



2014 Annual Drinking Water Quality Report Fort Wayne City Utilities

Investing in Our Water System for Quality and Reliability

In the late summer of 2013, City Utilities completed the installation of a new water disinfection system at the Three Rivers Water Filtration Plant that uses ultraviolet light as part of the drinking water treatment system. Implementing this additional treatment step represents an investment of \$22 million and was necessary to comply with new federal regulations for removing *Cryptosporidium* from drinking water (read more about Crypto on p. 2).

Now that the ultraviolet disinfection system is operating, City Utilities will be changing another part of the treatment process. We will be reducing the use of chlorine dioxide to free chlorine to kill bacteria in the water. This change will result in an annual savings of about \$150,000 for the water utility. Chlorine dioxide removed some of the natural taste and odor in the water, so with the change in disinfection will come a slight change in the way your water tastes and smells. The water will still have the same great quality and safety you've come to expect from us.

We're also happy to report that the number of miles of water mains that we are replacing each year has gone up. Replacing deteriorating water mains is the primary way we avoid water main breaks and assure you of a reliable supply of water when you turn on your tap. We are replacing an average of 9 miles of water main each year and in 2013, we invested \$6 million in this important program.

What's the Hardness of My Water?

The hardness of water is determined by the amount of calcium and magnesium it contains. These minerals occur naturally in river water. Early in the treatment process, City Utilities adds pebbled calcium oxide (commonly known as lime) to the water as a softener. The lime causes a chemical reaction that changes dissolved calcium and magnesium to an insoluble form so some can be removed.

The hardness of water is measured in milligrams of calcium and magnesium per liter of water. Very soft water may have from 0 – 75 mg/L of hardness. Hard water has between 150 and 300 mg/L. After softening, Fort Wayne's water had an average hardness of 118 mg/L in 2013 and is considered moderately soft. With moderately soft water, soaps and detergents create more suds so you can use less. Keeping water at a moderately soft level avoids some of the pipe corrosion problems that can occur with excessively soft water.



Dear Valued Customers,

As a regional water utility serving more than 250,000, City Utilities prides itself on providing you with a reliable supply of safe and affordable drinking water. This annual drinking water report, as required by the US Environmental Protection Agency (EPA), provides information on where the water comes

from and how it compares with current EPA and state standards.

CITY UTILITIES IN 2013

A YEAR OF INVESTING IN THE WATER SYSTEM

This report is also an opportunity for City Utilities to update you on changes in our water treatment processes and how we are responding to evolving regulations and market conditions. In this report you can read more about how we have implemented a new ultraviolet treatment system that represents an investment of more than \$22 million at the Three Rivers Filtration Plant and what we are doing to reduce the number of water main breaks in our system.

City Utilities' mission is to support public safety and public health and to enhance regional economic development. That means ensuring that our water continues to be a good value. Water fees paid by our customers are our only source of income (we receive no property tax money support). Yet for all we do, City Utilities' bills remain among the lowest in Indiana and in the 12-county region around us.

As always, I welcome your feedback and your ideas on how City Utilities can do a better job of serving you. Please share your thoughts with me at any time by email at info@fortwaynewater.org.

Sincerely,
Kumar Menon
Director of City Utilities



Aviso Importante

Este reporte contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda. En español: 311.

How to Read the Water Quality Table

Maximum Contaminant Level Goal (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.

Maximum Contaminant Level (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.

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

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

Detected Level: The highest level of a contaminant detected for comparison against the accepted level. The detected level could be the highest single measurement or it may be an average, depending on the peak level of a contaminant.

Range: The lowest to highest values for all samples tested for each contaminant. If only one sample is tested, no range is listed.

HA: Health Advisory level.

NA: Not applicable.

MNR: Monitoring not required but recommended.

ppm: Parts per million or milligrams per liter (mg/L).

ppb: Parts per billion or micrograms per liter (ug/L).

NTU: Nephelometric Turbidity Units. A measure of water's cloudiness and an indicator of the effectiveness of the water filtration process.

%: Percent of monthly samples that were positive.

