

2010 Water Quality Report

VILLAGE OF SILVER LAKE



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SILVER LAKE

Established 1918

The Village is pleased to provide the 2010 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.

The Village purchases its water from the City of Cuyahoga Falls. The Cuyahoga Falls water plant is located at 2028 Munroe Falls Avenue. The 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.

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 and through the system. It is then stored in the standpipe. The standpipe can store up to 500,000 gallons of water.

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.

For more information call Richard Fenwick, Service Director, at 330-923-5233 (8:00 a.m. to 3:30 p.m., Monday thru Friday).

Detected Contaminants Table for 2008

Village of Silver Lake

Contaminant	MCL	MCLG	2008 Levels	Range	Affects
Lead (ppb)	AL = 15	0	5 (90% level)	ND to 6	Corrosion
Copper (ppm)	AL = 1.3	1.3	.6 (90% level)	.16 to .83	Corrosion

ppb – is parts per billion, or 1 part in a billion

1 ppm is equivalent to 1 inch in

ppm – is parts per million, or 1 part in a million

15.78 miles

AL – is action level

ND – is non detected

Detected Contaminants Table for 2010

City of Cuyahoga Falls

Contaminant	MCL	MCLG	2010 Levels	Range	Affects
Fluoride (ppm)	4.0	4.0	1.0	0.8 to 1.1	Strong teeth

Detected Contaminants Table for 2010

Village of Silver Lake

TTHM (ppb)	80	0	37.2	24.3 to 58.6	By-product
HAA5	60	0	23.3	16.3 to 33.0	By-product

TTHMs – are Trihalmoethanes which are created by the disinfection process

HAA5s- are haloacetic acids which are created by the disinfection process

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

Your Water Quality

M C L Y H O D S M H T T M P B
C B A C T E R I A B J K P H C
N A D O S C I T S U A C I O O
K O X F O G N V E T V D N S H
S F R P M F K D D J I T S P I
C E P I W G I A I B A B D H O
M E D Q R R N E C M Q D Q A E
R F N I O G G L I A E B I T P
W C F U C L W N B A N T W E A
S E L R C I A K R P I N W I W
W F P M W N T W E X R L Z Z N
C R E K T D E S H Q O J U M G
O J Q S Q N R Q E N L Y P L I
E S E N A G N A M P H H T R V
S I L V E R L A K E C J X I S

BACTERIA
CONTAMINANTS
FLUORIDE
LEAD
MCLG
PHOSPHATE

CAUSTIC SODA
COPPER
HERBICIDES
MANGANESE
OHIO EPA
SILVER LAKE

CHLORINE
DRINKING WATER
IRON
MCL
PESTICIDES
TTHMS

HEALTH INFORMATION

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.

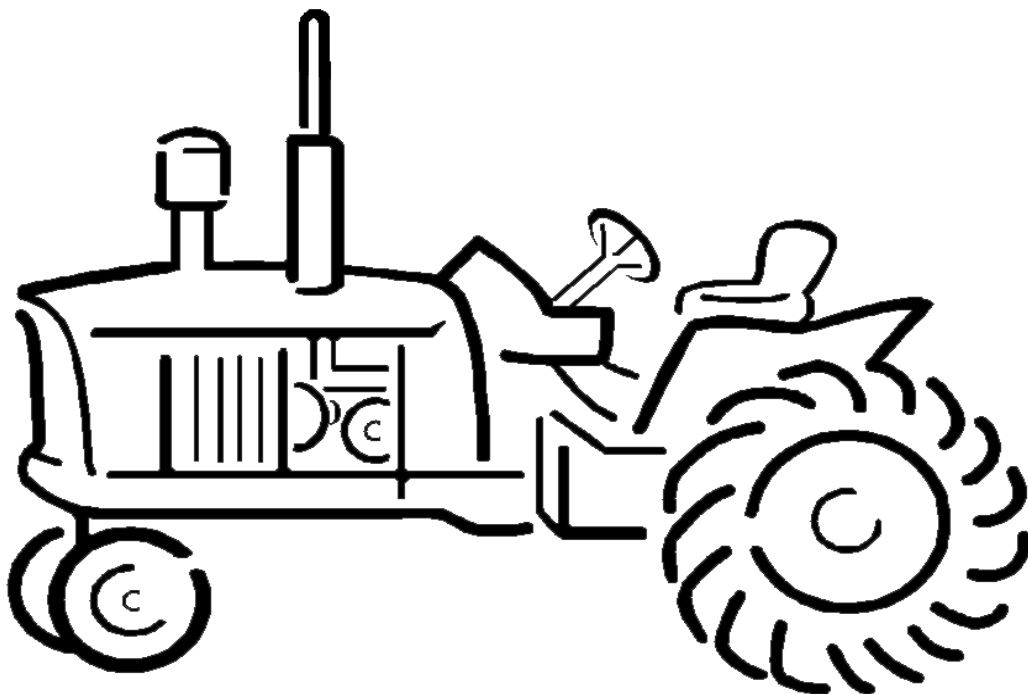
Contaminants that may be present in source water include: (A) **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) **Inorganic contaminants**, such as salts and metals, which can be naturally 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.

