Village of Silver Lake 2020 Water Quality

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villageofsilverlake.com

The Village is pleased to provide the 2020 Water Quality Report. The Village has a current unconditioned license to operate our water system. This report is mandated by the Ohio EPA and is required to be updated and distributed on an annual basis to all residents and water customers of the Village of Silver Lake.

We encourage public interest and participation in our community's decisions affecting drinking water. Village Council meetings are held at Village Hall on the first and third Mondays of every month beginning at 7:00 p.m.

Please feel free to call Mark Lipan, Service Director, at 330-923-5233 (8:00 a.m. to 3:00 p.m., Monday thru Friday) if you have any questions about this report or our operations.

The Village purchases its water from the City of Cuyahoga Falls. The Cuyahoga Falls water plant is located at 2028 Munroe Falls Avenue. The ground water source is derived from 18 wells located in the Water Works Park on the south bank of the Cuyahoga River. This area is part of a buried valley where permeable outwash gravels are crossed by major streams.

The Cuyahoga River contributes flow to the aquifer and the well fields are recharged by a series of man-made channels and lagoons.

EPA Assessment

On April 9, 2002, an inventory of potential contaminant sources located within the drinking water source was conducted by the Ohio EPA. This assessment indicates that the City of Cuyahoga Falls' source of drinking water has a high susceptibility to contamination because:

- The sand and gravel aquifer has a depth to water ranging from 4 to 32 ft. below ground surface;
- There is no low-permeability protective layer between the aquifer and the ground surface; and
- Potential significant contaminant sources exist within the protection area.

Please contact Mark Lipan, Silver Lake PWS at 330-923-5233 to see a copy of the source water protection report, or see the complete EPA assessment at:
http://wwwapp.epa.ohio.gov/gis/swpa/OH7701012.pdf

Treatment

Water is pumped from the well fields to the City of Cuyahoga Falls Water Plant using a series of processes to reduce naturally occurring constituents found in the ground water source. All of the water is discharged through iron removal filters, where chlorine is added to remove iron and manganese that cause clothes and plumbing fixtures to stain.

Depending on the raw water hardness, approximately two-thirds of the iron filter effluent is softened using exchange softeners.

This softened water effluent and the iron filter effluent that bypasses the softening units are blended in the mixing tank to produce a finished hardness of 160 to 180 ppm.

Chlorine, fluoride, orthophosphate, and caustic soda are added in the mixing chamber. Chlorine is added to disinfect the water. Chlorine protects the community by destroying or inactivating bacteria that may be introduced into the distribution system. Coliform bacteria are generally thought of as indicator bacteria. It's presence indicates that other potentially harmful bacteria may be present. Of the 48 samples the Village collected and analyzed in 2020, none showed the presence of coliform bacteria. The use of chlorine produces by-products called trihalomethanes, or TTHMS and haloacetic acids, HAA5s. The level of TTHMs and HAA5s produced in the Silver Lake water supply can be found on the next page.

Fluoride is added for the prevention of tooth decay. Caustic soda and orthophosphate is added for corrosion control and pH adjustment.

- *To view the water quality report of Cuyahoga Falls visit www.cityofcf.com/departments/water*

Auxiliary System

The Silver Lake Water System also has an emergency backup connection with the City of Stow Water System. During 2020, we used zero gallons of water from this connection. This report does not contain information on the water quality received from the City of Stow Water System, but a copy of their consumer confidence report can be obtained by contacting the City of Stow Water Department at 330-689-2700.

System Description and Employee Education

The Village of Silver Lake maintains its own water distribution system and all appurtenances including, 2 pumps, approximately 16 miles of water mains, 215 main valves, 1108 service connections, and 210 fire hydrants and valves. The Village of Silver Lake pumping station is located at 2888 Vincent Road. The standpipe for the Village is located at 3140 East Edgerton Road. Water purchased from Cuyahoga Falls is pumped from the pumping station to the standpipe which provides the water pressure to provide you with fresh water. The standpipe is 100 foot tall and 30 foot around and can store up to 500,000 gallons of water.

On average in 2020, the Silver Lake Pumping Station processed and pumped **179,972** gallons of water per day to area residents.

The Village employs seven full-time employees in the Service Department to oversee the operation of the water system.

The Ohio EPA requires the Village of Silver Lake to have at least one employee who is certified in water distribution. There are currently four Service Department employees who have obtained Class II certification with the Ohio EPA in water distribution.

The Village of Silver Lake's Water Department is committed to providing our customers with safe drinking water. Our water system meets all federal drinking water criteria as well as the strict requirements of the United States and Ohio EPA. Continuing education in the field of water distribution is a priority in the Village's Service Department to ensure the highest drinking water standards.

EPA DEFINITIONS

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

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

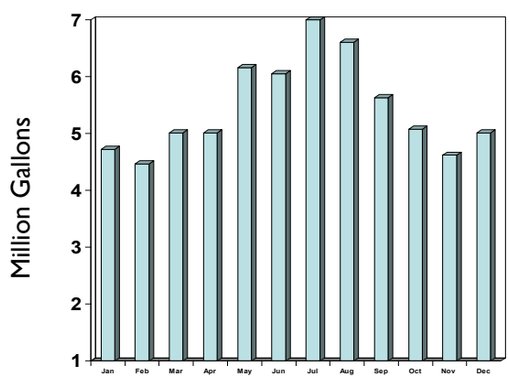
Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Variance or Exemption: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water.

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

2020 Average Monthly Pumpage



In 2020, the Village of Silver Lake did not exceed any of the federally mandated Maximum Contaminant levels or action levels, nor did the Village need any variances or exemptions.

