

# 2016 City of Geneva *Water Works* Water Quality Report PWSID# OH401712

## About Your Drinking Water

The City of Geneva is pleased to provide you with the 2016 Consumer Confidence Report for the City of Geneva Water Works System (public water supply ID# OH0401712) which contains important information about your drinking water. The report summarizes the quality of water provided in 2016 - including details about water sources, what the water at your tap contains, and how it compares to standards set by regulatory agencies. We are pleased to report that the water system was in compliance with all water quality regulations in 2016. Although the report lists only those regulated substances that were detected in your water, testing is conducted for more than what is reported. This report is only a summary of activities during 2016. If you have any questions about the information in this report, please call 440-466-4549. We have a current, unconditioned license to operate our water system.

### Sources of Supply

Bulk water is purchased from Aqua Ohio - Ashtabula Water System, which draws surface water from Lake Erie, to serve customers of the Geneva Water System. For the purposes of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel times from source to intake. Although Aqua Ohio's surface water intake is located offshore in Lake Erie, the proximity of several onshore sources increases the susceptibility of the source water to contamination. The drinking water protection area is susceptible to contamination from municipal wastewater treatment discharges, industrial wastewater discharges, runoff from residential and urban areas, contaminate driver sediments, oil and gas production and transportation and accidental releases and spills from rail and vehicular traffic as well as from commercial shipping operations and recreational boating. Aqua treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie. More detailed information is provided in the Aqua Ohio Water Company - Ashtabula Water System's Drinking Water Source Assessment report, which can be obtained by calling 440-466-4549.

**The sources of drinking water (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 waste-water 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 byproducts 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 that 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 1-800-426-4791. **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 microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.**

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

**Beta/Photon Emitters:** EPA considers a level of concern for beta/photon emitters to be equivalent to 50 pCi/L. The actual MCL for beta/photon Beta/Photon Emitters: EPA considers a level of concern for beta/photon emitters to be equivalent to 50 pCi/

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG'sL. The actual MCL for beta/photon as feasible using the best available treatment technology. Some levels are based on a running annual average.

**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 Residual Disinfectant Level (MRDL):** 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 (MRDLG):** 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.

**NA:** Not applicable, **ND:** Not detected ,

**NTU:** Nephelometric turbidity unit (cloudiness of water),

**pCi/L:** picocuries/Liter - a unit of concentration for radioactive contaminants.,

**ppb:** A unit of concentration equal to one part per billion.,

**ppm:** A unit of concentration equal to one part per million.,

**PWSID:** Public water supply identification number.,

**Total Organic Carbon:** The level reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value greater than one indicates that the water system is in compliance with the TOC removal requirements. A value of less than one indicates a Treatment Technique violation of the TOC removal requirements.

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

**Turbidity:** Monitored as a measure of treatment efficiency for removal of particles.

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The following table lists contaminants that were detected during 2016 (unless otherwise noted) in your water system. The table provides the level found and the range of detections of regulated contaminants.

Contaminants	Level Found	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Total Chlorine, ppm	1.3	1.1-1.5	MRDL=4	MRDLG=4	2016	N	Water additive used to control microbes
Turbidity, NTU	0.08	0.04-0.21	TT	NA	2016	N	Soil runoff
Turbidity, % meeting plant performance level	100	100-100	TT	NA	2016	N	Soil runoff
Total Organic carbon, removal ratio	.76	0.21-.091	TT	NA	2016	N	Naturally present in the environment
Barium, ppm	0.019	NA	3	2	2016	N	Erosion of natural deposits
Fluoride, ppm	1.04	0.75-1.12	4	4	2016	N	Erosion of natural deposits; water additives to promote strong teeth
Nitrate, ppm	0.70	0.50-0.70	10	10	2016	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Halo acetic acids, ppb	32.	17.9-43.4	60	0	2016	N	Byproduct of drinking water chlorination
TTHM	55.	21.1-68.0	80	0	2016	N	Byproduct of drinking water chlorination

Under the Stage 2 Disinfectants/Disinfection Byproducts Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2013. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acid (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both THMs and HAAs.

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 EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the highest recorded turbidity result for 2016 was 0.21 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

Lead and Copper Results	90th Percentile	Total Number of Samples	Samples Exceeding Action Level	Action Level	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Copper, ppm	0.307	21	0	AL=1.3	1.3	2016	N	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead, ppb	0	21	1	AL=15	0	2016	N	Corrosion of household plumbing systems; Erosion of natural deposits

1 out of 21 samples were found to have lead levels in excess of the lead action level of 15 ppb.

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. Geneva Water Works 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>.

#### Unregulated Contaminants (Plant Taps)

Chlorate (ppb)	193	ND-450
Chromium (total) (ppb)	0.07	ND-0.29
Chromium—6 (ppb)	0.083	0.05-0.11
Molybdenum (ppb)	1.2	1.1-1.4
Strontium (ppb)	150	140-160
Vanadium (ppb)	0.15	ND-0.24

#### Unregulated Contaminants (Distribution System)

Chlorate (ppb)	176	ND-340
Chromium (total) (ppb)	0.20	ND-0.37
Chromium—6 (ppb)	0.17	0.15-0.18
Molybdenum (ppb)	1.25	1.10-1.30
Strontium (ppb)	165	160-170
Vanadium (ppb)	0.32	0.20-0.42

Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

**Our water systems are designed and operated to deliver water to our customers' plumbing systems that complies with state and federal drinking water standards. This water is disinfected using chlorine, but it is not necessarily sterile. Customers' plumbing, including treatment devices, might remove, introduce or increase contaminants in tap water. All customers, and in particular operators of facilities like hotels and institutions serving susceptible populations (like hospitals and nursing homes), should properly operate and maintain the plumbing systems in these facilities. You can obtain additional information from the EPA's Safe Drinking Water Hotline at 1-800-426-4791.**