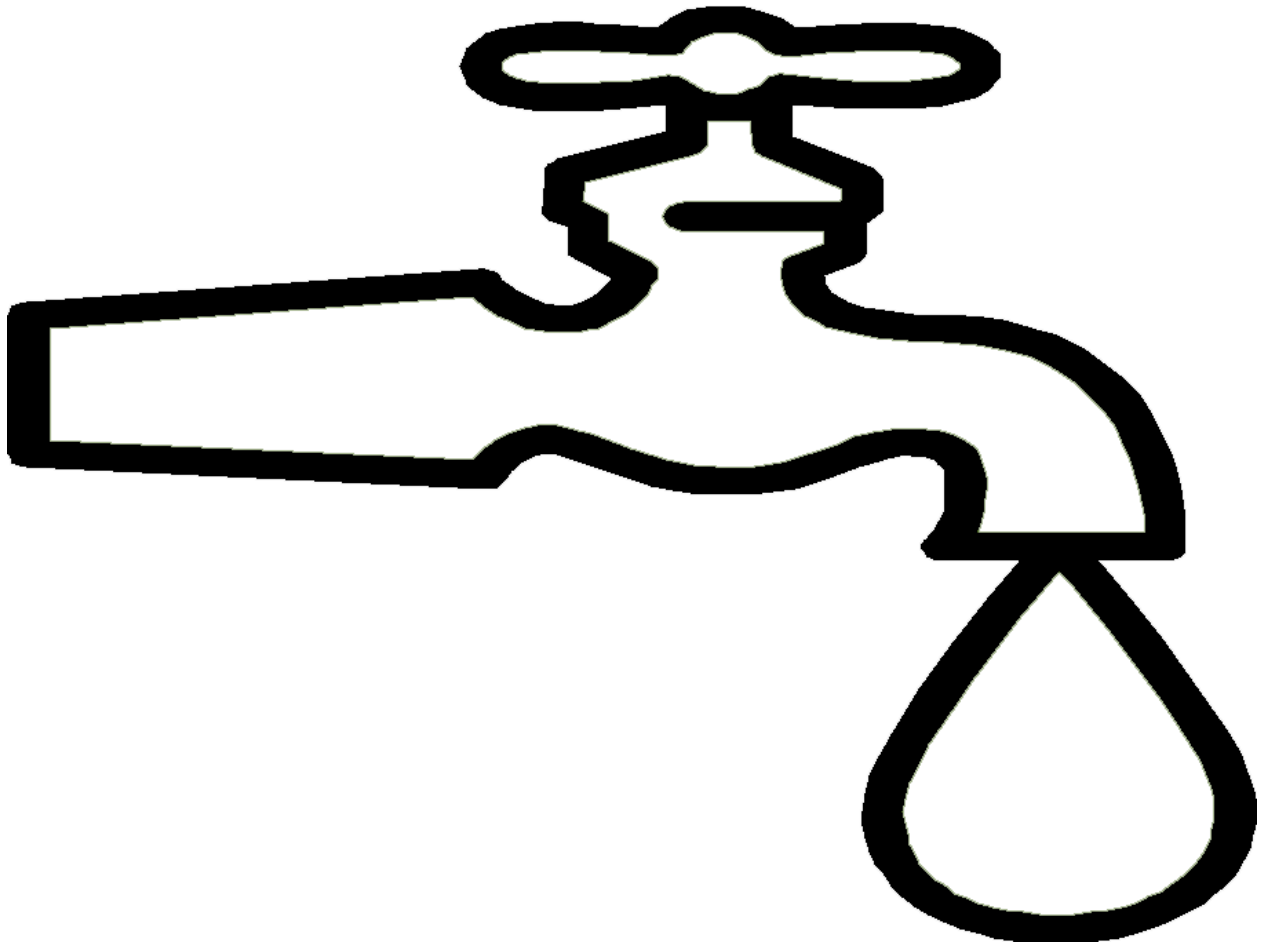
In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 *Safe Drinking Water Hotline* (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 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).





