

City of Sidney 2017 Drinking Water Consumer Confidence Report

The City of Sidney Water Treatment Plant has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. This report is required as part of the Safe drinking Water Act Reauthorization of 1996 and is required to be delivered to the consumers by July of each year. Included in this report is general health information, water quality test results, how to participate in decisions concerning your drinking water, and water system contacts.

Source Water

The City of Sidney's public water system receives its water from both ground water and surface water sources. The ground water sources are pumped from 4 water supply wells located along the Great Miami River as well as from our new well field in Washington Township. Surface water is drawn from intakes at the low head dams on Tawawa Creek and the Great Miami River. These multiple sources of water permit the selection of water from any source or combination of sources to achieve the required volume and best quality. It is our desire to rely more heavily on our groundwater source moving forward to lessen the susceptibility of potential contamination. Surface waters are by their nature susceptible to contamination, and numerous potential contaminant sources along their banks make them more so. The protection areas around Tawawa Creek, the Great Miami River and the well field include a moderate number of potential contaminant sources, including agricultural run-off, inadequate septic systems, and road and rail bridge crossings. As a result, the drinking water supplied to the City of Sidney's public water system is considered to have a high susceptibility to contamination.

What are Sources of Contamination to Drinking Water?

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, 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:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **(B) 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; **(C) Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; **(D) 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 storm water runoff, and septic systems; and **(E) 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, USEPA 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. 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 Federal EPA Safe Drinking Water Hotline (1-800-426-4791)

Who Needs To Take Special Precautions?

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 immune system disorders, some elderly, and infants can be particularly at risk from infection. 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 (1-800-426-4791)

Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Revised Total Coliform Rule (RTCR) Information

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the PWS.

Lead Educational Information

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. The City of Sidney Water Treatment Plant 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Cryptosporidium Information

The City of Sidney Water Treatment Plant monitored for Cryptosporidium in the source water during 2017. Cryptosporidium was detected in 2 samples of 12 collected from the raw water. It was not detected in the finished water. 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% removal. Monitoring of source water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease. However, immune-compromised people are at a greater risk of 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.

How Do I Participate in Decisions Concerning My Drinking Water?

Public participation and comment are encouraged at regular meetings of City Council which meets regularly on the first, second, and fourth Monday of each month at 6:30 pm in the Council Chambers at City Hall located at 201 W. Poplar Street. Comments and concerns can also be directed to Larry Broughton, Operator of Record, at (937) 498-8180 or to Bill Blakely, Utilities Director, at (937) 498-8152. You are welcome and encouraged to attend the next public meeting on the Annual Water Quality Report on July 17, 2018 at 3:00 pm. The meeting will take place at the Water Treatment Plant located at 880 East Court Street. This report can also be found on our website at www.sidneyoh.com

Staff & Treatment

The Water Treatment Plant is staffed 24 hours a day, 365 days per year, by a total of 8 personnel. All personnel operating the treatment plant are required to be licensed by the State of Ohio EPA. Water plant personnel are also certified by Ohio Environmental Protection Agency for the purpose of performing chemical and bacteriological testing, making us the only certified laboratory in Shelby County. We also perform testing and calibration of analytical equipment for surrounding communities.

The City’s Water Treatment Plant capacity of 10 million gallons per day still meets present and future needs. The processes used to treat the water include; powdered activated carbon to control taste and odors, herbicides and pesticides; coagulation to concentrate dissolved solids; sedimentation to remove particulates and precipitated solids; filtration to remove turbidity, other harmful contaminants; and disinfection with chlorine to kill any remaining bacteria and viruses throughout the distribution system.

In 2017 we had an, unconditioned license to operate our water system.

Historically, the Sidney public water system has effectively treated this source water to meet drinking water quality standards. The potential for water quality impacts can be further decreased by implementing measures to protect Tawawa Creek, the Great Miami River and the local aquifer. More detailed information is provided in the City of Sidney’s Drinking Water Source Assessment Report or the City of Sidney’s Wellhead Protection Program.

Definitions of some terms contained within this report.

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 contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL): The highest residual disinfectant level allowed.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of residual disinfectant below which there is no known or expected risk to health.

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

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

Parts per Million (ppm): Units of measure for concentration of a contaminant. A part per million corresponds to one second in approximately 11.5 days.

