



2016 Annual

Water Quality Report

Scott Air Force Base
PWS ID: IL1635237



AMERICAN WATER
Military Services

This report contains important information about your drinking water. If you do not understand it, please have someone explain or translate it for you.

Este informe contiene información muy importante sobre su agua potable. Si no lo comprende, favor acudir a alguien que se lo pueda traducir o explicar.

Continuing Our Commitment

A Message From Military Services Group President Todd Duerr

American Water's Military Services Group owns and operates water and wastewater utilities under the Utilities Privatization program and proudly provides water and wastewater services to military communities around the country, including yours. Our Company's Vision – "Clean Water for Life" drives everything we do for you, our product consumer. To reinforce our vision and maintain your trust, it's important that we share with you information about our commitment to providing high-quality water service.

I am pleased to provide you with the 2016 Annual Water Quality Report with detailed information about the source and quality of your drinking water. We have prepared this report using the data from water quality testing conducted for your local water system from January through December 2016. You'll find that we supply water that surpasses or meets all federal and state water quality regulations.

With equal importance, we place a strong focus on acting as stewards of our environment. In all of the communities we serve, we work closely with the local directorates of public works, civil engineering squadrons, local environmental departments and state regulatory agencies to protect environmental quality, educate customers on how to use water wisely, and ensure the high quality of your drinking water every day.

At American Water, our values – safety, trust, environmental leadership, teamwork, and high performance – result in more than making water available "on-demand". We deliver more than just water. We deliver a key resource for public health, fire protection, the economy and the overall quality of life we enjoy – Clean Water for Life. For more information or for additional copies of this report, visit us online at www.amwater.com.

Sincerely,

Todd Duerr

President – American Water's Military Services Group

What is a Water Quality Report?

A Water Quality Report provides consumers with detailed information about where the water that they use comes from and what it contains. The purpose of this report is to communicate the quality of the drinking water you received in 2016, increase your understanding of drinking water standards, and raise awareness of the need to protect your drinking water sources. To comply with Illinois Environmental Protection Agency (IEPA) and the U.S. Environmental Protection Agency (EPA) regulations, American Water issues a report annually.

Public Participation

Public input or questions about water quality or water use are always welcome. Although this report will not be mailed, individuals may receive a copy or request additional information or provide comments by contacting Aaron Williams, General Manager, at 34605 Arkansas Street, Scott AFB, IL 62225, phone: 618-744-9631 or email aaron.williams@amwater.com

Share This Report

Recipients of this report are encouraged to share this important information with water users at their location who are not customers of American Water O & M – Scott Air Force Base and therefore do not receive this report directly.

We Care About Water – It's What We Do

The Military Services Group of American Water provides water and wastewater contract services to military installations across the country as part of the federal government's Utility Privatization Program. It operates and maintains the water and/or wastewater assets at Fort A.P. Hill, Va., Fort Sill, Okla., Fort Leavenworth, Kan., Scott Air Force Base, Ill., Fort Rucker, Ala., Fort Meade, Md., Fort Belvoir, Va., Fort Hood, Texas, Fort Polk, La., Picatinny Arsenal, N.J., Hill Air Force Base, Utah and Vandenberg Air Force Base, Ca.

The Military Services Group is part of [American Water Enterprises](#), a market-based subsidiary of American Water.

American Water O & M – SAFB, PWS ID: IL 1635237, provides water service to approximately 6,800 customers living and working at Scott AFB, IL. With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly-traded water and wastewater utility company. The company employs more than 6,700 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 million people in 47 states and Ontario, Canada. More information can be found by visiting www.amwater.com.