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 the water is discharged through iron removal filters. These filters remove iron and manganese that cause clothes to stain and plumbing fixtures to discolor. 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 120 to 185 ppm.

Chlorine, fluoride, phosphate, 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.

Of the 48 samples the Village collected and analyzed in 2010, none showed the presence of coliform bacteria. The use of chlorine produces by-products called trihalomethanes, or TTHMS.

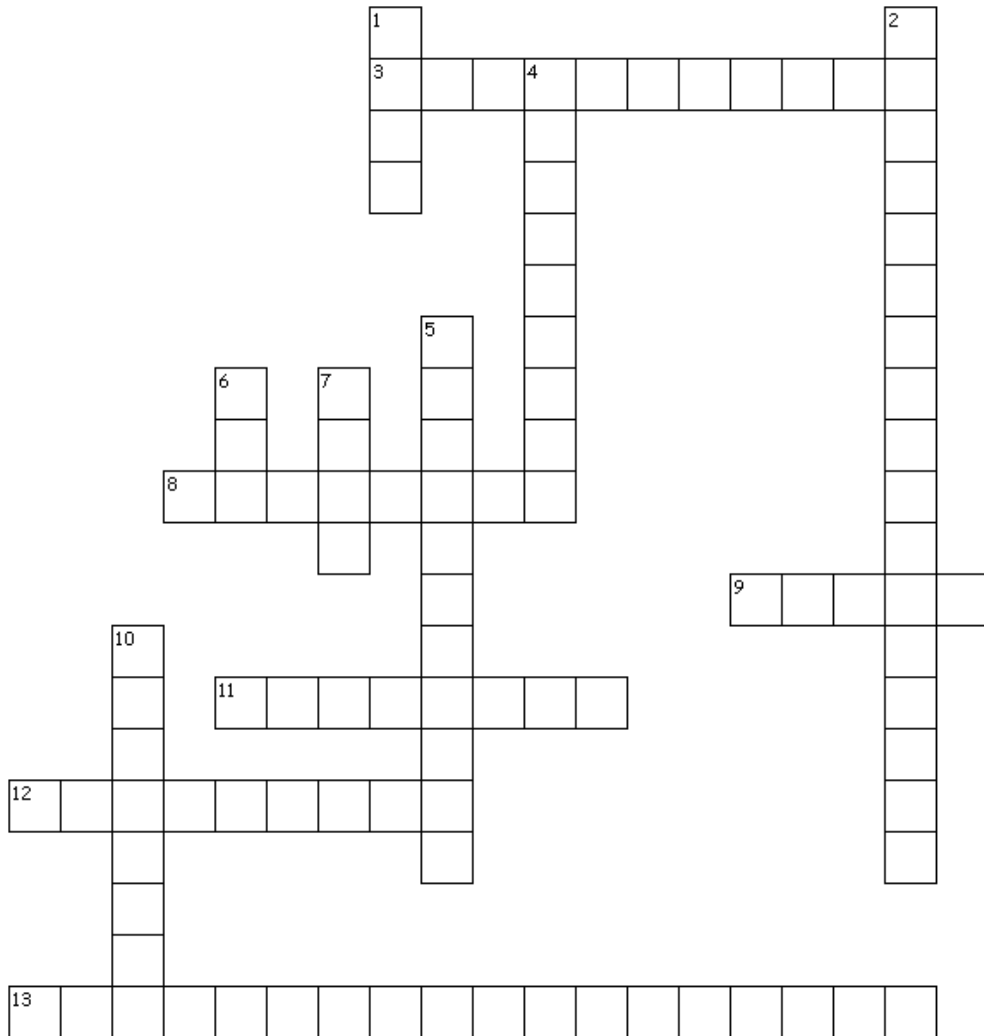
Fluoride is added for the prevention of tooth decay. Caustic soda is added for corrosion control and pH adjustment. Phosphate is added to reduce iron and manganese, which stain clothes and fixtures.

