

COTTRELLVILLE TOWNSHIP WATER DEPARTMENT

2017 ANNUAL DRINKING WATER QUALITY REPORT

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Cottrellville Township purchases its water from three different sources, Marine City, Clay Township and Ira Township. Our water source is Lake St. Clair, and the St. Clair River. We are pleased to report that our drinking water is safe and meets Federal and State requirements.

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:

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 results from urban storm water runoff, industrial or domestic discharges, oil and gas production, mining, or farming.

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.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm water run-off, and residential uses.

Radioactive, 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 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 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Thank you for allowing us to continue providing your family with clean, quality water this year. We will make every effort to provide a safe, dependable water supply to our customers. If you have any questions about this report or your water supply, please call the Cottrellville Township Hall at 8410-765-4730

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter – one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just barely noticeable to the average person.

Action Level – the concentration of a contaminant, which if exceeded, triggers treatment or other requirements a water system must follow.

Maximum Contaminant Level – The “Maximum Allowed” (MCL) is 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.

Maximum Contaminant Level Goal – The “Goal” (MCLG) is 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 Residual Disinfectant Level – or MRDL, means 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.

Maximum Residual Disinfectant Level Goal- or MRDLG, means 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.

Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

Note: Some tests are not performed every year. "The State allows us to monitor for certain contaminants less than once a year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old" Results from the most recent test dating back no further than 5 years are reported in the tables below.

Cottrellville Township Water Treatment Plant 2017 Regulated Detected Contaminants Tables

| Contaminant | Test Date | Units | Health Goal MCLG | Allowed Level MCL | Level Detected | Range of Detection | Violation yes/no | Major Sources in Drinking Water |
|--|--------------|-------|------------------|-------------------|----------------|--------------------|------------------|---|
| Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap | | | | | | | | |
| Fluoride | Jan-Dec 2017 | ppm | 4 | 4 | .71 | <.10 - .72 | No | Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System | | | | | | | | |
| Total Trihalomethanes (TTHM) | 8/11/ 2017 | ppb | n/a | 80 | 69 | 69 | No | By-product of drinking water chlorination |
| Haloacetic Acids (HAA5) | 8/11/ 2017 | ppb | n/a | 60 | 26 | 26 | No | By-product of drinking water disinfection |
| Disinfectant (Total Chlorine residual) | Jan-Dec 2017 | ppm | MRDGL 4 | MRDL 4 | 1.03 | .20-1.80 | No | Water additive used to control microbes |

| 2017 Turbidity – Monitored every 4 hours at Plant Finished Water Tap | | | |
|--|--|------------------|---------------------------------|
| Highest Single Measurement Cannot exceed 1 NTU | Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%) | Violation yes/no | Major Sources in Drinking Water |
| 0.15 NTU | 100% | No | Soil Runoff |
| Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. | | | |

| 2017 Microbiological Contaminants – Monthly Monitoring in Distribution System | | | | | |
|--|------|---|-------------------------|------------------|---------------------------------------|
| Contaminant | MCLG | MCL | Highest Number Detected | Violation yes/no | Major Sources in Drinking Water |
| Total Coliform Bacteria | 0 | Presence of Coliform bacteria > 5% of monthly samples | 0 in one month | No | Naturally present in the environment. |
| <i>E. coli</i> or fecal coliform bacteria | 0 | A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E. coli</i> positive. | 0 in entire year | No | Human waste and animal fecal waste. |

| 2017 Lead and Copper Monitoring at Customers' Tap | | | | | | | | |
|--|-----------|-------|------------------|-----------------|------------------------------------|---------------------------|------------------|--|
| Contaminant | Test Date | Units | Health Goal MCLG | Action Level AL | 90 th Percentile Value* | Number of Samples Over AL | Violation yes/no | Major Sources in Drinking Water |
| Lead | 2017 | ppb | 0 | 15 | 1.6 | 0 | No | Corrosion of household plumbing system; Erosion of natural deposits. |
| Copper | 2017 | ppb | 1300 | 1300 | 0.0 | 0 | No | Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives. |

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met. Infants and children who drink water containing lead in excess of the AL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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. Cottrellville Township 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 1-800-426-4791 or at <http://water.epa.gov/drink/info/lead>

| Regulated Contaminant | Treatment Technique | Running annual average | Monthly Ratio Range | Violation Yes/No | Typical Source of Contaminant |
|----------------------------|--|------------------------|---------------------|------------------|-------------------------------|
| Total Organic Carbon (ppm) | The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no requirement for TOC removal. | | | | Erosion of natural deposits |

2017 Special Monitoring

| Contaminant | MCLG | MCL | Level Detected | Source of Contamination |
|--------------|------|-----|----------------|-----------------------------|
| Sodium (ppm) | n/a | n/a | 8.1 | Erosion of natural deposits |

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.