

# 2016 Annual

# **Water Quality Report**

**Richmond Operations**PWS ID: IN5289012



This report contains important information about your drinking water. Have someone translate it for you if needed.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo tradúzca para usted, ó hable con alguien que lo entienda.

## A Message from the President

Indiana American Water is proud to be your local water company. Every day, our lives revolve around water. It's involved in everything we do, everything we use. That's why it's important that we provide you with information about our commitment to providing quality water service at a cost of only about a penny a gallon.

I am proud to share with 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 data from water quality testing conducted for your local water system through December 2016.

At Indiana American Water, we take water quality very seriously and your safety is our number one priority. When it comes to complying with strict federal regulations for delivering safe, quality drinking water, we have consistently scored among the highest of all water companies. In fact, American Water scored 21 times better than the industry average for meeting all drinking water requirements in 2016.

Just as important, we place a strong focus on acting as stewards of our environment. In Indiana, we participate in activities that help communities protect the watershed and educate customers on how to use water wisely. You can learn more about these ideas and programs on our website at www.indianaamwater.com.

As a subsidiary of American Water, we're part of a long standing American tradition of quality service. Our strength as an industry leader comes from our employees and their expertise—scientists, engineers and technicians all coming together to provide high quality water service. 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.

In addition to this written report, you can view an electronic version at www.indianaamwater.com.

We look forward to serving you throughout 2017.

Sincerely.

Deborah Dewey President, Indiana American Water



#### **About Indiana American Water**

Indiana American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 1.3 million people.

#### **About American Water**

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 <a href="https://www.amwater.com">www.amwater.com</a>.

## What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (EPA) regulations, Indiana American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect your drinking water sources. In 2016, we conducted tests for many contaminants, all of which were below state and federal maximum allowable levels. This report provides an overview of last year's (2016) water quality. It includes details about where your water comes from and what it contains.

If you have any questions about this report or your drinking water, please call our Indiana Customer Service Center at (800) 492-8373.

## **Share this report**

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of Indiana American Water and therefore do not receive this report directly.

#### **Source Water Information**

The public water system serving Richmond and surrounding communities relies on surface water and ground water sources. The surface water sources include Middle Fork Reservoir and collector wells under the East Fork of the Whitewater River. Richmond's ground water source is obtained from twelve wells and two springs located within three well fields.



## **Protecting Your Water Source**

The Indiana Department of Environmental Management (IDEM) has assessed all public surface and groundwater sources throughout the state to identify potential contaminants. For the purpose of source water assessments, in Indiana all surface waters are considered to be susceptible to contamination. Indiana American Water has developed a Wellhead Protection Management Plan, in cooperation with community volunteers, to protect the valuable ground water resources serving your community. Indiana American Water is also active in the local watershed group, and in recognition of these efforts, the American Water and Wastewater Association awarded the Richmond District the "Exemplary Source Water Protection" award for Large Systems in 2008. Also in 2011, IDEM recognized Indiana American Water – Richmond Operations by awarding them the Hoosier Water Guardian Award with Outstanding Commitment. Please share your views with us if you are interested in environmental water quality issues by calling our designated Water Quality Supervisor listed in this report.

#### **Investing in Richmond's Future**

Indiana American Water invested more than \$3.2 million in improvements in the Richmond Water system in 2016. Indiana American Water also paid over \$410,000 in local taxes in 2016 and is a valuable source of revenue to the local community and its services.



#### **Chloramines**

Chloramines are an Indiana and federally-approved alternative to free chlorine for water disinfection. Chloramines minimize disinfection by-product formation. Another benefit of chloramines is improved taste of the water as compared with free chlorine. Indiana American Water has successfully used chloramines in our Richmond system since 2011. Chloramines are also used by many other water utilities nationally. Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums. Treatments to remove chloramines are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life. You may also contact Indiana American Water for more chloramine information.

## **Partnership for Safe Drinking Water Program**

Indiana American Water–Richmond was awarded the prestigious Ten Year Director's Award under the Partnership for Safe Water program administered by EPA, Indiana Department of Environmental Management, and other water-related organizations. 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 Contact Us**

For more information about this report, or for any questions relating to your drinking water, please call Larry Wood, Supervisor of Water Quality and Environmental Compliance, at (765) 741-1256, ext. 4104 or (800) 492-8373. You can also contact Mr. Wood by e-mail at larry.wood@amwater.com.

