

# *2011 Annual Drinking Water Quality Report*

## **Hurlburt Field, Florida**



Although the base does not hold public meetings on its distribution systems, we are available to address any questions you may have. Please contact Hurlburt Field's Public Affairs Office at 884-7464.

We encourage our valued customers to be informed about their water quality.

Housing residents should contact the Military Family Housing Office at 884-7505 with any water concerns.

Dormitory residents should contact their building manager.



We are pleased to present this year's **Annual Water Quality Report**. This report is designed to inform you on the quality of the water and services we deliver to you every day. Our water production and delivery method provides 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 our water. Our ground water source is acquired from five wells. These wells draw from the Floridan Aquifer. Due to the excellent quality of our aquifer water, the only treatment process required is chlorine disinfection to meet Florida Administrative Code (FAC) standards prior to public water system (PWS) distribution.

In 2011 the Florida Department of Environmental Protection (FDEP) 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 thirteen 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 <http://www.dep.state.fl.us/swapp>.

If you have any questions regarding this report, or the water quality, contact Bioenvironmental Engineering Flight NCOIC at 881-1822. We encourage you to be informed about our water quality.

Hurlburt Field Bioenvironmental Office routinely monitors for contaminants in our 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.

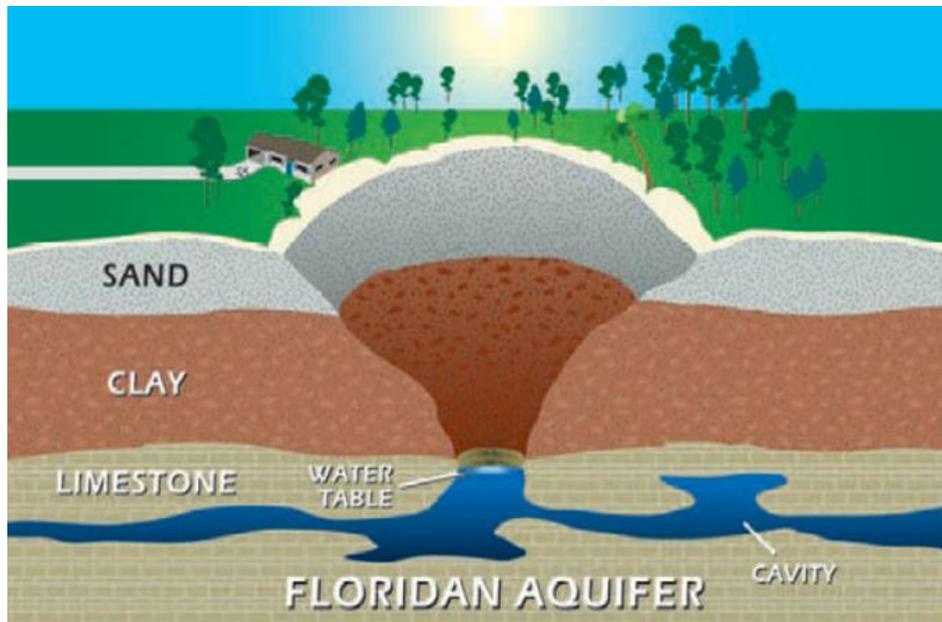
We at Hurlburt Field work around the clock to provide top quality water to every tap. We ask that you help us protect our water resource, which is at the heart of our community, our way of life, and our children's future.

JAMES C. SLIFE, Col, USAF  
Commander, 1st Special Operations Wing

## WHERE DO WE GET OUR DRINKING WATER?

Hurlburt Field draws its drinking water from the Floridan Aquifer, several hundred feet below ground. A series of five wells provides water that is pumped, treated, and then distributed around the base to ensure we are never without potable water.

Due to exceptional water quality, chlorine disinfection is the only treatment required to produce a safe product for our community. The Commando Village housing area obtains its water from the Okaloosa County distribution system. Okaloosa County publishes a separate Water Quality Report for those residents.



*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 materials, and can pick up substances from the presence of animals and 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.

## USEFUL FACTS

*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.*

## TERMS AND ABBREVIATIONS

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.

