

# 2018

## City of Sidney, Ohio Drinking Water Consumer Confidence Report



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# City of Sidney 2018 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.*

## **What's the source of your drinking 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 bedrock water supply wells located along the Great Miami River, as well as, from 2 gravel packed sand and gravel wells in our Washington Township well field. 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. Our ground water sources will be our primary source of drinking water with the surface water sources being our back-up. 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.

Protecting our drinking water source from contamination is the responsibility of all area residents. Please dispose of hazardous chemicals in the proper manner and report polluters to the appropriate authorities. Only by working together can we ensure an adequate safe supply of water for future generations. More detailed information is provided in the City of Sidney Drinking Water Source Assessment Report. For a copy of the complete report, please contact William Blakely at (937) 498-8152, or visit the direct link on the Ohio EPA website at <http://wwwapp.epa.ohio.gov/gis/swpa/OH7501214.pdf>.

## **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)

## About your drinking water

The EPA requires regular sampling to ensure drinking water safety. The City of Sidney Water Department conducts sampling 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. Samples were collected for a total of 61 different contaminants, most of which were not detected in the City of Sidney drinking water supply.

## 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 and other harmful contaminants; and disinfection with chlorine to kill any remaining bacteria and viruses throughout the distribution system.

## 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.

**ND:** Non-detect (below detectible limit)

## **In 2018 we had an unconditioned license to operate our water system.**

Listed below is information on those contaminants that were found in the City of Sidney drinking water.

| Contaminants (Units)  | MCLG   | MCL                            | Level Found                       | Range of Detections            | Violation    | Year Sampled                            | Typical source of contaminants   |
|---|--|--------------------------------|-----------------------------------|--------------------------------|--------------|---|--|
| <b>Microbiological Contaminants</b>   |  |                                |                                   |                                |              |   |  |
| Turbidity (NTU)   | NA   | TT                             | 0.29                              | 0.04 – 0.26                    | NO           | 2018                                    | Soil runoff  |
| Turbidity (% meeting Standard)  | NA   | TT                             | 100%                              | 100% - 100%                    | NO           | 2018                                    |  |
| <p><i>Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 5 NTU at any time. As reported above, the City of Sidney's highest recorded turbidity result for 2017 was 0.29 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.</i></p> |  |                                |                                   |                                |              |   |  |
| <b>Volatile Organic Contaminants (VOCs) and Disinfection Byproducts</b>   |  |                                |                                   |                                |              |   |  |
| TTHM<br>Total Trihalomethane (ppb)  | NA   | 80                             | 11.8                              | 8.0 – 14.6                     | NO           | 2018                                    | By-product of drinking water chlorination.   |
| <b>Inorganic Contaminants</b>   |  |                                |                                   |                                |              |   |  |
| Fluoride (ppm)  | 4  | 4                              | 0.91                              | 0.81 – 1.29<br>Monthly Average | NO           | 2018                                    | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate (ppm)   | 10   | 10                             | 1.43                              | 0.36 – 1.43                    | NO           | 2018                                    | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.                               |
| <b>Radioactive Contaminants</b>   |  |                                |                                   |                                |              |   |  |
| Radium (combined 226/228)<br>(pCi/L)  | 0  | 5                              | 1.0                               | 1.0<br>Single Sample           | NO           | 2017                                    | Erosion of natural deposits  |
| Gross Alpha (pCi/L)   | 0  | 15                             | 1.1                               | 1.1<br>Single Sample           | NO           | 2016                                    | Erosion of natural deposits  |
| <b>Lead and Copper</b>  |  |                                |                                   |                                |              |   |  |
| Contaminants (Units)  | Action Level (AL)  | Individual Results over the AL | 90% of test levels were less than | Violation                      | Year Sampled | Typical Source of Contaminants          |  |
| Lead (ppb)  | 15   | NA                             | < 5.0                             | NO                             | 2017         | Corrosion of household plumbing systems |  |
|   | 0 out of 30 samples were found to have lead in excess of the lead AL of 15 ppb.    |                                |                                   |                                |              |   |  |
| Copper (ppb)  | 1.3  | NA                             | < 0.05                            | NO                             | 2017         | Corrosion of household plumbing systems |  |
|   | 0 out of 30 samples were found to have lead in excess of the copper AL of 1.3 ppb. |                                |                                   |                                |              |   |  |
| Contaminants (Units)  | MCLG   | MCL                            | Level Found                       | Range of Detections            | Violation    | Year Sampled                            | Typical source of contaminants   |
| <b>Residual Disinfectants</b>   |  |                                |                                   |                                |              |   |  |
| Total Chlorine (ppm)  | MRDLG<br>4   | MRDL<br>4                      | 1.72                              | 0.7 – 2.5                      | NO           | 2018                                    | Water additive used to control microbes.   |

