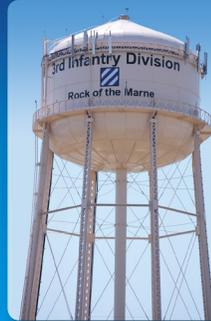


# 2013 Water Quality Report

## 2013 Water Quality COMBINED REPORT

The Directorate of Public Works (DPW) is pleased to present Fort Stewart (Water System Identification CG1790024) and Hunter Army Airfield's (Water System Identification CG0510107) Annual Water Quality Report. This report provides you with a detailed account of all water monitoring and testing results gathered in 2013, results which show the Installation having good water quality and having no exceedances of drinking water standards or violations of the Safe Drinking Water Act. As always, our constant goal is to provide our patrons with safe and dependable drinking water. Additional copies of this report are available at the Installation's Environmental Offices: Fort Stewart Building 1137 and Hunter Army Airfield Building 615.



## Where Does My Water Come From?



Fort Stewart's main water supply comes from eight municipal groundwater wells that are no less than 500-feet deep, while Hunter Army Airfield residents are serviced by four 500-feet deep wells and one 1100-feet deep well. Groundwater is stored in permeable rock layers called aquifers, which are like underground lakes. Our groundwater is supplied by the *Upper and Lower Floridan Aquifers*. Before the water is distributed, the water is chlorinated to kill disease-causing organisms and fluoridated to promote dental health.

## Protecting Your Water Source

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the land or through the ground, water dissolves naturally-occurring minerals and, in some cases, radioactive material. Therefore, water can pick up substances as by-products from both the presence of animals and human activities. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that 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 stormwater runoff, industrial and domestic wastewater discharges, oil and gas production, or mining and farming activities.
- Pesticides or herbicides, which may come from a variety of sources such as agriculture, urban runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals (VOCs), which are by-products of industrial processes and petroleum production, and they can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be either naturally-occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which provide the same public health protection. 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 EPA's Safe Drinking Water Hotline (800-426-4791). [www2.epa.gov/learn-issues/health-and-safety](http://www2.epa.gov/learn-issues/health-and-safety)

## Source Water Assessment

A source water assessment has been performed on the source of your drinking water (the *Upper and Lower Floridan Aquifers*). The Wellhead Protection Plans at Fort Stewart and Hunter Army Airfield were developed to determine the susceptibility of contaminants entering our drinking water supply and to better identify ways for protecting our water source. For further information, a copy of these Wellhead Protection Plans may be reviewed at the Fort Stewart Environmental Office, 1550 Veterans Parkway (Bldg. 1137), Fort Stewart, GA 31314-4927. Point of contact is Mr. Stanley Thomas, 912-767-2010.



## Vulnerability

Both MEDDAC'S Preventive Medicine and the DPW continually monitor the drinking water for contaminants. Our water is SAFE to drink; however, some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those 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 (Center for Disease Control) 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).



# Water Quality Data

Below is a table that indicates the constituents that have been detected during sampling of Fort Stewart and Hunter Army Airfield's water supply system.

## DETECTED CONTAMINANTS<sup>1</sup>

Parameter	MCL	MCLG	Fort Stewart				Hunter Army Airfield				Source of Contaminants
			Detected	Range of Detection	Sample Date <sup>2</sup>	Violation	Detected	Range of Detection	Sample Date <sup>2</sup>	Violation	
<b>Regulated Contaminants</b>											
Fluoride (ppm)	4	4	1.01*	0.68-1.93	Jan-Dec 2013	NO	0.97*	0.57-1.92	Jan-Dec 2013	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead (ppb)	AL=15	0	2.9**	0-4.3	Jul-Sep 2013	NO	4.4**	0-0.76	Jul-Sep 2013	NO	Corrosion of household plumbing system; Erosion of natural deposits.
Copper (ppb)	AL=1300	0	160**	1.1-300	Jul-Sep 2013	NO	190**	0-300	Jul-Sep 2013	NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
TTHMs [Total trihalomethanes] (ppb)	80	0	5.1*	2.7-9.8	Jan-Nov 2013	NO	4.5***	4.5	Jun 2013	NO	By-product of drinking water chlorination
Total Xylenes (ppm)	10	10	1.6	n/d-1.6	Jan-Aug 2013	NO	n/d	n/d-n/d	Mar 2013	NO	Discharge from petroleum factories; discharge from chemical factories
Haloacetic Acids (ppb)	60	0	1.0	n/d-1.0	Jan-Nov 2013	NO	1.4***	1.4	Jun 2013	NO	By-product of drinking water chlorination
<b>Unregulated Contaminants</b>											
Chloroform (ppb)	n/a	n/a	2.14*	n/d-6.0	Feb-Aug 2013	NO	1.6	n/d-1.6	Mar-Jun 2013	NO	By-product of drinking water chlorination
Bromodichloromethane (ppb)	n/a	n/a	2.35*	n/d-3.2	Feb-Aug 2013	NO	n/d	n/d-n/d	Mar 2013	NO	By-product of drinking water chlorination
Chlorodibromomethane (ppb)	n/a	n/a	1.35*	n/d-1.5	Feb-Aug 2013	NO	n/d	n/d-n/d	Mar 2013	NO	By-product of drinking water chlorination
Sodium (ppb)	n/a	n/a	14163*	5300-21000	Mar-Dec 2013	NO	9000*	8700-9200	Oct 2011	NO	Erosion of natural deposits; Leaching through soils high in sodium
Iron (ppb)	n/a	n/a	1238*	n/d-3600	Mar-Dec 2013	NO	120*	n/d-130	Oct 2011	NO	Corrosion of household plumbing systems; Erosion
Zinc	n/a	n/a	100	n/d-100	Mar-Dec 2013	NO	82	n/d-82	Oct 2011	NO	Runoff/leaching from natural deposits; industrial wastes
Aluminum	n/a	n/a	270	n/d-270	Mar-Dec 2013	NO	n/d	n/d-n/d	Oct 2011	NO	Erosion of natural deposits; residue from some surface water treatment processes

