

MORGAN COUNTY
Rural Water Corporation
(MCRW)

2016

ANNUAL DRINKING WATER
QUALITY REPORT

MCRW Contact Information

www.MCRW.org

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Introduction

MCRW is pleased to present a summary of the quality of our drinking water provided to you during the past year (2016). The Safe Drinking Water Act, (SDWA), requires that water companies (regardless of size) issue an annual Water Quality Report to their customers, in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and any risks the water testing and treatment are designed to prevent. MCRW is committed to providing you and your family with a safe and reliable water supply.

Summary

MCRW meets or surpasses all Federal and State drinking water standards. This report was prepared by Glen C. Miller, Utility General Manager, with technical assistance provided by the Indiana Department of Environmental Management, (IDEM) and other Water Associations. If you have any questions concerning this report, please call MCRW during regular business hours at 765-342-7370. The Board of Directors meets monthly to review operations. If you desire to attend, contact the manager for requirements. Comments may be submitted to the MCRW Members Committee, P.O. Box 1575, Martinsville, IN 46151.

Overview

MCRW produced 169,002,000 gallons of water for the system in 2016; and purchased 31,623,000 gallons of water from Citizens Water (CW). We provided a daily average of 549,959 gallons to 3331 accounts, or a population of 8328 at the end of 2016.

IDEM has provided MCRW with a Source Water Assessment (SWA) for our wells and Wellhead Protection Area (WHPA). Our SWA rating for land use/potential contaminant sources within the WHPA and susceptibility determination is moderately low.

The next Drinking Water Quality Report for MCRW will contain the data for 2017 and will be issued prior to July 1, 2018. Because the levels of some contaminants are not expected to vary significantly from one year to another, we are required by IDEM to monitor those contaminants less frequently than every year. Although we routinely monitor your water for more than eighty contaminants, we are not able to report those with no detectable concentrations or those below detectable limits in this report format.

We encourage you to share this information. Especially those supplying large water volume to multiple consumers, such as schools, apartment buildings, and restaurants. Consider posting extra copies in areas where they are easily seen, or distributing them to tenants, students, and employees. They may be interested in the quality of water they consume.

Source of Water

MCRW pumps ground water from its well field in Morgan County; pulling from the large central Indiana White River aquifer. We have developed a Well Head Protection plan following guidelines from IDEM. This information is on file at our main office. MCRW also purchases water from CW to supplement our supply capability; and act as a contingent source of water for the system.

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 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.

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 the water poses a health risk.

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 water 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 storm water runoff, and residential uses.
- ◆ **Organic chemical contaminants**, including synthetic and volatile organic chemicals, 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. Food and Drug Administration (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 the general population.

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 the system's business office.

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 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.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

DEFINITIONS

- ◆ **NA-** Not applicable
- ◆ **ND-** Not detected
- ◆ **pCi/l-** **Measure of Radioactivity:** Picocuries per liter
- ◆ **BDL-** Below Detection Level
- ◆ **Org/10L -** Organisms per 10 liters
- ◆ **PPM- Parts per Million or milligrams per liter:** One ounce in 7,350 gallons of water.
- ◆ **PPB- Parts per Billion or micrograms per liter:** One ounce in 7,350,000 gallons of water.
- ◆ **AL- Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- ◆ **MCLG- Maximum Contaminant Level Goal:** The “Goal” ; the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG’s allow for a margin of safety.
- ◆ **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.
- ◆ **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.
- ◆ **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.
- ◆ **NTU- Nephelometric Turbidity Units:** Unit to measure turbidity, which is the measure of the cloudiness of water (a good indicator of the effectiveness of the filtration system)
- ◆ **TT- Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- ◆ **AVG –** Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- ◆ **SMCL –** (Secondary Maximum Contaminant Limits)
- ◆ **TOC -** Total Organic carbon

MORGAN COUNTY RURAL WATER TREATED DRINKING WATER DATA (IN5255010)

Substance

Inorganic Contaminants:	MCLG (Goal)	MCL (Limit)	Compliance Achieved?	Average Results (Range Detected)	Possible Source of Contaminants
Arsenic (ppb)	0	10	Yes	2 (Range: 2 - 2)	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	Yes	0.15 (Range: 0.15 - 0.15)	Discharge of drilling wates; Discharge from metal refineries; erosoin of natural deposits
Fluoride (ppm)	4	4	Yes	0.66 (Range: 0.30 - 0.90)	Natural deposits; Treatment additive
Nitrate (as Nitrogen) (ppm)	10	10	Yes	1 (Range: 0.7 - 0.7)	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	N/A	N/A	Yes	34	Erosion of natural deposits; Leaching
Sulfate	N/A	N/A	Yes	49	Erosion of natural deposits; Leaching

Copper & Lead:	MCLG (Goal)	AL (Limit)	Compliance Achieved?	90th Percentile	# Sites over AL	Possible Source of Contaminants
Copper (ppm)	1.3	1.3	Yes	0.16	0	Erosion of Natural Deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead (ppb)	0	15	Yes	7.6	0	Corrosion of household plumbing systems; Erosion of natural deposits

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. We are responsible for providing high quality drinking water, but we 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>.