What contaminants could be in my drinking water?

The sources of drinking water, both tap water and bottled, 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 water 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 by-products of industrial processed and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems; (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, the 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.

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* (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 for 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).

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 Village of Silver Lake 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. A list of laboratories certified in the State of Ohio to test for lead may be found at *http://www.epa.ohio.gov/ddagw* or by calling (614-644-2752). Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the *Safe Drinking Water Hotline* (1-800-426-4791) or at *www.epa.gov/safewater/lead*.

Protecting Your Home Against Cross-Connections

Without proper protection devices, something as useful as your garden hose has the potential to poison your home's water supply. In fact, over half of the nation's cross-connections involve unprotected garden hoses.

What is a "cross-connection?" A cross-connection is a permanent or temporary piping arrangement which can allow your drinking water to be contaminated if a backflow condition occurs.

What is "backflow"? It's just what it sounds like: the water is flowing in the opposite direction from its normal flow. With the direction of flow reversed, due to a change in pressures, backflow can allow contaminants to enter our drinking water system through cross-connections.

A potentially hazardous cross-connection occurs every time someone uses a garden hose sprayer to apply insecticides or herbicides to their lawn. Another cross-connection occurs when someone uses their garden hose to clear a stoppage in their sewer line.

Without a backflow prevention device between your hose and hose bib (spigot or outside faucet), the contents of the hose and anything it is connected to can backflow into the piping system and contaminate your drinking water.

Backflows due to cross-connections are serious plumbing problems. They can cause sickness and even death. However, they can be avoided by the use of proper protection devices. Each spigot at your home should have a hose-bib vacuum breaker installed. This is a simple, inexpensive device which can be purchased at any plumbing or hardware store. Installation is as easy as attaching your garden hose to a spigot. For more information on cross-connection control and backflow prevention for your home, please contact the Village of Silver Lake Service Department at (330) 923-5233.

History of Silver Lake Water

In 1920, the Village of Silver Lake constructed a concrete and brick pump house, approximately 700 feet north of Graham Road, on what is known as the Silver Lake Country Club property. During this same period, the majority of waterlines in the area of Silver Lake Estates were installed. The system operated without storage facilities until 1924. In 1924, the Village had a 50,000 gallon elevated storage tank installed. The storage tank was erected by the Chicago Bridge & Iron Company on property in the northeast section of Silver Lake.

The well supply on Silver Lake Country Club property became inadequate in 1927. At that time, the Village contracted to purchase water from the City of Cuyahoga Falls. A pumping station was constructed in 1928 at the Village corporate line, which is located at the corner of Vincent and Lee Roads, to boost water delivered by Cuyahoga Falls to the Village storage tank.

In July of 1956, Chester Engineers from Pittsburgh delivered to then Mayor Hilda Chisnell and Council a report on improvements to the water supply, distribution and storage facilities. Two plans were submitted by Chester Engineers. The first plan was the potential to develop the Village's own water supply from wells located throughout the Village as well as to increase the storage capacity. The second plan was to continue to purchase water from the City of Cuyahoga Falls, to construct a new pump house, and to build a standpipe with a water capacity of 500,000 gallons.

The Village opted for the second plan. On December 3, 1956, the Village entered into a contract to improve the Water Works system. The project estimate was $150,000 and was to be paid for from the sale of water revenue bonds as well as raising water rates by 42%. The project was completed in 1957.

Village of Silver Lake

100 Years

1918-2018

Detected Contaminants Table - Village of Silver Lake

Contaminant (Units)	MCL	MCLG	Level Found 90th%	Range of Detections	Violation	Sample Date	Typical Source of Contaminants
Lead (ppb)	AL = 15.0	0	1.1	ND-2.17	No	2020 (every 3 years)	Corrosion of household plumbing
0 out of 10 samples were found to have lead levels in excess of the lead action level of 15 ppb							
Copper (ppm)	AL = 1.3	1.3	0.486	.065-.750	No	2020 (every 3 years)	Corrosion of household plumbing
0 out of 10 samples were found to have copper levels in excess of the copper action level of 1.3 ppm							
Disinfection By-products	**MCL**	**MCLG**	**Level Found**	**Range of Detections**	**Violation**	**Sample Date**	**Typical Source of Contaminants**
TTHM (ppb) [Total Trihalomethane]	80	0	34.6	24.5 - 44.6	No	2020	By-product of chlorination
HAA5 (ppb) [Haloacetic Acids]	60	0	10.7	8.65 - 12.7	No	2020	By-product of chlorination
Residual Disinfectants	**MCL**	**MCLG**	**Level Found**	**Range of Detections**	**Violation**	**Sample Date**	**Typical Source of Contaminants**
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.1	0.9 - 1.2	No	2020	Water additive to control microbes

Detected Contaminants Table - City of Cuyahoga Falls

Contaminant (Units)	MCL	MCLG	Level Found	Range of Detections	Violation	Sample Date	Typical Source of Contaminants
Flouride (ppm)	4.0	4.0	1.0	0.8 - 1.1	No	2020	Water additive that promotes strong teeth

ppb - is parts per billion or 1 part in a billion
ppm - is parts per million or 1 part in a million
1 ppm is equivalent to 1 inch in 15.78 miles
1 ppb is equivalent to 1 inch in 15,782 miles

AL - is action level
ND - is non detected
TTHMs - are Trihalomethanes which are created by the disinfection process
HAA5s - are Haloacetic Acids which are created by the disinfection process