

# **2011 Water Quality Report**

# Annual Consumer Confidence Report on the Quality of Drinking Water Tinker AFB for the Year 2010 (Water System ID Number OK2005508)

This year's Annual Water Quality Consumer Confidence Report is designed to inform you about the quality of water on base, to advance your understanding of drinking water and heighten awareness of the need to protect our precious water resources. Tinker AFB issues this annual report to meet requirements set under the "Consumer Confidence Reporting Rule" of the Safe Drinking Water Act.

Bioenvironmental Engineering constantly monitors the system to meet all regulatory requirements. Our staff collects water samples from the water distribution system. These samples are then shipped to certified laboratories where all of the required water quality analyses are performed.

### **Bottom Line:**

**Bottom Line:** Tinker's drinking water is safe and meets all federal and state requirements. No monitoring violations occurred during 2010. All detected analytes were below the Maximum Contaminant Level.

## Where does our water come from?

The Tinker AFB water system is primarily supplied by a system of wells ranging in depth from approximately 400 to 800 feet, drawing from the Garber-Wellington mudstone/sandstone aquifer. Water from the wells is chlorinated before entering the distribution system. Fluoride is added to the system on the west side of the base only, serving our non-industrial consumers. Tinker AFB can also use the

Oklahoma City Stanley Draper water system as a secondary source of water. These connections are occasionally opened in the summer and during other peak demand periods. The water supplied by Oklahoma City is produced at the Lake Stanley Draper Drinking Water Plant, where it is treated to meet SDWA standards. The Stanley Draper system is the source of water for the Tinker Aerospace Complex.

## **How do contaminants get into drinking water?**

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:

— *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife

— *Pesticides and herbicides*, which may come from a variety of sources

A black and white photograph of a U.S. Air Force technician in camouflage uniform performing a blood glucose test. He is holding a small vial and a syringe, and is leaning forward over a counter. On the counter to his left is a blood glucose meter and some test strips. The name "SALAZAR" is visible on his uniform.

*Air Force photo by Brian Ockenfels*

*Air Force photo by Brian Ockenhei*

**Airman 1st Class Jerome Salazar, 72nd Aerospace Medical Group's Bioenvironmental Engineering Flight, tests samples of the Tinker water supply for chlorine, among other sampling criteria, to ensure base drinking water is safe. "There has to be the correct amount, there can't be too much or too little," said Airman Salazar. Each year the annual report informs consumers about the quality water delivered on base from Jan. 1 through Dec. 31, 2010. According to report Tinker's drinking water continually meets or surpasses state and federal standards for drinking water quality.**

such as agriculture, urban stormwater runoff and residential uses

— *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.

*Organic contaminants*, including  
tic and volatile organic chemi-  
hich are by-products of industri-  
esses and petroleum production  
n also come from gas stations,  
storm water runoff and septic  
S

*See Water page 12.*

## Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that were detected during 2010. Although many more contaminants were tested, only those substances listed below were found in your water. Some water quality parameters do not require annual testing. If the parameter was not tested in 2010, the sampling year is noted below. Terms used in the table are explained in the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range Low	High	Sample Date	Violation	Typical Source
Disinfectants & Disinfectant By-Products (Chlorine disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes] (ppb)	NA	80	17.4	17.4	17.4	2010	No	By-product of drinking water disinfection
Inorganic Contaminants								
Lead (ppb)	NA	0.8	0.8 (MPL)	ND	0.8	2010	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	NA	0.2141	0.2141 (MPL)	0.13	0.2141	2010	No	Corrosion of household plumbing systems; Erosion of natural deposits
Barium (ppm)	2	2	0.477	0.374	0.477	2010	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	13.5	ND	13.5	2010	No	Discharge from steel and pulp mills; Erosion of natural deposits
Nitrate [measured as Nitrogen] (ppm)	10	10	1	0.13	1	2010	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	0.759	ND	0.759	2010	No	Erosion of natural deposits
Gross alpha excluding radon and uranium emitters (pCi/L)	0	15	2.78	ND	2.78	2010	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	4	3.640	ND	3.640	2010	No	Decay of natural and man-made deposits
Uranium (ug/l)	0	30	2.1	ND	2.1	2008	No	Erosion of natural deposits
Volatile Organic Contaminants								
Trichloroethylene (ppb)	0	5	2	0	2.1	2010	No	Discharge from metal degreasing sites and other factories