In 2010, 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.

The Village of Silver Lake is committed to providing continuing education to its employees to ensure the highest drinking water standards.

The Village of Silver Lake and the Ohio EPA are committed to providing you with information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

Water Quality Crossword

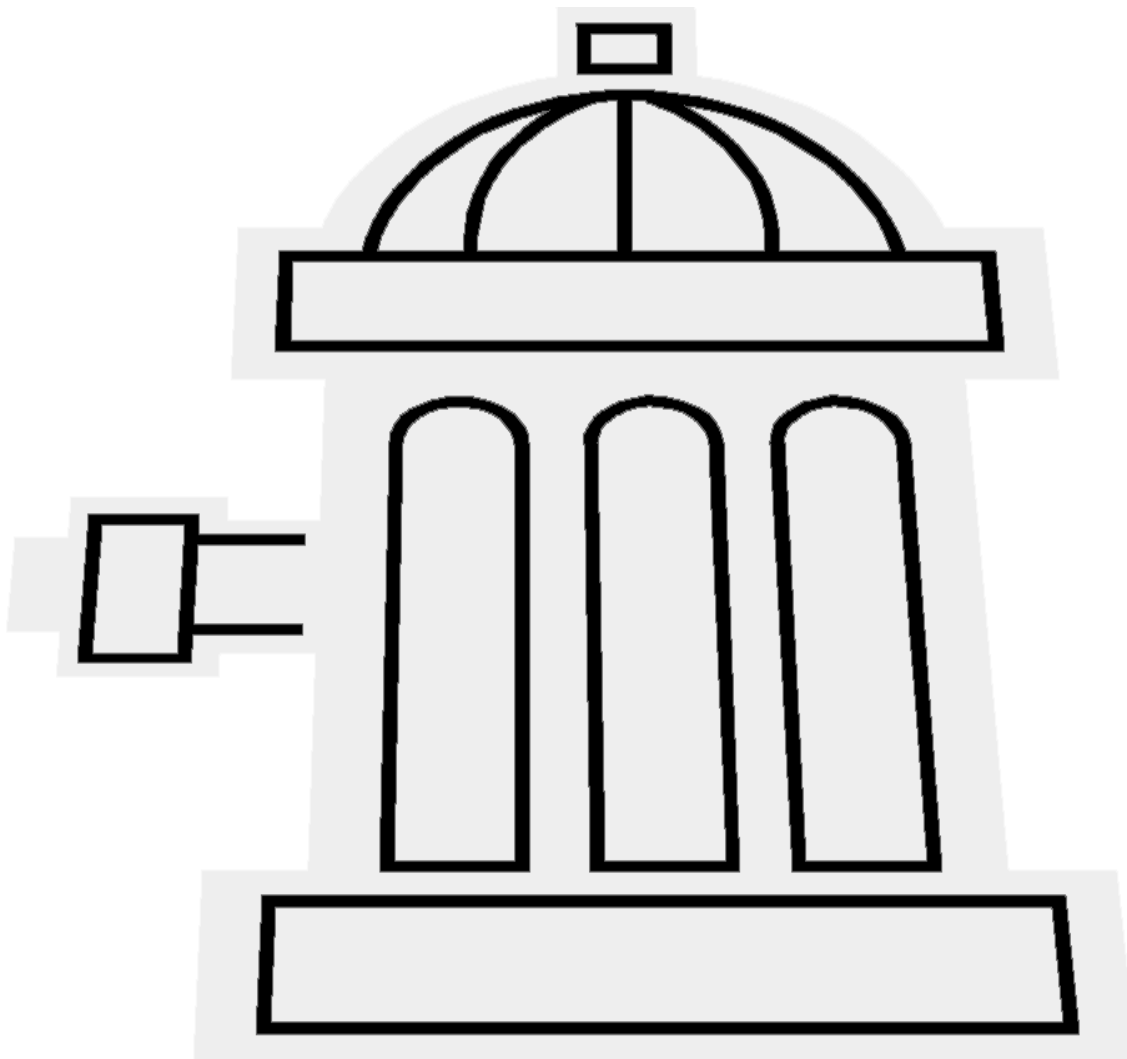


Across

- 3. Added to water for pH adjustment. (2 words)
- 8. Added to water for the prevention of tooth decay.
- 9. By-products produced from the use of chlorine.
- 11. Example of a microbial contaminant.
- 12. Added to water to reduce iron and manganese.
- 13. Required process intended to reduce the level of contaminant in drinking water. (2 words)

Down

- 1. Level of a contaminant in drinking water below which there is no known or expected risk to health.
- 2. State or EPA permission to meet an MCL or a treatment technique under certain conditions. (2 words)
- 4. Can store up to 500,000 gallons of water.
- 5. Concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. (2 words)
- 6. Highest level of contaminant that is allowed in drinking water.
- 7. Can cause staining in clothing.
- 10. Added to disinfect water.



QUALIFICATIONS

The Village maintains its own water distribution system including all appurtenances, pumps, water mains, and fire hydrants. 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 six Service Department employees who have obtained their 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 EPA. Continuing education in the field of water distribution is a priority in the Village's Service Department.

To view the water quality reports of other communities, visit www.dwwa.org.

Water Word Scramble

Unscramble the words to learn some interesting facts about your water quality.

1. The Village purchases its tarwe from the City of Cuyahoga Falls. _____
2. The npetsiadp can store up to 500,000 gallons of water. _____
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4. There are currently six Service Department employees certified in trewa butritsidoni.

5. Continuing nacudeito in the field of water distribution is a priority in the Service Department. _____
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_____ - _____
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10. Molcoirf bacteria are generally thought of as indicator bacteria. _____
11. Fluoride is added to water for the prevention of ohtot acedy. _____
12. Rivers, lakes, streams, ponds, reservoirs, springs, and lewls are sources of drinking water.

13. Mibalirco contaminants may come from sewage treatment plants. _____
14. Radioactive contaminants can be lutyralan occurring or be the result of oil and gas production and mining activities. _____
15. Ginkrind atewr, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. _____
16. The presence of tontnasinmac does not necessarily indicate that water poses a health risk.

17. When your water has been sitting for several hours, flushing your tap for 30 seconds to two minutes, before usage, can help minimize the potential for adle exposure. _____