<sup>1</sup>The presence of contaminants does not necessarily indicate that the water poses a health risk as some contaminants naturally occur in drinking water systems.

<sup>2</sup>Based on most recent sampling requirement  
\*Average of all detections.

\*\*Value represents 90th percentile value of most recent sampling, see frequency below.  
\*\*\*Single sample

**As mentioned, Fort Stewart and Hunter Army Airfield monitor constantly for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. The presence of contaminants does not necessarily indicate that the water poses a health risk. Many other contaminants have been analyzed also, but were either not present or were below the detection of the laboratory equipment.**

## Conserving our Water Supply

Every day throughout the world, nations are facing water problems in terms of both quantity and quality. Between 1950 and 1970, global water demand tripled and is expected to double within 35 years. Although 75 percent of the earth is covered by water, only 1 percent is available as renewable fresh water, and only about one-third of all precipitation that falls on the land goes back to the oceans by rivers and runoff. We are a nation whose water needs are rapidly rising while available supplies are shrinking; regional water crises are becoming increasingly frequent as water tables are falling and stream flow is decreasing. We can no longer take our drinking water for granted. This means that individuals, municipalities, industries, and governments must be proactive in conserving and protecting our water supplies. The consequences of recurring long duration droughts are far-reaching, affecting wildlife, vegetation, and humans. Additionally, drought impacts on society is often exacerbated by the demand that people place on the water supply. Water is the most precious commodity we have on this planet; we ought not to treat it as if it were an unlimited resource. By shifting our priorities for water usage, we can prevent water scarcity. The well has run dry in many places—let's not make our community next!

### Terms and Abbreviations

**Maximum Contaminant Level Goal (MCLG):** 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 Contaminant Level (MCL):** 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.  
**Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.  
**ppm:** Parts per million; a unit of measure equivalent to a single penny in \$10,000.  
**ppb:** Parts per billion; a unit of measure equivalent to a single penny in \$10,000,000.  
**TTHM:** Total Trihalomethanes; by-products of drinking water disinfection.  
**Range:** The range of the highest and lowest analytical values of a reported contaminant. For example, the range of an unregulated contaminant may be 10.1 (lowest value) to 13.4 (highest value). EPA requires the range to be reported for certain analytes.  
**n/d-** Not Detected.; **n/a-** Not applicable

## Monitoring Frequencies

Our water systems use only EPA approved laboratory methods to analyze your drinking water. Our personnel take water samples from numerous locations throughout the distribution system and residents' taps; samples are then delivered to an accredited laboratory where water quality analyses are performed as follows:

Parameter	Fort Stewart Frequency	Hunter Army Airfield Frequency
Biological Contaminants	Once a month	Once a month
Volatile Organic Contaminants (VOCs)	Once every 3 years	Once every 3 years
Synthetic Organic Contaminants (SOCs)	Waived*	Waived*
Inorganic Contaminants (IOCs)	Once every 3 years	Once every 3 years
Lead and Copper	Once every 3 years	Once every 3 years
Nitrates/Nitrites	Once every year	Once every year
Total Trihalomethanes (TTHM)	Once a quarter	Once every 3 years
Unregulated Contaminants	Approx. once every 3 yrs	Approx. once every 3 yrs

## Health Effects of Lead in Water

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. Water Systems are 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>

## Georgia Water Restrictions

Georgia has received significant rainfall over the past year. However, the state still restricts outdoor water use to conserve our water resources. Homes and businesses with odd-numbered addresses may water on **Sundays, Tuesdays, & Thursdays** and even numbered or unnumbered addresses, to water on **Mondays, Wednesdays, & Saturdays** from 12 midnight to 10 a.m. and 4 p.m. to 12 midnight. All outdoor water use is prohibited on **Fridays**.

\*The Georgia Environmental Protection Division (EPD) issued Fort Stewart/Hunter Army Airfield a SOC monitoring waiver until 2016 because EPD studies have shown that the drinking water is not vulnerable to contamination from SOC's at either Installation.