**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 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 billion (ppb) or Micrograms per liter ( $\mu\text{g}/\text{l}$ ):** one part by weight of analyte to 1 billion parts by weight of the water sample.

**Parts per million (ppm) or Milligrams per liter ( $\text{mg}/\text{l}$ ):** one part by weight of analyte to 1 million parts by weight of the water sample.

**Picocurie per liter ( $\text{pCi}/\text{L}$ ):** measure of the radioactivity in water.

## 2011 CONTAMINANTS TABLE

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	Jan-Dec 11	Y	4	0	For systems collecting fewer than 40 samples per month: presence of coliform bacteria in 1 sample collected during a month.	Naturally present in the environment
Contaminant	Dates of sampling (mo./yr.)	Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL	Likely source of contamination
<i>E. coli</i> (at the ground water source)*	Jan-Dec 11	N	1	0	0	Human or animal fecal waste

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)	Jul-Sep 08	N	2.6	ND-2.6	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	Jul-Sep 08	N	0.9	0.2-0.9	0	5	Erosion of natural deposits
Inorganic Contaminants							
Arsenic (ppb)	Jul & Nov 11	N	0.8	ND-0.8	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	Jul & Nov 11	N	0.36	0.12-0.36	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	Jul & Nov 11	N	0.3	ND-0.3	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cyanide (ppb)	Jul & Nov 11	N	8.1	ND-8.1	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	Jul & Nov 11	N	1	ND-1	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
Lead (point of entry) (ppb)	Jul & Nov 11	N	0.8	ND-0.8	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate (as Nitrogen) (ppm)	Jul & Nov 11	N	0.1	ND-0.1	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Sodium (ppm)	Jul & Nov 11	N	130	110-130	NA	160	Salt water intrusion, leaching from soil
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### 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	1.2	0.5-1.49	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	Jul 11	N	3.6	ND-6.96	NA	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	Jul 11	N	32.8	0.98-56.84	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)	Jun-Sep 11	N	0.27	0 of 20	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	Jun-Sep 11	N	6.7	0 of 20	0	15	Corrosion of household plumbing systems, erosion of natural deposits

### SECONDARY CONTAMINANTS TABLE

#### Secondary Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Odor (threshold odor number)	Jul-Dec 11	Y	40.5	ND-40.5	N/A	3	Naturally occurring organics

### BACTERIOLOGICAL MCL VIOLATIONS

**Systems that collect fewer than 40 samples per month:** The Hurlburt Field Water System had an MCL violation for Total Coliform bacteria in July. Four samples tested positive; three more than is allowed by rule. These sample sites were immediately retested with all repeats testing negative (no bacteria present). Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. When coliforms are found in more samples than allowed there is a warning of potential problems. All other distribution samples taken during the year were negative (no bacteria present). The bacteriological sampling procedures for this system were reviewed and modified to ensure compliance in the future.

**E. coli:** On 6 July 2011, we sampled Well 2 for the fecal-indicator, E. coli. We were notified on 7 July 2011, that Well 2 tested positive for E. coli. Well 2 was immediately shut off and a public notice was issued. On 11 July 2011, we took five additional samples from well 2 and all repeats tested negative for E. coli. Therefore, the well was in compliance and was put back in service.

**Health effects:** Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

**Secondary MCL:** The State of Florida Department of Environmental Protection (FDEP) sets drinking water standard for secondary contaminants and has determined that Odor is an aesthetic concern at certain levels of exposure. Odor was sampled in Jul, Nov, and Dec 11 and was found in higher levels than are allowed by the State

(an MCL violation). Odor, as a secondary drinking water contaminant, does not pose a health risk and in small amounts is essential to human health. We will continue to sample as required by rule.

*Total Coliform: The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.*

### **EPA's GUIDE ON LEAD**

*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. Hurlburt 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>.*

### **IMPORTANT INFORMATION**

***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).***

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

*Hurlburt Field Public Affairs: 884-7464*

*Hurlburt Field Housing Office: 884-7505*

*Hurlburt Field Bioenvironmental Engineering: 881-1822*

*Environmental Protection Agency Safe Drinking Water Hotline: 1-800-426-4791*

*Centers for Disease Control and Prevention: 1-800-232-4636*