For questions about your water bill or service issues, please call our Customer Service Center at (800) 492-8373.

To learn more about Indiana American Water, please visit our web site at www.indianaamwater.com.

#### **Water Information Sources**

**Indiana American Water** 

www.indianaamwater.com

**Indiana Department of Environmental Management** 

www.in.gov/idem

**United States Environmental Protection Agency** 

www.epa.gov/safewater

Safe Drinking Water Hotline: (800) 426-4791

**Centers for Disease Control and Prevention** 

www.cdc.gov

**American Water Works Association** 

www.awwa.org

**Water Quality Association** 

www.wqa.org

National Library of Medicine/National Institute of Health

www.nlm.nih.gov/medlineplus



#### **Substances Expected to be in Drinking Water**

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.

#### 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 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 also may 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.

# **Special Health Information**

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and 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 EPA's Safe Drinking Water Hotline at (800) 426-4791. For additional information regarding cryptosporidiosis (a gastrointestinal disease caused by *Cryptosporidium*) and how it may impact those with weakened immune systems, please contact our Customer Service Center at (800) 492-8373.

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. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Indiana American Water's treatment processes are designed to reduce any such substances to levels well below any health concern and the processes are controlled to provide maximum protection against microbial and viral pathogens which could be naturally present in surface and groundwater. 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 U.S. Environmental Protection Agency's Safe Drinking Water Hotline (800) 426-4791.

#### **Availability of Monitoring Data for Unregulated Contaminants**

Monitoring was conducted during 2014 and 2015 under the EPA Unregulated Contaminant Monitoring Rule 3 (UCMR3). The compound(s) detected under UCMR3 are noted in the table. For information concerning our results, please contact our designated Water Quality Supervisor listed in this report. Data is also available on the EPA's website (www.epa.gov/safewater/data/ucmrgetdata.html).

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.



#### Lead

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. Indiana American Water–Richmond 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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.

# **Long Term 2 Enhanced Surface Water Treatment Rule**

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. 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, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing lifethreatening illness. We encourage immuno-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.

The U.S. EPA has created the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) for the sole purpose of reducing illness linked with the contaminant Cryptosporidium and other disease causing microorganisms in drinking water. The rule will bolster existing regulations and provide a higher level of protection of your drinking water supply. Sampling of our water source during 2016 has shown the following: Cryptosporidium: (0-0.727 oocysts/L); Giardia lamblia: (ND-0.273 cysts/L); and E. coli: (ND-98.5 MPN/100ml). It is important to note that these results are from our raw water source only and not our treated drinking water supply. For more information, contact U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

#### **How to Read This Table**

Indiana American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The table in this report lists all the drinking water contaminants that we detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2016. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. For help with interpreting this table, see the "Table Definitions" section.

Starting with a **Substance**, read across. **Year Sampled** is usually in 2016 or year prior. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **MCL** shows the highest level of substance (contaminant) allowed. **Level Found** represents the measured amount (less is better). **Range of Detections** 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 contaminant levels have not been established by the government.

#### **Definitions of Terms Used in This Report**

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



- mrem/year: Millirems per year (a measure of radiation absorbed by the body).
- NA: Not applicable
- . ND: Not detected
- NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of the water.
- pCi/L (picocuries per liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- 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.
- ppt (parts per trillion): One part substance per trillion parts water, or nanograms per liter.
- TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.
- %: means percent

## **Water Quality Statement**

We are pleased to report that during the past year, the water delivered to your home or business complied with, or was better than, all state and federal drinking water requirements. For your information, we have compiled a list in the table below indicating what substances were detected in your drinking water during 2016. Although all of the substances listed below are under the Maximum Contaminant Level (MCL) set by the EPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

## **Water Quality Results**

## Turbidity - A Measure of the Clarity of the Water at the Treatment Facilities

Substance (units)	Year Sampled	MCL	MCLG	Highest Level Detected	Compliance Achieved	Typical Source
Turbidity (NTU) <sup>1</sup>	2016	TT= 1 NTU	0	0.30	Yes	Soil Runoff
Turbidity % meeting standards	2016	TT= % of samples <0.3 NTU	NA	100%	Yes	Soil Runoff

<sup>&</sup>lt;sup>1</sup>Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system.