# Additional Water Quality Information for residents in Tinker family housing

PUBLIC WATER SYSTEM ID NUMBER OK8005550

Tinker Family Housing is pleased to report that your drinking water is safe! Your drinking water is purchased from Tinker AFB, Public Water System ID Number OK2005508. See the Annual Consumer Confidence Report on the Quality of Drinking Water, Tinker AFB, for the Year 2010, for information on the quality of drinking water provided to base housing in the year 2010. Tinker Family Housing is also required by the Oklahoma Department of Environmental Quality to collect additional drinking water samples in the base housing area for lead, copper, bacteriological and Total Trihalomethanes. All of these samples, shown in the table below, met federal and state requirements for drinking water. If you have any questions regarding the drinking water supplied to your base home, call Brett Yankey at Tinker Family Housing at 732-3324.

Contaminants	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
<b>Microbiological Contaminants</b>								
Total Coliform (positive samples/month)	0	1	0	NA		2010	No	Naturally present in the environment
<b>Contaminants</b>								
Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
<b>Inorganic Contaminants</b>								
Lead - action level at consumer taps (ppb)	0	15	0	2010	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Copper - action level at consumer taps (ppm)	1.3	1.3	0.095	2010	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

## Water...

Continued from page 11

— Radioactive materials, which can be naturally occurring or the result of oil and gas production and mining activities.

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 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 (800-426-4791).

### Source Water Assessment and Protection and Wellhead Protection Programs

The Oklahoma Department of Environmental Quality conducted a contamination susceptibility assessment of Tinker's water system in 2003, under the Source Water Assessment and Protection

Program. The overall contamination susceptibility was rated as "Low." The Tinker AFB Wellhead Protection Plan, written in April 2004, is used to protect the underground source of Tinker's drinking water. For more information on the Source Water Assessment and Wellhead Protection Programs contact the base Civil Engineering Restoration Division at 736-4348.

### Who needs to take special precautions?

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/Centers 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).

### Want additional information?

If you have any questions about this Water Quality Report or other Tinker drinking water quality issues, contact Douglas Woods at the Bioenvironmental Engineering Flight at 734-7844. Additional information on drinking water quality may be obtained from the Oklahoma DEQ 702-8100 and the EPA Safe Drinking Water Hotline (800) 426-4791.

This water quality report is also available online at: <https://afkm.wpafb.af.mil/DocView.asp?DocID=6445016>

# New DOD/VA system improves support for wounded warriors

## 72nd Medical Support Squadron

Tinker Air Force Base service members referred for medical evaluation boards after June 30 will go through a new Disability Evaluation System that integrates the processes of the departments of Defense and Veterans Affairs.

The Integrated Disability Evaluation System, or IDES, provides a more seamless transition to veteran disability benefits with fewer hurdles, faster results and more consistent ratings between Defense and Veterans Affairs than the previous system.

Under the previous system, service members completed the military Disability Evaluation System in an average of 10 months. This included a set of medical examinations by military physicians, a series of boards to determine if the member was still able to serve, and if not, assignment of a disability rating used by the Defense Department to calculate disability compensation. Service members could not begin to apply for disability compensation and benefits from Veterans Affairs until after receiving a discharge date from their service.

It was then up to the veteran to complete an application to Veterans Affairs and provide all required documentation. If any documents were missing, it was the veteran's responsibility to locate them. Then, the veteran had to complete another set of medical exams in accordance with standards set by Veterans Affairs and wait for a panel at Veterans Affairs to provide another disability rating, this one used to calculate veterans disability compensation and benefits. This second process took an average of another eight months during which benefits were gapped.

Under the new IDES, there is only one set of medical exams, performed to the standards of Veterans Affairs, which provides all the information needed by both departments. A panel at Veterans Affairs issues disability ratings that meet the needs of both departments. The integrated process still takes just over eight months, but now when the service member is finished with the military process, a disability claim is already filed with Veterans Affairs so veteran disability compensation and benefits can arrive after one month in veteran status. That is the earliest allowable under current law.

In designing IDES, the two departments examined the recommendations of several commissions and task forces established to improve the delivery of

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