Oocyst: A fertilized gamete of a parasitic organism's sporozoans that is enclosed in a thick wall.

What is Cryptosporidium?

Cryptosporidium is a microbial pathogen found in surface water such as rivers, lakes and streams throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing illness. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of the infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children and the elderly are at greater risk for developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

What's in the Water Before It's Treated?

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, spring, 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.
- 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.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential land uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. 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 contaminants. The presence of contaminants in drinking water 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What if I have special health considerations?

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 persons 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 microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Fort Wayne City Utilities uses a stringent monitoring program, testing source water from the St. Joseph River and finished drinking water. In 2013 the highest level of Cryptosporidium found in the river was 0.622 oocysts per liter of water. No Cryptosporidium was found in the drinking water that City Utilities sent out to its customers.

Testing Our Water — The US EPA and the State of Indiana require City Utilities to test the drinking water we produce regularly to make sure that it remains safe. The chemists and operators at the Three Rivers Water Filtration Plant test for nearly 120 substances in the water before, during and after the water is treated for your use. City Utilities also collects water samples from many locations in the community to monitor the quality of water as it travels to your tap.

The table below shows substances that are regulated by the US EPA and that were detected in our finished drinking water between January 1 and December 31, 2013. Results of all tests performed in 2013 met or were better than federal and state standards require.

City Utilities also tests for some substances that are not regulated. Monitoring unregulated contaminants helps the US EPA determine where certain contaminants occur and whether the Agency should consider regulating those in the future. City Utilities tests for many other substances, but because they were not detected, they are not reported here. Some tests are required only once per year because the EPA and State of Indiana have determined that the concentration of these substances does not change frequently. For tests required only once a year there is no range of results in the table.

You can learn much more about us by visiting our website at www.cityoffortwayne.org/utilities.

Water Quality Table

Contaminants	Units	MCLG	MCL	Compliance Achieved	Highest Level Detected in Your Water	Range	Typical Sources
Disinfectants & Disinfection By-Products							
Chlorine	ppm	4	4	Yes	2.02	1.13 - 2.02	Additive used in treatment process to control bacteria
Chlorine Dioxide	ppb	800	800	Yes	430	38 - 430	Additive used in treatment process to control bacteria
Chlorite	ppm	0.8	1	Yes	1	0.033 - 1.0	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	ppb	NA	60	Yes	25.3.1	4.5 - 55.6	By-product of drinking water disinfection NOTE: Compliance is based on each location's running annual average. The location running annual average for the site with 55.6 was 24.85
Total Organic Carbon	mg/L	NA	TT	Yes	The percentage of TOC was measured each month and the system met the TOC removal requirements	NA	Naturally present in the environment
TTHMs (Total Trihalomethanes)	ppb	NA	80	Yes	34.95	4.1 - 94.7	By-product of drinking water disinfection NOTE: Compliance is based on each location's running annual average. The location running annual average for the site with 94.7 was 34.4
Inorganic Compounds							
Fluoride	ppm	4	4	Yes	1.49	0.030 - 1.49	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	10	10	Yes	5.12	0.147 - 5.12	Runoff from fertilizer use; Leaching from septic systems; Sewage discharge; Erosion of natural deposits
Nitrite (measured as Nitrogen)	ppm	1	1	Yes	0.054	<0.001 - 0.054	Runoff from fertilizer use; Leaching from septic systems; Sewage discharge; Erosion of natural deposits
Sodium	ppm	0	none	NA	36	14 - 36	Naturally present in the environment
Barium	ppm	2	2	Yes	0.017	0.0095 - 0.017	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nickel	ppm	NA	0.1	Yes	0.002	0 - 0.002	Leaching from metals in contact with drinking water such as pipe sand fittings
Sulfate	ppm	NA	NA	NA	57	Only one test is required per year	Naturally occurring compound
Microbiological Contaminants							
Total Coliform	% of positive samples monthly	0	5	Yes	0.56	0.0 - 0.56	Naturally present in the environment
Turbidity	% of samples below of 0.3 NTU	100	95	Yes	100	100.0 - 100.0	Soil runoff
Turbidity	highest single measurement	NA	TT	Yes	0.17	NA	Soil runoff
Cryptosporidium	oocysts/100 L	0	TT	Yes	0	NA	Human and animal fecal waste
Volatile Organic Compounds							
Vinyl Chloride	ppb	0	2	Yes	0.2	0.0 - 0.2	Leaching from PVC pipes; discharge from plastic factories
Synthetic Organic Compounds							
Atrazine	ppb	3	3	Yes	0.1	0.0 - 0.1	Runoff of herbicide used on row crops
2,4-D	ppb	70	70	Yes	2.2	0.2 - 2.2	Runoff of herbicide used on row crops
Simazine	ppb	4	4	Yes	0.07	0.0 - 0.07	Runoff of herbicide used on row crops
Unregulated Compounds							
Metolachlor	ppb	NA	NA	NA	0.3	0.1 - 0.3	Runoff of herbicide used on row crops
Dicamba	ppb	NA	NA	NA	0.9	0.0 - 0.9	Runoff of herbicide used on row crops
Inorganic Contaminants							
						90th percentile	
Copper	ppm	1.3	90% of samples taken below AL = 1.3	Yes	0.126	Samples taken = 52 samples Exceeding AL = 0	Erosion of natural deposits; Corrosion of household plumbing systems
Lead	ppb	0	90% of samples taken below AL = 15	Yes	12	Samples taken = 52 samples Exceeding AL = 1	Corrosion of household plumbing systems; Erosion of natural deposits

