

OUR WATER

2019 Annual Drinking Water Quality Report FORT WAYNE CITY UTILITIES



Letter from the Director

City Utilities is proud to bring the “Best Tasting Water in Indiana” to our more than 300,000 residents in the Fort Wayne/Allen County and Northeast Indiana region. This recognition was an honor bestowed by the Alliance of Indiana Rural Water and is just one highlight of our water quality report for the year 2018.

Our commitment is to bring you good tasting, safe water with adequate pressure needed for fire fighting operations every day, and our efforts start at the source. From cleaning up and protecting our rivers to investing in infrastructure by making an unprecedented commitment to replacing our water mains and producing water that’s safe, tasty, reliable and affordable, City Utilities is committed to being the best regional utility in the country. In 2018, we treated and delivered almost 12 BILLION gallons of water to our customers.

In 2018, we started the Summit Pump Station that will further enhance fire protection and pressure in the northwest portion of the water system. The project will be completed this year. Additionally, 2018 saw water main replacements occur on Dupont Road, Directors Row, Doan Drive and in the Tamarack and Beacon/Glenwood neighborhoods.

City Utilities continues our commitment to proactively improve our water main delivery system by replacing pipes that are past their useful lives, which impede the reliability of water delivery. From 2013 to 2018, we replaced an unprecedented number (45 miles) of aging water pipe, averaging nine miles per year.

Last year, we had just over 318 breaks. And, while it’s clear our replacement efforts are paying off, 318 is still too many. Main breaks impact you at home, at your business, at your school and in many of the other places you frequent.

Did you know that World War II still impacts our water systems across the country? Most of the quality metal went to the war effort, and a lower quality metal was used in the water industry from the 1930s to 1970s. One of our biggest challenges is the sub-standard pipes that were placed in the ground in Fort Wayne after World War II. Many of the pipes placed in the 1940s through the early 70s require replacement.



Kumar Menon
City Utilities Director

We have 1,403 miles of water main pipe in our system, and about 355 miles are at the point of needing repair. To address this need, we are stepping up to an aggressive pipe replacement plan that will see over 70 miles replaced over the next five years. We will replace an average of 14 miles per year in neighborhoods throughout the community by 2023. New pipes last 75-100 years and reduce the cost of expensive emergency repairs.

We have invested \$472.1 million in neighborhood improvements over the last decade, improvements to reduce street flooding, basement backups and sewer cave-ins, as well as lining pipes to extend the life of a sewer, replacing water main breaks and projects to clean up our rivers. But the work isn’t done. Over the next 20 years, we will continue reinvesting in underground infrastructure and maintenance to ensure that we are protecting our environment and economy.

Efforts in 2019 will see a \$115 million investment in water, sewer and stormwater enhancements throughout the system. These improvements protect and support our neighborhoods, public health, public safety, and economic development.

Treating water for you and your family is a responsibility we take very seriously. As Director of Fort Wayne City Utilities, I am happy to be able to share this report about our improvements and our future commitment to sustaining our system for generations to come. We look forward to continuing to serve all of our customers with the same focus on professionalism and quality that supports our neighborhoods and contributes to the growth and development of Fort Wayne, Allen County and Northeast Indiana.

Fire Protection Rating

Did you know that a key role of a water utility is to provide water for fire protection? Some of the investments we make in the water system are specifically intended to increase water capacity and reliability for fire fighting. Thanks to these investments and to City Utilities’ partnership with the professionals at the Fort Wayne Fire Department, Fort Wayne has been able to upgrade its ISO fire protection rating from Class 3 to Class 2. A community’s ISO rating helps determine what property owners pay for insurance. As a result of the improved rating, Fort Wayne residents can expect to see lower property insurance costs.

Drinking Water and Your Health

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised individuals such as people with cancer who are undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people and infants, can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers.

Cryptosporidium is a microbial pathogen that may be found in surface water such as rivers, lakes and streams throughout the United States. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of the infection include nausea, diarrhea and abdominal cramps. Cryptosporidium oocysts must be ingested to cause disease, and the illness may be spread through means other than drinking water. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants, small children and the elderly are at greater risk for having cryptosporidiosis advance into a life-threatening illness.

Guidelines from the US EPA and Centers for Disease Control and Prevention 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.



In order to guard against any possibility that Cryptosporidium could be present in Fort Wayne's drinking water, City Utilities added a new water disinfection process in 2014 that uses ultraviolet light specifically to deactivate Cryptosporidium and other similar pathogens. To ensure your safety, City Utilities also uses a stringent monitoring program, testing both source water from the St. Joseph River and finished drinking water, to ensure that any Cryptosporidium has been removed or neutralized before the water is sent to you.

