources of contamination identified for this system with low to high susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or they can be obtained from Joelle O'Daniel-Lopez 452-3131 x3027.

Emerald Coast Utility Authority and the Naval Air Station Pensacola 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, 2016. Data obtained before January 1, 2016, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

If you have any questions about this report, please contact Joelle O'Daniel-Lopez 452-3131 x3027.

For questions concerning the water that ECUA provides, please contact the ECUA Laboratory Manager at 969-6689. ECUA encourages their valued customers to be informed about their drinking water. ECUA Board and Committee meetings are held in the boardroom of the ECUA Administration Building, 9255 Sturdevant St., Pensacola, FL 32514. For a complete schedule of meetings, please contact the Executive Assistant to the Board, Ms. Linda Iversen, at (850) 969-3302, or visit us on-line at www.ecua.fl.gov.

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

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

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.*

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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.*

“ND” *means not detected and indicates that the substance was not found by laboratory analysis.*

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.*

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.*

Pico curie per liter (pCi/L) - *measure of the radioactivity in water.*

2016 CONTAMINANTS TABLE

Stage 2 Disinfectants and Disinfection By-Products*							
Contaminant and Unit of Measurement	Dates of sampling	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
THM [Total trihalomethanes] (ppb)	Jul-16	No	7.41	NA	N/A	80	By-products of drinking water disinfection
HAA5 (ppb)	Jul-16	No	1.32	NA	N/A	60	By-products of drinking water disinfection
Chlorine (ppm) - Stage 1	Jan-Dec 16	No	0.98 avg.	0.77– 1.16	4 MRDLG	4.0 MRDL	Water additive used to control microbes

Lead and Copper (Tap Water)*							
Contaminant and Unit of Measurement	Dates of sampling	AL Exceeded	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	Jun-Sept 2015	No	0.22	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	Jun-Sept 2015	No	3.9	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

*Contaminant data marked with an asterisk are obtained from NAS Saufley Field only, all other contaminant data is from ECUA wells.

Radioactive Contaminants							
Contaminant and Unit of Measurement	Dates of sampling	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	2008 - 2014	No	13 avg.	ND - 15.7	0	15	Erosion of natural deposits
Radium 226 + 228 (pCi/L)	2008 - 2014	No	5 avg.	0.2 – 8.5	0	5	Erosion of natural deposits

Inorganic Contaminants							
Contaminant and Unit of Measurement	Dates of sampling	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	July/Aug 14	No	1.8	ND - 1.8	0	10	Erosion of natural deposits: runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	July/Aug 14	No	0.05	0.01 - 0.05	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	July Aug 14	No	0.5	ND - 0.5	4	4	Discharge from metal refineries and coal burning factories; discharge from electrical, aerospace, and defense industries
Chromium (ppb)	July/Aug 14	No	4.8	ND - 4.8	100	100	Discharge from steel and pulp mills; erosion of natural deposits

Inorganic Contaminants

Contaminant and Unit of Measurement	Dates of sampling	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Cyanide (ppb)	July/Aug 14	No	16	ND - 16	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	July/Aug 14	No	0.42	ND - 0.42	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
Nickel (ppb)	July/Aug 14	No	1.5	ND - 1.5	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	July 16	No	3.7	0.3 - 3.7	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	July/Aug 14	No	2.7	ND - 2.7	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits
Sodium (ppm)	July/Aug 14	No	10.0	2.9 - 10	N/A	160	Salt water intrusion, leaching from soil

Volatile Organic Contaminants

Contaminant and Unit of Measurement	Dates of sampling	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Tetrachloroethylene (ppb)	Jan-Dec 16	No	0.97 avg.	ND – 2.3	0	3	Discharge from factories and dry cleaners
Trichloroethylene (ppb)	Jan-Dec 16	No	0.74 avg.	ND – 1.1	0	3	Discharge from metal degreasing sites and other factories

ECUA monitored for Unregulated Contaminants (UCs) in 2015 as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) or likely sources have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. In 2016, ECUA tested for fluorinated organic chemicals (PFOA and PFOS) in the Spanish Trail well. **The level of PFOA and PFOS found in the Spanish Trail well is below the combined concentration of U.S. EPA’s health advisory of 0.07 parts per billion.** ECUA has proactively installed treatment for PFOA and PFOS at this well site to eliminate any possible future contamination concerns. If you would like more information on PFOA and PFOS data collected under EPA’s Unregulated Contaminants Monitoring Rule, it is available at :
<https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule>

Information on PFOA and PFOS Health Advisories Level is available at:
<https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>

Unregulated Contaminants Table (reported in parts per billion, ppb)				
Contaminant and Unit of Measurement	Date of sampling (mo/yr)	Level Detected	Range	Likely Source of Contamination
PFOA	July 2016	0.019	0.019-0.019	Fire Suppression Material
PFOS	July 2016	0.04	0.037-0.042	Fire Suppression Material

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. Saufley 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.

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.

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).