

# New Castle Water Works 2016 Annual Water Quality Report

New Castle Water Works is committed to providing residents with a safe and reliable supply of high-quality drinking water. The laboratories we use to test our water are certified by the State of Indiana and have the most advanced equipment and procedures at their disposal. New Castle Water Works water meets State and Federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tell you where your water comes from, what our tests shows about it, and other things you should know about drinking water.

**We are proud to report that the water provided by the New Castle Water Works meets or exceeds established water-quality standards.**

The United States Environmental Protection Agency (EPA) enforces the Safe Drinking Water Act. The EPA mandates compliance through State Agencies.

The New Castle Water Works falls under the directions of the IDEM (Indiana Dept. of Environmental Management). IDEM mandates rules and procedures for testing of water, approval of new water mains, and approval of site for new wells or well fields. They also assist with direction for general operation of public water systems.

New Castle Water Works is a member of the IURC (Indiana Utility Regulatory Commission). The IURC regulates rate concerns for Utilities.

New Castle City Council through the Board of Public Works sets local rules and policies for the New Castle Water Works. A copy of the New Castle Utilities Regulations and Standards Procedures Manual is available for review in our office 227 N. Main St.

The Board of Public Works who governs the Water Works has created a panel to review concerns between the utility and the customer. The Citizens Advisory Board meets once a month. An application may be picked up at the Utility Office at 227 North Main Street.

In addition, New Castle Water Works has a well-head protection committee. This committee has prepared a management plan, contingency plan, inventory of potential sources of contamination and delineation information to complete Phase I of this state requirement. This information has been submitted to IDEM and the office of Water Quality has approved Phase I of this program. The goal of this committee is to protect the ground water supply for future generations.

## Overview

New Castle Water Works provides service to 9020 active residential connections that serve approximately 20,000 people. We also provide water service to 983 commercial connections and 40 industrial connections for a total of 10043 active connections. We have and enforce a very rigid Backflow Program to assure that the chance of our water system becoming contaminated from a cross connection from one of our non-residential customers is kept to a minimum.

Our staff maintains water mains and services throughout New Castle, as well as sub-divisions on the outer edge of the city. During 2014, we responded to 5,389 service calls to provide services such as turning water on or off, checking for leaks, checking and testing meters, etc. Our plumbing crew repaired 43 water main breaks, repaired or replaced 32 existing service lines. We also added 3 new service connections to our water distribution system in 2014.

In addition, we also provide water service to 733 fire hydrants throughout New Castle, Henry Township and Prairie Township and Franklin Township for fire protection.

## Water Source

New Castle Water Works is supplied by ground water pumped from 13 wells, located in the Big Blue River Flood Plain, in and north of New Castle.

We draw water from an aquifer at depths of 90 to 120 feet and constantly monitor this aquifer and it continues to provide an adequate source of high-quality water.

Our first treatment process is aeration (to bring water in contact with air). We then move the water through eight pressure filters capable of treating 1,000,000 gallons each per day. These are designed for iron and mineral removal, as ground water is typically very hard. Our average daily production is 2,490,000 gallons per day.

The disinfection process consists of adding chlorine gas that kills disease-causing organisms found naturally in ground water.

Fluoride is also added to reduce the incidence of dental cavities in the children of our customers.

## An Explanation of the Water-Quality Data Table

This report is based upon tests conducted in the year 2014 by New Castle Water Works. Terms used in the Water-Quality table and in other parts of this report are defined here.

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal or 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.

**Action Level:** The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirement that a water system must follow.

## Key to Table

AL=Action Level      MCL=Maximum Contaminant Level  
MCLG=Maximum Contaminant Level Goal  
ppm=parts per million, or milligrams per liter (mg/L)  
ppb=parts per billion, or micrograms per liter (ug/L)  
pCi l=picocuries per liter

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2014	1.3	1.3	0.117		ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2014	0	15	25.1	4	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2015	1	1 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAAS)*	2015	9	0 - 25	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2015	16	9.3 - 23.7	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2014	0.6	0.6 - 0.6	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2014	0.327	0.327 - 0.327	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2014	0.717	0.717 - 0.717	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2015	0.26	0.26 - 0.26	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2014	1.4	1.4 - 1.4	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

#### Water-Quality Table Footnotes

Although we test for a wide range of contaminants, the preceding list is the only contaminants that were detected. In each case the detected level of the contaminants was less than the MCL. \*\*Please note: In 2016 the City of New Castle Water Works voluntarily conducted 60 Lead and Copper tests, including the four (4) that were in violation in 2014, and those test results all came back well below the Action Level.

#### Unregulated Contaminants

New Castle Water Works runs tests on the water as set forth in our Standard Monitoring Framework schedule. IDEM (Indiana Department of Environmental Management) mandates this schedule based on the vulnerability of the system, as to the contaminants most likely to appear in our water supply. We do testing beyond the requirements of this schedule.

#### Lead

"If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking is primarily from materials and components associated with service lines and home plumbing. New Castle Water Department 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 <http://www.epa.gov/safewater/lead>

#### Violations Table

Haloacetic Acids (HAA5)*			
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), MAJOR	07/01/2015	09/30/2015	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Total Trihalomethanes (TTHM)			
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.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), MAJOR	07/01/2015	09/30/2015	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

#### Violations Table Footnotes

Although the third quarter tests for Haloacetic Acids and Total Trihalomethanes were not taken, the tests taken during the second quarter and the fourth quarter were well within acceptable parameters.

#### Required Additional Health Information

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

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 Environmental Protection Agency's Safe Drinking Water Hot line (800-426-4791)

The sources of drinking water (both tap water and bottled water) 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 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 storm 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, storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm-water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. 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.

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, who have undergone organ transplants, people with HIV/AIDS or other immune systems disorders, some elderly 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 of *Cryptosporidium* are available from the Safe Drinking Water Hot line (800-426-4791)

#### National Primary Drinking Water Regulation Compliance

We'll be happy to answer any questions about New Castle Water Works and our water quality. Call at (765) 521-6841.