In 2018, the highest level of Cryptosporidium found in the river water coming into the water filtration plant before it was treated was 1.0 oocysts per liter of water. Cryptosporidium was NEVER found in the drinking water that City Utilities sent out to its customers, as is required by federal standards. That means that 100% of the time, City Utilities' water treatment process was able to remove or deactivate these "germs."

Sources of Drinking Water

The sources of drinking water (both tap and bottled) 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.
- 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.

Building a Pipeline of Talent

Like all public sectors, City Utilities struggles to attract and retain staff with increased technical specialization. To sustain the profession and fill industry needs, we've established a robust partnership with our schools and universities.

Our program with the "Concrete Crew" from the Fort Wayne Community Schools' Career Academy offers real-world experience. City Utilities hires these students from the construction trades program to restore the concrete dug up by our crews when fixing water mains and valves. Students get hands-on experience with supervised educational guidance and report to work for a real job with pay. The students gain skills and are quickly hired upon completion of the program to fill positions in City Utilities and with area construction firms.

Additionally, we work with engineering and environmental programs at universities throughout Indiana to support our highly successful internship program. Students work side-by-side with our team on engineering projects, environmental issues, field and design work. Their work is essential to the Utility, and students gain practical career experience in their fields of study. Many of these students come to work for us after graduation.

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.



Testing Our Water

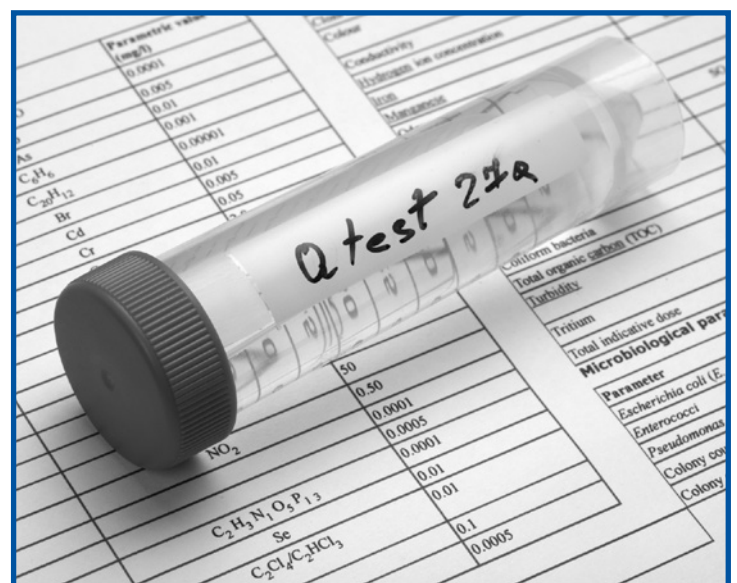
To ensure that tap water is safe to drink, the United States Environmental Protection Agency (US EPA) sets regulations that limit the amount of certain contaminants in water that comes from public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. The US EPA also requires that public water systems make an annual report, such as this one, to all of their customers. Bottled water producers don't face the same requirement to share information regularly.

The US EPA and the State of Indiana require City Utilities to regularly test the drinking water we produce and send out to make sure that it remains safe. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants in drinking water, at a level below the limits set by regulatory agencies, does not indicate that the water poses a health risk.

The table to the right shows substances that are regulated by the US EPA that were detected in Fort Wayne's finished drinking water between January 1 and December 31, 2018. Results of all tests performed in 2018 met or were better than federal and state standards require. 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 US 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.

City Utilities also tests for many 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.

Check the City Utilities' website at www.cityoffortwayne.org/utilities for more information.



