

2011 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. Our water source is ground water from 33 Emerald Coast Utility Authority wells. The wells draw 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. Calcium Hydroxide (lime) is added for pH adjustment; Phosphoric Acid (H₃PO₄) is added for corrosion control in the distribution system and Chlorine gas (Cl₂) is added for water disinfection. Granular Activated Carbon (GAC) filters are installed on twelve wells, nine for organic contamination removal and three for iron removal. Hydrofluosilicic Acid (H₂SiF₆) is added, at select wells, as a source of fluoride treatment for the entire system.

The recharge area for ECUA wells is limited to the area of Escambia County, south of Cantonment. Because the Sand and Gravel Aquifer does not have a confining layer above it, virtually everything that falls on the ground has the potential to reach the main producing zone of the aquifer and affect the quality of our water supply. This concern is referenced in the NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT Public Information Bulletin 87-2, March 1990 and again, in the Escambia County 2004 Grand Jury Report on Groundwater Contamination. This report can be reviewed on line at: [www.clerk.co.escambia.fl.us/downloads/2004Grand Jury Ground Water Contamination.tif](http://www.clerk.co.escambia.fl.us/downloads/2004Grand%20Jury%20Ground%20Water%20Contamination.tif).

ECUA is well aware of this threat to the groundwater and over the years has worked with Escambia County and the City of Pensacola in strengthening their Wellhead Protection Ordinances. For more specific information concerning each well, please contact the ECUA. The tables in this report contain data from ECUA's water quality testing. In addition, our system tests for microbiological contaminants, disinfectant and disinfection by products and also tests for lead and copper.

In 2011 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 seventy one potential sources of contamination identified for this system, 7 locations at low concern and 64 at moderate concern 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 Mr. William Taylor at 452-3131 x3003.

If you have any questions about this report or concerning your water utility, please contact William Taylor at 452-3131 x3003. We encourage our valued customers to be informed about their water utility.

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, 2011. Data obtained before January 1, 2011, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

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.*

Initial Distribution System Evaluation (IDSE): *An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.*

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. MRDLGs 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.*

2011 CONTAMINANTS TABLE

Stage 1 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 11	N	1.16	0.81-1.77	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb) *	Sep 11	N	1.86	NA	NA	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb) *	Sep 11	N	1.9	NA	NA	MCL = 80	By-product of drinking water disinfection

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)*	Jan-Dec 10	N	0.21	0 of 20	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)*	Jan-Dec 10	N	4.10	0 of 20	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.

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
Radioactive Contaminants							
Alpha emitters (pCi/L)	1/2008 & 4/2011	N	6.0	ND-6.0	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	1/2008 & 4/2011	N	4.4	0.11-4.4	0	5	Erosion of natural deposits
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							
Antimony (ppb)	October 2011	N	0.7	ND-0.7	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Barium (ppm)	October 2011	N	0.079	0.01-0.079	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

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
Cyanide (ppb)	October 2011	N	30	ND-30	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	October 2011	N	0.57	ND-0.57	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Mercury (inorganic) (ppm)	October 2011	N	0.2	ND-0.2	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (as Nitrogen) (ppm)	October 2011	N	4.3	0.31-4.3	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	October 2011	N	9.4	2.6-9.4	N/A	160	Salt water intrusion, leaching from soil
Volatile Organic Contaminants							
Tetrachloroethylene (ppb)	Jan. – Dec 2011	N	1.43	ND-2.24	0	3.0	Discharge from factories and dry cleaners
Trichloroethylene (ppb)	Jan. – Dec 2011	N	0.67	ND-1.23	0	3.0	Discharge from metal degreasing sites & other factories
1-1- Dichloroethylene (ppb)	Jan. – Dec 2011	N	0.88	ND-1.02	7	7	Discharge from industrial chemical factories

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).