Parts per Billion (ppb): Units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

The “<”symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

Picocuries per liter (pCi/L): A common measure of radioactivity.

LRAA: Locational Running Annual Average.

| Unregulated Contaminants (2013-2014) | Reported Level | Range | |
|---|----------------|---------|---------|
| | | Low | High |
| chromium (total chromium) (ppb) | 0.289 | 0.242 | 0.36 |
| chromium-6 (hexavalent chromium) (ppb) | 0.281 | 0.256 | 0.33 |
| molybdenum (ppb) | 7.109 | 6.009 | 7.9 |
| strontium (ppb) | 1168.9 | 977.835 | 1400.00 |
| vanadium (ppb) | 0.367 | 0.32 | 0.46 |

The table below lists all of the latest levels of drinking water contaminants that we detected in the City of Sidney's drinking water within the past 5 years. (see sample year date) Although many more contaminants were tested, only those substances listed below were found in your water. The City of Sidney is regulated to test for the following contaminants: Total Coliform, E. coli, Total Organic Carbon, Turbidity, Microcystins, Radiologicals, 19 inorganics, 32 Synthetic Organic Contaminants including Pesticides and Herbicides, and 23 Volatile Organic Contaminants. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions in a table contained within this report titled "Definitions of some terms contained within this report".

| Contaminants | MCLG or MRDLG | MCL, TT, or MRDL | Level Detected | Range | | Sample Year | Violation | Typical Source |
|---|---------------------|------------------------|-------------------|-------|-------|----------------|-----------|---|
| | | | | Low | High | | | |
| Disinfectants & Disinfection By-Products | | | | | | | | |
| (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants) | | | | | | | | |
| Chlorine (as Cl ₂) (ppm) | 4 | 4 | 2.5 | 1.6 | 2.5 | 2017 | No | Water additive used to control microbes |
| Haloacetic Acids (HAA5) (ppb) | NA | 60 | 18.14 | 7.67 | 20.65 | 2016 | No | By-product of drinking water chlorination |
| TTHMs [Total Trihalomethanes] (ppb) | NA | 80 | 66.25 | 13.7 | 82.71 | 2016 | No | By-product of drinking water disinfection |
| Total Organic Carbon (% Removal) | NA | TT | 67.10 | NA | NA | 2017 | No | Naturally present in the environment |
| *Total Organic Carbon (Compliance Value) | NA | TT | 4.0 | 1.0 | 4.0 | 2017 | No | |
| *The value reported under "Level Detected" for Total Organic Carbon (TOC) 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 one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements. The value reported under the "Range" for TOC is the lowest monthly ratio to the highest monthly ratio. | | | | | | | | |
| Microbiological Contaminants | | | | | | | | |
| Total Coliform (positive samples/month) | 0 | 1 | 1 | 0 | 1 | 2017 | No | Naturally present in the environment |
| Turbidity (NTU) | TT | 0.3 | 0.29 | 0.04 | 0.29 | 2017 | No | Soil runoff |
| 100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.29. Any measurement in excess of 1.0 is a violation unless otherwise approved by the state. | | | | | | | | |
| Synthetic organic contaminants including pesticides and herbicides | | | | | | | | |
| Atrazine (ppb) | 3 | 3 | 2.28 | ND | 2.28 | 2017 | No | Runoff from herbicide used in row crops |

Volatile Organic Contaminants (VOCs)

| | | | | | | | | |
|----------------------------|---|---|------|---|------|------|----|---|
| Carbon Tetrachloride (ppb) | 0 | 5 | 0.67 | 0 | 0.67 | 2016 | No | Discharge from chemical plants and other industrial activities. |
|----------------------------|---|---|------|---|------|------|----|---|

The City of Sidney received a violation letter from the Ohio EPA for not reporting the detection of Carbon Tetrachloride in its 2016 Drinking Water Consumer Confidence Report. The detection was well below the MCL, as revealed above, and was simply an oversight during the CCR preparation.