Water Information Sources

The web sites of US EPA Office of Water, the Centers for Disease Control and Prevention, Illinois Environmental Protection Agency (IEPA), and others provide substantial information on many issues relating to water resources, water conservation and public health. Please visit them here:

Centers for Disease Control and Prevention

www.cdc.gov

United States Environmental Protection Agency www.epa.gov/safewater

Illinois Environmental Protection Agency <http://www.epa.state.il.us/water/>

American Water Works Association

www.awwa.org

Safe Drinking Water Hotline: (800) 426-4791

FIND WATER CONSERVATION TIPS AT:

<http://www.wateruseitwisely.com/100-ways-to-conserve/>

Source Water Assessment

Drinking water for Scott AFB is supplied by Illinois American Water Company (IAWC), PWSID 1635040. The East St. Louis Water Treatment Facility draws surface water for treatment from the Mississippi River, which is subject to a variety of influences including agricultural, municipal, and industrial activities. Farm chemicals may be seasonally elevated in the river. Extensive monitoring and treatment ensure high quality finished water regardless of variations in the source water. The Illinois EPA has completed a source water assessment for the East St. Louis system. A summary of this report can be found at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>

Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems, hence, the reason for mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. Accidental spills of hazardous materials into navigable waterways are a major concern because of their frequency in the United States in recent years. Illinois has access to 1,116 miles of inland waterway that can handle commercial barge traffic. These include the Upper Mississippi River, Illinois River Waterway, and the Ohio River. Along these waterways are numerous facilities that load and unload hazardous materials. Analysis of reported spills indicate that between 1974 and 1989, 794 accidental spills of hazardous materials occurred along Illinois waterways. Approximately 92% of these spills occurred along the Mississippi and/or the Illinois River. Spills occurring in this critical area will travel to the intake in five hours or less, making contingency planning and spill reporting a major concern in this watershed. Information concerning spill response planning on the Mississippi River may be found at the U. S. EPA website www.epa.gov/region5/oil, and additional data can also be downloaded at the U. S. Geological Survey's FTP site: ftp://ftp.umesc.er.usgs.gov/pub/gis_data/oil_spill

Substances Expected to be in Drinking Water

To ensure that tap water is of high quality, U.S. Environmental Protection Agency prescribes regulations limiting the amount of certain substances in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

The source of drinking water (both tap water and bottled water) includes 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.

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. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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, or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems.

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

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control and Prevention) 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) or by calling our Customer Service Center at (800) 685-8660.

Information about Lead and Copper

Although we periodically test lead and copper levels in your drinking water, it is possible that lead and/or copper levels at your home are higher because of materials found in your building plumbing. Elevated levels of lead can cause serious problems, especially for pregnant women and young children. You can minimize the potential for lead and copper 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 drinking 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Partnership for Safe Drinking Water Program

The Illinois American Water East St. Louis Water Treatment Facility is a volunteer participant in the USEPA's Partnership For Safe Water, a national program designed to achieve operational excellence in water treatment. In 2013 the East St. Louis facility was awarded the prestigious Ten Year Director's Award under the Partnership for Safe Water program. The award honors water utilities for achieving operational excellence, by voluntarily optimizing their treatment facility operations and adopting more stringent performance goals than those required by federal and state drinking water standards. We are proud to report that we have maintained those standards throughout 2016.

How to Read the Data Tables

Starting with a **Substance**, read across. **Year Sampled** is usually in 2016 or year prior. **MCL** shows the highest level of substance (contaminant) allowed. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **Amount Detected** Unless otherwise noted in the footnotes, an average of all sample results for the year, or results from a single sample if only one was collected. If multiple entry points exist, the data from the entry point with the highest value is reported. **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells where the substance usually originates. Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.

Table Definitions and Abbreviations

- **AL (Action Level):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **MCL (Maximum Contaminant Level):** 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.
- **MCLG (Maximum Contaminant Level Goal):** 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.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of disinfectant routinely allowed in drinking water. Addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of 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 contamination.
- **NA:** Not applicable
- **ND:** Not detected.
- **NTU - Nephelometric Turbidity Units:** Measurement of the clarity, or turbidity, of water.
- **pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- **pH:** A measurement of acidity, 7.0 being neutral.
- **ppm (parts per million):** One part substance per million parts water, or milligrams per liter.
- **ppb (parts per billion):** One part substance per billion parts water, or micrograms per liter.
- **S:** Single Sample
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

Water Quality Information

We are pleased to report that during the past calendar year the water you received from Illinois American Water Company and American Water O & M – SAFB complied with, or was better than, all state and federal drinking water requirements. For your information, we have compiled a table showing what substances were detected in your drinking water during 2016. Although all water delivered to customers was within limits prescribed by EPA, American Water feels it is important that you know exactly what was detected and in what quantities each substance was present in the water delivered to Scott AFB. The table below only contains sample results for contaminants that were detected in your drinking water. Some contaminants are required to be sampled for detection less than annually, for example, only every three years. In these cases, the most recent sample results are provided indicating the year they were collected.