| <b>Disinfectant Byproducts</b>  |   |                    |                                |                     |                     |                                       |                     |
|---|---|--------------------|--------------------------------|---------------------|---------------------|---------------------------------------|---------------------|
| <b>2018 TTHM Results (ppb)</b>  | <b>April 2017</b>   | <b>July 2017</b>   | <b>October 2017</b>            | <b>January 2018</b> | <b>April 2018</b>   | <b>July 2018</b>                      | <b>October 2018</b> |
| DS201 (Arrowhead) Quarterly Results   | 28.9  | 57.6               | 32.8                           | 11.9                | 15.2                | 27.1                                  | 35.7                |
| <b>DS201—LRAA</b>   | -   | -                  | -                              | <b>32.8</b>         | <b>29.4</b>         | <b>21.8</b>                           | <b>22.5</b>         |
| DS202 (Countryside) Quality Results   | 37.5  | 84.7               | 29.5                           | 20.1                | 18.7                | 28.4                                  | 39.2                |
| <b>DS202—LRAA</b>   | -   | -                  | -                              | <b>43.0</b>         | <b>38.3</b>         | <b>24.2</b>                           | <b>26.6</b>         |
| DS203 (Creekside) Quality Results   | 25.1  | 57.7               | 29.7                           | 76.5                | 70.5                | 57.5                                  | 29.3                |
| <b>DS203—LRAA</b>   | -   | -                  | -                              | <b>47.3</b>         | <b>58.6</b>         | <b>58.6</b>                           | <b>58.5</b>         |
| DS204 (Courter) Quality Results   | 36.6  | 86.1               | 74.8                           | 54.1                | 56.8                | 69.8                                  | 77.9                |
| <b>DS204—LRAA</b>   | -   | -                  | -                              | <b>62.9</b>         | <b>68.0</b>         | <b>63.9</b>                           | <b>64.7</b>         |
| <b>CCR Report Values</b>  | Highest Compliance Value = <b>68.0 ppb</b><br>Range of Values = <b>11.9 to 86.1 ppb</b> |                    |                                |                     |                     |                                       |                     |
|   |   |                    |                                |                     |                     |                                       |                     |
| <b>2018 HAA5 Results (ppb)</b>  | <b>April 2017</b>   | <b>July 2017</b>   | <b>October 2017</b>            | <b>January 2018</b> | <b>April 2018</b>   | <b>July 2018</b>                      | <b>October 2018</b> |
| DS201 (Arrowhead) Quality Results   | 12.2  | 17.7               | 0.0                            | 0.0                 | 0.0                 | 0.0                                   | 7.7                 |
| <b>DS201—LRAA</b>   | -   | -                  | -                              | <b>7.5</b>          | <b>4.4</b>          | <b>0.0</b>                            | <b>1.9</b>          |
| DS202 (Countryside) Quality Results   | 14.0  | 26.2               | 0.0                            | 0.0                 | 0.0                 | 0.0                                   | 6.1                 |
| <b>DS202—LRAA</b>   | -   | -                  | -                              | <b>10.1</b>         | <b>6.6</b>          | <b>0.0</b>                            | <b>1.5</b>          |
| DS203 (Creekside) Quality Results   | 10.5  | 19.0               | 0.0                            | 6.0                 | 0.0                 | 0.0                                   | 0.0                 |
| <b>DS203—LRAA</b>   | -   | -                  | -                              | <b>8.9</b>          | <b>6.3</b>          | <b>1.5</b>                            | <b>1.5</b>          |
| DS204 (Courter) Quality Results   | 13.4  | 14.9               | 8.0                            | 0.0                 | 9.5                 | 0.0                                   | 9.1                 |
| <b>DS204—LRAA</b>   | -   | -                  | -                              | <b>9.1</b>          | <b>8.1</b>          | <b>4.4</b>                            | <b>4.7</b>          |
| <b>CCR Report Values</b>  | Highest Compliance Value = <b>10.1 ppb</b><br>Range of Values = <b>0.0 to 26.2 ppb</b>  |                    |                                |                     |                     |                                       |                     |
|   |   |                    |                                |                     |                     |                                       |                     |
| <b>Total Organic Carbon (TOC)</b>   |   |                    |                                |                     |                     |                                       |                     |
| <b>MCL</b>  | <b>Minimum Ratio of % removal to required % removal</b>                                 | <b>Level Found</b> | <b>Range of Monthly Ratios</b> | <b>Violation</b>    | <b>Year Sampled</b> | <b>Typical Source of Contaminants</b> |                     |
| <b>TT</b>   | <b>1</b>  | <b>1.44*</b>       | <b>1.00 – 4.86</b>             | <b>NO</b>           | <b>2018</b>         | Naturally present in the environment. |                     |
| *The value reported under “Level Found” for Total Organic Carbon (TOC) is the lowest ratio between percent of TOC actually removed to the percentage of TOC required to be removed. A value or greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates violation of the TOC removal requirements. |   |                    |                                |                     |                     |                                       |                     |

