ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2015

Presented By
City of Jacksonville

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (903) 586-3510.

PWS ID#: TX0370002

Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. We continually strive to adopt new methods for delivering the best quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants 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. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

The public may participate in City Council meetings held the second Tuesday of each month at 6:00 p.m. at the Norman Activity Center located at 526 E. Commerce St.

Water Loss Audit

In the most recent water loss audit submitted to the Texas Water Development Board for the period January 1, 2010, to December 31, 2010, our system produced an estimated 1.2 billion gallons of water and lost an estimated 253 million gallons (approximately 21%). The amount lost includes required line flushing, firefighting exercises, leaks, main breaks, theft, etc. If you have any questions about the water loss audit, please call (903) 589-3510.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

Source Water Assessment

The Texas Commission on Environmental Quality (TCEQ) completed an assessment of your source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in this water quality report. For more information on source water assessments and protection efforts at our system, call (903) 589-3510.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Lead in Home Plumbing

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. This water supply 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 www.epa.gov/safewater/lead.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

Questions?

For more information about this report or for any questions relating to your drinking water, please call David Brock, Utilities Director, at (903) 589-3510.

Where Does My Water Come From?

The City of Jacksonville's customers are fortunate because we enjoy an abundant water supply from six sources. The Kickapoo Street Surface Water Treatment Plant draws water from Lake Jacksonville, which holds about 129 billion gallons of water. Our other water sources are from five deep wells, which pump water from the Carrizo/Wilcox Aquifer at a depth of approximately 700 feet. The Surface Water Treatment Plant (constructed in 1980) is capable of treating more than 4.5 million gallons of water per day. Combined, our treatment facilities provide roughly 1.3 billion gallons of clean drinking water every year.

Our water supply is part of the Upper Neches Watershed, which covers an area of roughly 480 square miles. Most of the watershed is covered by forest growth with agricultural development accounting for less than 10%. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed Web site at www.epa.gov/surf.

UCMR3 Sampling

We were required to participate in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Any UCMR3 detections are shown in the data tables in this report. The cost for the City to comply with the UCMR3 exceeded $9,600. Contact us for more information on this program.

2014 UNREGULATED CONTAMINANT MONITORING RULE 3 RESULTS

SUBSTANCE (UNIT OF MEASURE)	AMOUNT DETECTED	RANGE LOW-HIGH
Chromium (ppb)	0.27	<0.2 - 0.44
Hexavalent Chromium (ppb)	0.09	<0.03 - 0.14
Strontium (ppb)	48	27 - 69
Vanadium (ppb)	0.30	<0.2 - 0.48

About Our Violations

In the third quarter of 2015, the City exceeded U.S. EPA's total trihalomethane MCL of 80 ppb, with a concentration of 87 ppb for DBP2-01 and in the fourth quarter with a concentration of 106 ppb for DBP2-01 and 103 ppb for DBP2-02.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Sampling Results

During the past year, we have taken hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We were informed by TCEQ that significant deficiencies, failure to collect a sample from each active well, had been identified on April 11, 2016. We were directed to correct the deficiency by July 11, 2016. We are implementing the corrective action plan, which is sampling the required wells, providing Microbial Monitoring Forms and notifying the public by July 11, 2016, as prescribed by TCEQ.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2015	2	2	0.035	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2015	[4]	[4]	1.35	0.20–2.50	No	Water additive used to control microbes
Fluoride (ppm)	2015	4	4	0.322	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2015	60	NA	42.6	6.10–77.2	No	By-product of drinking water disinfection
Nitrate (ppm)	2015	10	10	0.033	0.018–0.033	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Sample Point: 01 (ppb)	2015 (3rd qtr)	80	NA	87	19.0–165	Yes	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Sample Point: 01 (ppb)	2015 (4th qtr)	80	NA	106	19.0–165	Yes	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Sample Point: 02	2015 (4th qtr)	80	NA	103	19.0–165	Yes	By-product of drinking water disinfection
Total Coliform Bacteria (# positive samples)	2015	More than 1 positive monthly sample	0	1	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2015	TT	NA	2.27	1.89–2.65	No	Naturally present in the environment
Turbidity[1] (NTU)	2015	TT	NA	0.20	0.04–0.20	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2015	TT = 95% of samples < 0.3 NTU	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.322	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	1.39	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES[2]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2015	15.0	5.4–29.1	By-product of drinking water disinfection
Bromoform (ppb)	2015	0.6	<1.0–1.4	By-product of drinking water disinfection
Chloroform (ppb)	2015	35.1	10.0–85.7	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2015	6.8	2.6–12.3	By-product of drinking water disinfection

[1] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

[2] 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.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

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 a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.