Water Quality Results

Data from Illinois American Water – Purchased Water (Measured in water leaving the treatment facility)

Regulated Contaminants							
Substance (units)	Sample Year	MCLG	MCL	Amount Detected	Range of Detections	Compliance Achieved	Typical Source
Inorganic Contaminants							
Arsenic (ppb)	2016	0	10	1	1-1	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2013	3	3	0.5	ND – 0.5	Yes	Runoff from herbicide used on row crops
Fluoride (ppm) ¹	2016	4	4.0	.8	0.73 - 0.77	Yes	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate(measured as Nitrogen) (ppm) ²	2016	10	10	5	3.50 – 5.05	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm) ⁶	2016	NA	NA	16	16 – 16.2	Yes	Erosion of naturally occurring deposits; Used in water softener regeneration
Radiological Contaminants							
Beta/photon emitters (mrem/y)	2014	0	4	4.4 pCi/L	4.4 – 4.4 pCi/L	Yes	Erosion of natural deposits
Combined Radium 226/228 (pCi/L)	2014	0	5	0.9	0.9 – 0.9	Yes	Erosion of natural deposits
Gross Alpha emitters (pCi/L)	2014	0	15	1.5	1.5 – 1.5	Yes	Erosion of natural deposits
Total Organic Carbon ³							
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA. TOC has no health effects but contributes to the formation of disinfection by-products. Reduction of TOC can help to minimize disinfection by-product information.							
Turbidity ⁴ – (Measured in water leaving the treatment facility)							
	Limit (Treatment Technique)	Level Detected		Compliance Achieved		Typical Source	
Lowest Monthly % Meeting Limit	0.3 NTU	100%		Yes		Soil runoff	
Highest Single Measurement	1 NTU	0.16 NTU		Yes		Soil runoff	
Secondary Contaminants - State Regulated							
Substance (units)	Sample Year	MCLG	MCL	Amount Detected	Range of Detections	Compliance Achieved	Typical Source
Manganese (ppb) ⁵	2015	150	150	20	15 – 20	Yes	Erosion of naturally occurring deposits
Sodium ⁶	2016	NA	NA	16	16 – 16.2	Yes	Erosion of naturally occurring deposits; Used in water softener regeneration.
Unregulated Contaminants ⁹							
Substance (units)	Sample Year	MCLG	MCL	Amount Detected	Range of Detections	Compliance Achieved	Typical Source
N-nitroso-dimethylamine (NDMA) (ppb) ⁷	2009	NA	NA	0.023	0.010 - 0.036	NA	Nitrosamines can form as intermediates and byproducts in chemical synthesis and manufacture of rubber, leather, and plastics; can form spontaneously by reaction of precursor amines with nitrosating agents (nitrate and related compounds), or by action of nitrate-reducing bacteria. Foods such as bacon and malt beverages can contain nitrosamines; there is also evidence that they form in the upper GI tract.
Hexavalent Chromium (ppb) ⁸	2012	NA	NA	0.10	0.07 – 0.10	NA	Discharge from steel and pulp mills; erosion of natural deposits
Sulfate (ppm)	2015	NA	NA	38.1	37.4 – 38.1	NA	Erosion of naturally occurring deposits

Water Quality Results

Data from Illinois American Water – Purchased Water (Measured in water leaving the treatment facility)

Unregulated Contaminant Monitoring Rule (UCMR3) ⁹				
Substance (units)	Year Sampled	Amount Detected	Range of Detections	Typical Source
1,4-Dioxane (ppb)	2013	0.24	0.12-0.41	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics, and shampoos, cleaning agent, surface coating, and adhesive agent.
Chlorate (ppb)	2013	26	ND-170	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide.
Chromium (ppb)	2013	0.09	ND-0.4	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation
Chromium (VI) (ppb)	2013	0.03	ND-0.05	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation
Molybdenum (ppb)	2013	2.1	1.3-2.6	Naturally-occurring element found in ores and present in plants, animals, and bacteria; commonly used form molybdenum trioxide used as a chemical reagent.
Strontium (ppb)	2013	125	94-157	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Vanadium (ppb)	2013	2.2	1.2-3.4	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.