Radioactive Contaminants

| | | | | | | | | |
|-----------------------------------|---|----|-----|----|-----|------|----|-----------------------------|
| Radium (combined 226/228) (pCi/L) | 0 | 5 | 1.0 | NA | 1.0 | 2017 | No | Erosion of natural deposits |
| Gross Alpha (pCi/L) | 0 | 15 | 1.1 | NA | NA | 2016 | No | Erosion of natural deposits |

| Contaminants | MCLG or MRDLG | MCL, TT, or MRDL | Level Detected | Range | | Sample Date | Violation | Typical Source |
|--------------------------------------|---------------|------------------|----------------|-------|------|-------------|-----------|---|
| | | | | Low | High | | | |
| Inorganic Contaminants | | | | | | | | |
| Fluoride (ppm) | 4 | 4 | 1.24 | 0.73 | 1.24 | 2017 | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate [measured as Nitrogen] (ppm) | 10 | 10 | 7.20 | 0.10 | 7.20 | 2017 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Sodium (optional) (ppm) | NA | NA | 20 | 10.0 | 20.0 | 2017 | No | Erosion of natural deposits; Leaching |

| 2017 TTHM Results (ppb) | April 2016 | July 2016 | October 2016 | January 2017 | April 2017 | July 2017 | October 2017 |
|-------------------------------------|------------|-----------|--------------|--------------|-------------|-------------|--------------|
| DS201 (Arrowhead) Quarterly Results | 25.5 | 81.4 | 88.8 | 38.9 | 28.9 | 57.6 | 88.8 |
| DS201—LRAA | - | - | - | 58.7 | 59.5 | 53.6 | 53.6 |
| DS202 (Countryside) Quality Results | 36.6 | 98.2 | 92.0 | 50.8 | 37.5 | 84.7 | 29.5 |
| DS202—LRAA | - | - | - | 69.4 | 69.6 | 66.3 | 50.6 |
| DS203 (Creekside) Quality Results | 35.9 | 63.5 | 101.0 | 54.6 | 25.1 | 57.7 | 29.7 |
| DS203—LRAA | - | - | - | 63.8 | 61.1 | 59.6 | 41.8 |
| DS204 (Courter) Quality Results | 38.8 | 81.5 | 104.0 | 55.4 | 36.6 | 86.1 | 74.8 |

| | | | | | | | |
|-------------------------------------|---|------------------|---------------------|---------------------|-------------------|------------------|---------------------|
| DS204—LRAA | - | - | - | 69.9 | 69.4 | 70.5 | 63.2 |
| CCR Report Values | Highest Compliance Value = 70.5 ppb Range of Values = 25.1 to 88.8 ppb | | | | | | |
| | | | | | | | |
| 2017 HAA5 Results (ppb) | April 2016 | July 2016 | October 2016 | January 2017 | April 2017 | July 2017 | October 2017 |
| DS201 (Arrowhead) Quality Results | 10.1 | 21.8 | 31.1 | 10.7 | 12.2 | 17.7 | 31.1 |
| DS201—LRAA | - | - | - | 18.4 | 19.0 | 17.9 | 17.9 |
| DS202 (Countryside) Quality Results | 13.0 | 24.4 | 24.5 | 17.0 | 14.0 | 26.2 | 6.0 |
| DS202—LRAA | - | - | | 19.7 | 20.0 | 20.4 | 15.8 |
| DS203 (Creekside) Quality Results | 11.8 | 19.0 | 23.9 | 15.8 | 10.5 | 19.0 | 6.0 |
| DS203—LRAA | - | - | - | 17.6 | 17.3 | 17.3 | 12.8 |
| DS204 (Courter) Quality Results | 17.7 | 16.6 | 24.8 | 12.2 | 13.4 | 14.9 | 8.0 |
| DS204—LRAA | - | - | - | 17.8 | 16.8 | 16.3 | 12.1 |
| CCR Report Values | Highest Compliance Value = 20.4 ppb Range of Values = 6.0 to 26.2 ppb | | | | | | |

| Secondary Contaminants | Secondary Standard | 2017 level in Your Water | Violation |
|-------------------------------|---------------------------|---------------------------------|------------------|
| Chloride (ppm) | 250 | 25.3 | No |
| Sulfate (ppm) | 250 | 46.5 | No |
| Water Stability | Non-corrosive | Non-corrosive | No |
| Odor (TON) | 3 | 0 | No |
| pH | 7.0 – 10.5 | 9.3 | No |
| Total Dissolved Solids | 500 | 134-184 | No |
| Total Alkalinity (ppm) | N/A | 43 | No |
| Total Hardness (ppm) | N/A | 100 | No |
| Non-Carbonate Hardness | N/A | 56 | No |
| Magnesium (ppm) | N/A | 7 | No |