#### Regulated Substances - Measured on the Water Leaving the Treatment Facilities

Substance (units)	Year Sampled	MCL	MCLG	Level Found	Range Low-High	Compliance Achieved	Typical Source
Atrazine (ppb)	2016	3	3	0.24	ND - 0.30	Yes	Runoff from herbicide used on row crops
Fluoride (ppm)	2016	4	4	0.80	0.78 - 0.80	Yes	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories



Nitrate (ppm)	2016	10	10	2.69	1.99 - 2.69	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (Removal Ratio) <sup>2</sup>	2016	П	NA	2.37	2.06 - 3.81	Yes	Naturally present in the environment

<sup>&</sup>lt;sup>2</sup> The value reported under "Level Found" is the lowest running annual average ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than or equal to 1.0 indicates that the water is in compliance with TOC removal requirements.

# Tap Water Samples: Lead and Copper Results - Measured in the Distribution System

Substance (units)	Year Sampled	Action Level	MCLG	90th Percentile	Number of Samples Taken	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Lead (ppb)	2014	15	0	14	30	3	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2014	1.3	1.3	0.582	30	2	Yes	Corrosion of household plumbing systems; Erosion of natural deposits

# Other Regulated Compounds - Measured in the Distribution System

Substance (units)	Year Sampled	MCL	MCLG	Results	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (ppb)	2016	80	NA	65.7	10.4 - 87.9	Yes	By-product of drinking water chlorination
Haloacetic Acids (ppb)	2016	60	NA	17.3	4.3 - 22.6	Yes	By-product of drinking water chlorination

# **Disinfectant Residual - Measured in the Distribution System**

Substance (units)	Year Sampled	MRDL	MRDLG	Level Found	Range Low-High	Compliance Achieved	Typical Source
Chloramines (ppm)	2016	4	4	2.1	1.7 - 2.2	Yes	Water additive used to control microbes



# **Unregulated Substances- Measured on the Water Leaving the Treatment Facilities**

Substance	Year Sampled	Level Found	Range (Low-High)	Typical Source
Chromium (ppb) <sup>3</sup>	2014	0.26	ND - 0.4	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Hardness (ppm)	2016	316	180 - 390	Erosion of natural deposits
Hexavalent Chromium (ppb) 4	2014	0.06	0.03 - 0.11	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Molybdenum (ppb) <sup>4</sup>	2014	3.1	2.6 - 3.8	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
Sodium (ppm)	2016	28.3	8.4 - 48.1	Naturally occurring
Strontium (ppb)	2016	450	300 - 600	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Sulfate (ppm)	2016	26.3	22.8- 29.8	Erosion of natural deposits
Vanadium (ppb) <sup>4</sup>	2014	0.2	ND - 0.2	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

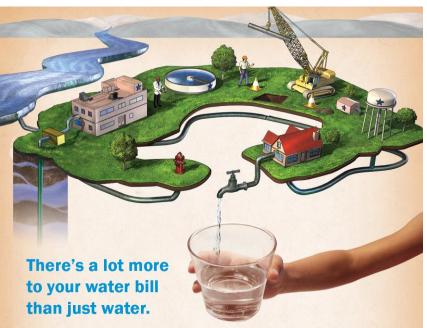
# **Unregulated Substances- Measured on the Water in the Distribution System**

Substance	Year Sampled	Level Found	Range (Low-High)	Typical Source
Chromium (ppb) <sup>3</sup>	2015	0.2	0.2	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Hexavalent Chromium (ppb) <sup>4</sup>	2014	0.09	0.04 - 0.15	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Molybdenum (ppb) 4	2014	3.3	2.6 - 4.0	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) <sup>4</sup>	2014	472	250 - 610	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) <sup>4</sup>	2014	0.23	ND - 0.4	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

<sup>&</sup>lt;sup>3</sup> Monitored under UCMR3, Total Chromium itself is a regulated substance.

<sup>&</sup>lt;sup>4</sup> Monitored under UCMR3, the EPA has not set drinking water standards for these contaminants.





When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring that water to your home. The miles of pipeline hidden below the ground. The facilities that draw water from the source. The plant where it's treated and tested. The scientists, engineers, and maintenance crews working around the clock to make sure that water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us—today and well into the future. All for about a penny a gallon.



WE CARE ABOUT WATER. IT'S WHAT WE DO. FIND OUT WHY YOU SHOULD, TOO, at amwater.com.