| Unregulated Contaminants<br>(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        |
| Unregulated Contaminant Monitoring Rule 4 - Harmful Algal Bloom (UCMR4-HAB)<br>(2018) |                | Maximum Residual<br>Limit (MRL) | Range Found |
| Cylindrospermopsin (ug/L)   | ND             | 0.090                           | ND          |
| Anatoxin-a (ug/L)   | ND             | 0.030                           | ND          |

| Secondary Contaminants | Secondary Standard | Average 2018 level in Your Water | Violation |
|------------------------|--------------------|----------------------------------|-----------|
| Chloride (ppm)         | 250                | 26.5                             | No        |
| Sulfate (ppm)          | 250                | 49.6                             | No        |
| Water Stability        | Non-corrosive      | Non-corrosive                    | No        |
| Odor (TON)             | 3                  | 0                                | No        |
| pH                     | 7.0 – 10.5         | 9.5                              | No        |
| Total Dissolved Solids | 500                | 145                              | No        |
| Total Alkalinity (ppm) | N/A                | 66                               | No        |
| Total Hardness (ppm)   | N/A                | 110                              | No        |
| Non-Carbonate Hardness | N/A                | 44                               | No        |
| Magnesium (ppm)        | N/A                | 13                               | No        |
| Sodium (ppm)           | N/A                | 10.3                             | No        |
| Phosphate as Total P   | N/A                | 0.54                             | No        |

The tables list 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 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, 23 Volatile Organic Contaminants, Cyanobacteria, and HABs. 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.

### 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 deficiencies are 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.

### **Cyanobacteria Information**

The City of Sidney Water Treatment Plant monitored for Cyanobacteria in the surface water source during 2018. Cyanobacteria was detected in 16 samples out of 26 collected from our surface water source. It was not detected in the finished water. Cyanobacteria is a photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations, can pose a risk to public health.

### **Microcystins Information**

The City of Sidney Water Treatment Plant monitored for microcystins in both its raw water and finished drinking water in 2018. Microcystins were not detected in all 52 samples of raw water and 52 samples of finished drinking water through the weekly samples for the year. All results were below the detectible limit of 0.30 ppb. Microcystins are liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin. The MCL for public health for microcystins has been established as 0.3 ppb for children under 6 and sensitive populations, and 1.6 ppb for children 6 and older and adults.

### **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 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 Bill Blakely, Utilities Director, at (937) 498-8152. This report can also be found on our website at [www.sidneyoh.com](http://www.sidneyoh.com)