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	1.91	1.22 - 1.91	Additive used in drinking water treatment process to control bacteria
Chlorine Dioxide	ppb	800	800	Yes	209	38 - 209	Additive used in drinking water treatment process to control bacteria
Chlorite	ppm	0.8	1	Yes	1.05	0.377 - 1.05	By-product of drinking water disinfection
Haloacetic Acids (HAA5)	ppb	NA	60	Yes	24.05 Highest LRAA at site #10	3.2 - 51.8	By-product of drinking water disinfection NOTE: compliance is based on each location's running annual average (LRAA). The location running annual average for the site with 51.8 was 24.05
Total Organic Carbon (TOC)	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	31.375 Highest LRAA at site #1	7.6 - 64.1	By-product of drinking water disinfection NOTE: compliance is based on each location's running annual average (LRAA). The location running annual average for the site with 64.1 was 31.28
Inorganic Compounds							
Fluoride	ppm	4	4	Yes	0.83	0.22 - 0.83	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	10	10	Yes	2.35	0.440 - 2.35	Runoff from fertilizer use; leaching from septic systems; sewage discharge; erosion of natural deposits
Nitrite (measured as Nitrogen)	ppm	1	1	Yes	0.089	0.007 - 0.089	Runoff from fertilizer use; leaching from septic systems; sewage discharge; erosion of natural deposits
Sodium	ppm	0	NA	NA	34	10 - 34	Naturally present in the environment
Barium	ppm	2	2	Yes	0.022	0.008 - 0.022	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Thallium	ppb	0.5	2	Yes	0.3	0 - 0.3	Discharge from electronics, glass, leaching from ore-processing sites, drug factories
Chromium	ppb	100	100	Yes	1.3	0 - 1.3	Discharge from steel and pulp mills; erosion of natural deposits
Sulfate	ppm	NA	NA	NA	46	Only one test is required per year	Naturally occurring compound
Microbiological Contaminants							
Total Coliform	% of positive samples monthly	0	5	Yes	1.55	0 - 1.55	Naturally present in the environment
Turbidity	% of samples below 0.3 NTU	100	95	Yes	100%	100 - 100	Soil runoff
Turbidity	Highest single measurement in NTU	NA	TT	Yes	0.2	NA	Soil runoff
Cryptosporidium	oocysts/100 L	0	TT	Yes	0	NA	Human and animal fecal waste
Source (Raw) water Cryptosporidium	oocysts/ L	NA	NA	NA	NA	<0.091 - 1.0	Human and animal fecal waste
Volatile Organic Compounds							
NA							
Synthetic Organic Compounds							
Atrazine	ppb	3	3	Yes	0.4	0.0 - 0.40	Runoff of herbicide used on row crops
Unregulated Compounds							
Metolachlor	ppb	NA	NA	NA	0.5	0.0 - 0.5	Runoff of herbicide used on row crops
Inorganic Contaminants							
					90th percentile		
Copper (last testing period was 2018)	ppm	1.3	90% of samples taken below AL = 1.3	Yes	0.111	Samples taken = 70 samples Exceeding AL = 0	Corrosion of household plumbing systems; erosion of natural deposits
Lead (last testing period was 2018)	ppb	0	90% of samples taken below AL = 15	No	18.4	Samples taken = 70 samples Exceeding AL = 8	Corrosion of household plumbing systems; erosion of natural deposits
Unregulated Contaminant Monitoring*							
Bromochloroacetic acid	ppb	NA	NA	NA	2.15	0.626 - 2.15	By-product of drinking water disinfection.
Dichloroacetic acid	ppb	NA	NA	NA	21.5	6.0 - 21.5	By-product of drinking water disinfection.
Trichloroacetic acid	ppb	NA	NA	NA	4.04	2.12 - 4.04	By-product of drinking water disinfection.

* Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants

Water Qualities that Matter to You: Taste and Softness

As a customer of City Utilities, you expect the drinking water delivered to you to be safe and to meet all federal and state water quality regulations. You also expect your water to have a certain feel and to be tasteless and odorless. In other words, you care about the aesthetics of your water. So does City Utilities.



City Utilities is committed to providing great water and to making adjustments to the water treatment process as necessary to ensure consistency in water quality. Occasionally, substances are found in drinking water that may cause taste, color and odor. These types of problems are not necessarily causes for health concerns. Employees at the Three Rivers Water Filtration Plant work diligently to anticipate these changes in river water quality and adjust the treatment process to remove as much of the taste and odor as possible from the water. This is done by adding powdered activated carbon to the treatment process and adjusting the balance between various types of disinfecting chemicals being used. For more information on taste, odor or color of drinking water please contact City Utilities by calling 311. City Utilities posts an indicator of current taste and odor of our water at drinkingwater.cityoffortwayne.org.

The feel of water is determined by the softness. The plant softens the water sent to customers using powdered calcium hydroxide (lime). The lime causes a chemical reaction that helps to remove calcium and magnesium – the naturally occurring minerals that cause hardness in water. Water hardness is measured in milligrams of calcium and magnesium per liter. Very soft water may be from 0-75 mg/L of hardness. Hard water has between 150 and 300 mg/L of hardness. Fort Wayne's water had an average hardness of 113.8 mg/L in 2018 and is considered moderately soft.