Fort Wayne City Utilities

200 E. Berry, Suite 270
Fort Wayne, IN 46802

Important Information Sources:

Three Rivers Water Filtration Plant
Vicky Zehr – Water Quality Manager
(260) 427-1254

Or 311

EPA's Safe Drinking Water Hotline
1-800-426-479

www.epa.gov/drink/

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A Word About Lead

Fort Wayne City Utilities regularly tests water from a number of homes in the community to determine lead levels. Water that comes out of the City's Water Filtration Plant meets all state and federal requirements for lead. However, in some buildings and homes lead levels in water may go up because of the kind of pipes and plumbing fixtures used in those structures.

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 water service lines and home plumbing. Fort Wayne City Utilities 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 in home plumbing for several hours, lead may enter the water from plumbing fixtures. You can minimize your potential for lead exposure by letting the water run before using it. Turn on the cold water and let it run at least until you feel the water get noticeably cooler before you use the water for drinking or cooking. If you are concerned about the level of lead in your water, you may wish to have your water tested by a private laboratory. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at www.epa.gov/safewater/lead. You may also contact Fort Wayne City Utilities at 311 or visit our website at www.cityoffortwayne.com/utilities or contact the Indiana State Department of Health at (317) 233-1250 or the Fort Wayne- Allen County Department of Health at (260) 449-8600 for more information on health risks and on reducing lead exposure.



Where does Fort Wayne's drinking water come from?

The St. Joseph River is the sole source of drinking water for customers of Fort Wayne City Utilities. Water flows into the river from more than 694,000 acres in northeast Indiana, northwest Ohio and a small part of south central Michigan. The primary land use in the watershed is agricultural.



Fort Wayne draws an average of about 34 million gallons of water each day from the river. This "raw" water is treated, filtered and tested at the Three Rivers Water Filtration Plant before it is distributed to customers. Fort Wayne operates two dams on the river: the Cedarville Dam located near Leo-Cedarville and the St. Joe Dam located near the intersection of North Anthony and Coliseum Boulevards in Fort Wayne. These dams hold water behind them to ensure that City Utilities has an adequate water supply during the driest times of the year.

Fort Wayne City Utilities works with partners upstream to protect the quality of water in the St. Joseph River before it gets to Fort Wayne. The St. Joseph River Watershed Initiative involves many watershed stakeholders in testing river water quality, developing management plans, implementing best management practices to reduce pollution going into the river and educating property owners.

Do you want to help protect Fort Wayne's drinking water at its source? Check out the St. Joe Initiative's website at www.sjrwi.org for information on ways you can volunteer.