HISTORY

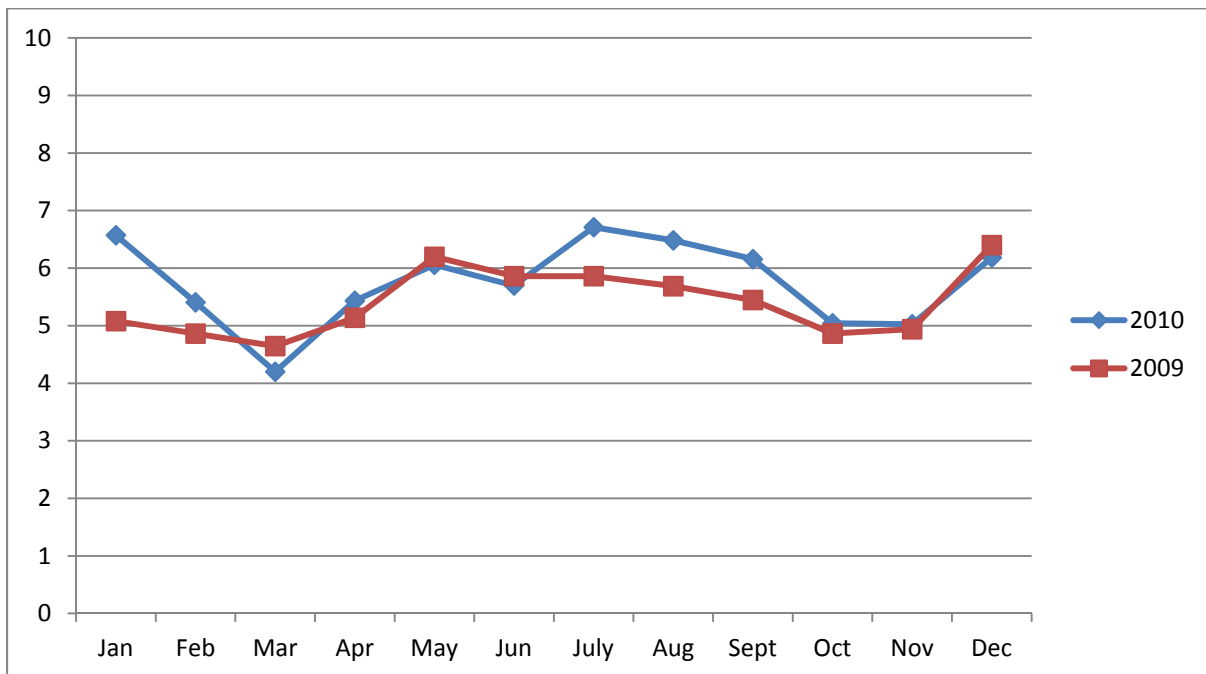
In 1920, the Village of Silver Lake constructed a concrete and brick pump house, approximately 700 feet north of Graham Road, on what is known as the Silver Lake Country Club property. During this same period, the majority of waterlines in the area of Silver Lake Estates were installed. The system operated 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.

2010 Average Monthly Pumpage



On average, the Silver Lake Pumping Station processed and pumped 188,960 gallons of water per day to area residents.

Answer Key

<p>Water Word Scramble</p> <ol style="list-style-type: none"> 1. water 2. standpipe 3. maintains 4. water distribution 5. education 6. iron 7. filters 8. two-thirds 9. caustic soda 10. coliform 11. tooth decay 12. wells 13. microbial 14. naturally 15. drinking water 16. contaminants 17. lead 	<p style="text-align: center;">Water Quality Crossword</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p>Across</p> <ol style="list-style-type: none"> 3. Caustic Soda 8. Fluoride 9. TTHMS 11. Bacteria 12. Phosphate 13. Treatment Technique </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p>Down</p> <ol style="list-style-type: none"> 1. MCLG 2. Variance Exemption 4. Standpipe 5. Action Level 6. MCL 7. Iron 10. Chlorine </td> </tr> </table>	<p>Across</p> <ol style="list-style-type: none"> 3. Caustic Soda 8. Fluoride 9. TTHMS 11. Bacteria 12. Phosphate 13. Treatment Technique 	<p>Down</p> <ol style="list-style-type: none"> 1. MCLG 2. Variance Exemption 4. Standpipe 5. Action Level 6. MCL 7. Iron 10. Chlorine 	<p style="text-align: center;">Your Water Quality</p>
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