With moderately softer water, soaps and detergents create more suds, so you use less. Softer water has been found to extend the life of water-using appliances such as ice makers and dishwashers by as much as 30%.

An essential part of the regulatory requirement of drinking water treatment is providing adequate corrosion control to help prevent pipe deterioration and aid their long-term reliability. It reduces the risk of leaching of metals, such as lead, from the pipes into the water and helps preserve the quality of water in the distribution system and customer plumbing systems. In 2018, we evaluated ways to enhance that process, and in early 2019, we successfully added orthophosphate as an additional control measure.

The Board of Public Works reviews and approves contracts for utility construction projects that impact how your drinking water is treated. The Board meets every Tuesday at noon at Citizens Square, 200 E. Berry Street, Fort Wayne, Indiana. The meetings are open to the public and are on Public Access TV.

Information about Lead

Lead in drinking water primarily comes from materials and components in water service lines and interior plumbing; therefore, lead levels in water may go up because of the kinds of pipes and plumbing fixtures present in homes and businesses. City Utilities cannot control the variety of materials used in plumbing components inside homes and businesses. However, when we do water main replacement projects, any water service lines that are found to be made of lead are replaced from the water main to the curb stop on private property.

When your water has been sitting in your home plumbing for several hours, lead may enter the water from plumbing fixtures. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 for 30 seconds to two minutes 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 other steps you can take to minimize exposure to lead is available from the Safe Drinking Water Hotline 1-800-426-4791 or at www.epa.gov/safewater/lead.

Award Winning City Utilities

In 2018 City Utilities won seven awards. Three of those were National awards including the Utility of the Future Today award presented by four national water associations and the Environmental Protection Agency. The Utility of the Future Today award recognized our energy generation and recovery program at the Water Pollution Control Plant.

On the water side, the Alliance of Indiana Rural Water chose the Fort Wayne City Utilities' water as the Best Tasting Water in Indiana. Judges describe Fort Wayne's water as clean, crisp, pure and refreshing.

For the 18th year in a row, City Utilities received the Directors Award from the Partnership for Safe Water. Developed by the Environmental Protection Agency (EPA) and the American Water Works Association (AWWA), the Directors Award recognizes treatment operations, including process and testing, performance and action plans to achieve quality optimization.

Our water plant also received the Wendell Ladue Utility Safety award for Water Maintenance and Filtration Plant – presented by AWWA. This award recognizes our plant safety program and our safe work environment.

Additionally, the Indiana Water Environment Association (IWEA) honored the Fort Wayne City Utilities' Biosolids and Composting Facility with the 2018 Residuals & Resource Recovery Award for Excellence in Operating. IWEA also honored the Water Pollution Control Plant with the 2018 Laboratory Excellence Award and the 2018 Safety Excellence Award.

FORT WAYNE CITY UTILITIES

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Fort Wayne, IN 46802

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Important Information Sources:

Three Rivers Water Filtration Plant
Vicky Zehr - Water Quality Manager
260-427-8311 or 260-427-1254
www.cityoffortwayne.org/utilities

Indiana Department of Environmental
Management (IDEM)
1-888-233-7745
in.gov/idem/cleanwater/2450.htm

EPA's Safe Drinking Water Hotline
1-800-426-4791
www.epa.gov/drink/

Where Does Fort Wayne's Water Come From?

Water provided to customers of City Utilities comes from the St. Joseph River. Water flows into the river from more than 694,000 acres in north-east Indiana, north-west 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.

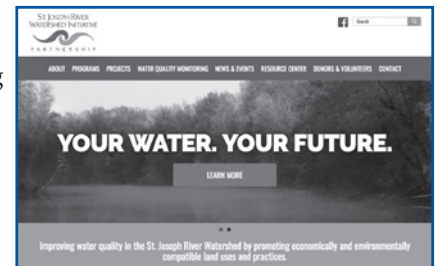
The Indiana Department of Environmental Management (IDEM) has conducted a Source Water Assessment for City Utilities' water supply. The Source Water Assessment has identified potential sources of contamination. The report also analyzes the hydrological conditions that may affect the susceptibility of the water supply to potential contaminants. More information concerning this Source Water Assessment may be obtained by contacting the Water Quality Manager of the Three Rivers Filtration Plant, Vicky Zehr, by calling 260-427-8311.



Protecting Our Water Source

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 is a non-profit watershed planning and protection organization that 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.



City Utilities' Mission

To support public safety and public health and enhance regional economic development by delivering high quality, affordable water, wastewater and stormwater services in ways that protect the environment.

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.