Cryptosporidium

Cryptosporidium is a protozoan found in untreated surface waters throughout the United States (the organism is generally not present in a ground water source). Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100% removal. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, people with severely weakened immune systems have a risk of developing life-threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it is spread through means other than drinking water.

USEPA issued a new rule in 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. In 2016, our monitoring of the Mississippi River raw untreated water indicated the presence of this organism. The Mississippi River cryptosporidium levels ranged from not detected to 0.500 oocysts/L, with an average of 0.089 oocysts/L. Although this organism is present, it is at levels low enough that no supplemental treatment is required by our facility per USEPA standards.

Data From American Water O & M - SAFB (Measured in water in the distribution system)

Regulated Contaminants							
Substance (units)	Sample Year	MCLG	MCL	Amount Detected	Range of Detections	Compliance Achieved	Typical Source
Disinfectant and Disinfection By-Products							
Haloacetic Acids (HAA5) (ppb) ¹⁰	2016	NA	60	11	1.4 - 18.1	Yes	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb) ¹⁰	2016	NA	80	21	13.4 - 19.8	Yes	By-product of drinking water disinfection
Chloramines (ppm) ¹¹	2016	4	4	1.2	0.6 - 2	Yes	Water additive used to control microbes
Microbiological Contaminants							
Substance (units)	Sample Year	MCLG	MCL		Tested Positive	Compliance Achieved	Typical Source
Coliform, Total (TCR) ¹²	2016	0	Not more than 1 positive monthly sample		1	Yes	Naturally present in the environment
Lead and Copper							
Substance (units)	Sample Year	AL	MCLG	90 th Percentile	Sites Above AL	Compliance Achieved	Typical Source
Lead (ppb) ¹³	2014	15	0	2	0	Yes	Corrosion of household plumbing; Erosion of natural deposits
Copper (ppm) ¹³	2014	1.3	1.3	0.376	0	Yes	Corrosion of household plumbing; Erosion of natural deposits

¹ Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride level of 0.9 mg/L to 1.2 mg/L.

² The value in the "amount detected" column is the maximum detected for the year. Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

³ Total organic carbon (TOC) has no health effects. However, TOC provides a means for the formation of disinfection by-products. One way to minimize disinfection by-product formation is to remove a specific percentage of the TOC present in the source water. The numbers in the Amount Detected and Range columns are the TOC removal factors, where the removal factor is defined as the actual percent TOC removal divided by the required percent removal. A value of 1.0 or greater in the Amount Detected column indicates that compliance with the removal requirement was achieved.

⁴ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The treatment technique requires that at least 95% of routine samples are less than or equal to 0.3 NTU, and no sample exceeds 1 NTU. We are reporting the percentage of all readings meeting the standard of 0.3 NTU, plus the single highest reading for the year.

⁵ Manganese is not currently regulated by USEPA. However, the state has set an MCL for manganese for supplies serving a population of 1,000 or more. Manganese is not a health concern but can cause staining of plumbing and fixtures.

⁶ There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

⁷ A maximum contaminant level (MCL) for this substance has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this substance is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted. For the N-nitroso-dimethylamine, in the "Amount Detected" column we are reporting the average, and in the "Range of Detections" column we are reporting the lowest and highest individual readings.

⁸ A maximum contaminant level (MCL) for this substance has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this substance is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted. There are currently no regulations for Hexavalent Chromium (Chromium 6).

⁹ Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. A maximum contaminant level (MCL) for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

¹⁰ Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

¹¹ Chloramines are produced by combining chlorine and ammonia which produces a desirable disinfection product to keep the water system free of undesirable bacteria growth. Levels well in excess of the MCL could cause irritation of eyes and nose in some people. The values reflect multiple locations in the water system.

¹² Coliform detection is used as a leading indicator of the general bacteriological quality of the water.

¹³ Compliance with the Lead and Copper Rule (LCR) is determined by the levels of lead and copper found in samples taken from customers' taps. LCR requirements are met if the 90th percentile of all samples taken does not exceed the action level listed for the substance.