Disinfectants and Disinfection By-Products:	MCLG (Goal)	MCL (Limit)	Compliance Achieved?	Average Results (Range Detected)	Possible Source of Contaminants
Haloacetic acids (HAA5) (ppb)	N/A	60	yes	3 (Range: 3.1 - 3.2)	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb)	N/A	80	yes	15 (Range: 14.8 - 15.1)	By-product of drinking water disinfection

Violation Explanation: We failed to test our drinking water for these contaminants. Because of this failure, we cannot be sure of the quality of our drinking water during the period 01/01/16 - 12/31/16.

Disinfectant Residual:	MCLG (Goal)	MCL (Limit)	Compliance Achieved?	Average Results (Range Detected)	Possible Source of Contaminants
Chlorine (as C12) (ppm)	4	4	Yes	0.32 (Range: 0.15 - 0.52)	Water additive used to control microbes

CITIZENS WATER TREATED DRINKING WATER DATA (IN5249004)

Substance	MCLG/ MRDGL (Goal)	MCL/MRDL (Limit)	Compliance Achieved?	Average Results (Range Detected)	Possible Source of Contaminants
Inorganics:					
Barium (ppm)	2	2	Yes	0.14 (0.035 - 0.34)	Natural deposits
Chromium (ppb)	100	100	Yes	1.2 (ND - 3.8)	Natural deposits
Fluoride (ppm)	4	4	Yes	0.80 (0.13 - 1.3)	Natural deposits; treatment additive
Nitrate (ppm)	10	10	Yes	0.99 (ND - 4.6)	Fertilizer, septic tank leachate
Organic Disinfection By-Products:					
Total Trihalomethanes (TTHMs) (ppb)	N/A	80	Yes	9.9 (Highest Sample)	By-product of chlorination treatment
Haloacetic acids (HAA5) (ppb)	N/A	60	Yes	10 (Highest Sample)	By-product of chlorination treatment
Other Regulated Organics:					
2,4-D (ppb)	70	70	Yes	0.13 (ND - 0.50)	Herbicide runoff
Atrazine (ppb)	3	3	Yes	0.15 (ND - 1.5)	Herbicide runoff
Turbidity: TT					
Turbidity (NTU)	N/A	1 NTU	Yes	0.11 (0.014 - 0.20)	Soil runoff
Turbidity (% below TT)	N/A	95% < 0.3 NTU	Yes	100%	Soil runoff
Turbidity is the measure of the cloudiness of water. CW monitors turbidity as it is a good indicator of the effectiveness of the filtration system.					
Disinfectant Residual:					
Chlorine (as C12) (ppm)	4	4	Yes	1.1 (0.35 - 1.5)	Water additive used to control microbes
Total Chlorine includes free chlorine and chloramine. Chlorine is added to kill any bacteria present and to maintain a level of disinfectant as the water travels through the distribution system. A small amount of ammonia is used to minimize by-products of the disinfection process and to allow chlorine to persist longer in the distribution system. For a few weeks each year, when the water temperature is cool, no ammonia is added in order to help maintain good water quality in the distribution system. This chlorine residual without ammonia known as "free chlorine" is a more active form of chlorine. The "free chlorine" has a more noticeable bleach or chlorine smell with the same level of chlorine.					
Untreated Source Water:					
Cryptosporidium (org/10L)				1 (1 - 2) oocysts / 10L	Removed during treatment
Giardia (org/10L)				5 (ND - 7) cysts / 10L	Removed during treatment
TOC (Untreated Water) (ppm)				4.1 (2.7 - 7.2)	Naturally present in the environment
There are no goal, limit, or compliance requirements for untreated source water					
Copper & Lead: AL					
Copper (ppm)	1.3	1.3	Yes	0.32 (0 of 26 > AL)	Corrosion of customer plumbing
Lead (ppb)	0	15	Yes	5.3 (1 of 26 > AL)	Corrosion of customer plumbing
Radionuclides:					
Combined Radium (pCi/L)	0	5	Yes	0 - 1.7	Erosion of natural deposits
Gross alpha excluding radon and uranium	0	15	Yes	2.1 - 8.8	Erosion of natural deposits
Uranium	0	30	Yes	0.13 - 0.93	Erosion of natural deposits

CITIZENS WATER CONT. (IN5249004)

Substance

Secondary Drinking Water Standards:	SMCL	Compliance Achieved?	Average Results (Range Detected)	Possible Source of Contaminants
Aluminum (ppb)	200	Yes	37 (ND - 300)	Natural deposits; water treatment additive
Chloride (ppm)	250	Yes	66 (14 - 140)	Natural deposits; water treatment additive
Hardness (ppm)	N/A	Yes	309 (129 - 534)	Erosion of natural deposits; leaching
pH (Standard Units)	6.5 - 8.5	Yes	7.66 (7.11 - 8.15)	
Sodium (ppm)	N/A	Yes	35 (8.1 - 94)	Erosion of natural deposits; leaching
Sulfate (ppm)	250	Yes	52 (3.3 - 214)	Erosion of natural deposits; leaching

Secondary standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water