Village of Athens

DPW

2016 Annual Water Quality Report

The Village of Athens Department of Public Works (DPW) presents its Drinking Water Quality Report! While the Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ) require water utilities to report the quality of your drinking water, the DPW considers it a priority to inform you, our customers, about the safety of the water you drink and the importance of protecting our water supply. The DPW is also pleased to announce that there were not any treatment or monitoring violations for operational year 2016. If you have any questions or desire more information about this report or any other subject to your water quality, please contact Dorman Snyder (superintendent), phone 269-729-4940.

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. 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Where does my drinking water come from?

Your water comes from two municipal groundwater wells. Each well is 129 feet deep and is in a lower aquifer that is situated in a formation called the Coldwater Shale Formation. These wells are located in the Southwest part of the village in front of the Little League Ball fields. The village owns the land around these wells and restricts any activity that could contaminate the well water supply. The raw well water supply undergoes aeration,and is treated with Potassium Permanganate and pressure sand filtration to remove Iron, Manganese, and Arsenic. Potassium Permanganate is an oxidizing agent and is used to oxidize the dissolved Iron, Manganese and Arsenic that are naturally present in our ground water. The filtered finish water is then treated with Liquid Chlorine and Phosphate. The purpose for chlorinating is to provide disinfecting of the water distribution system in order to eliminate bacteriological contamination. Phosphate treatment of the filtered water supply is for corrosion control by forming a thin scale along the service lines and water mains thus preventing lead and copper from leaching to the potable water. The DPW purchased a backup generator to power the wells and filter plant in case of any power failures. Also a natural gas powered engine is connected to Well No. 2 and is used for a backup in case of an electrical power failure that can't be repaired quickly.

What should I know about hydrant flushing?

Fire hydrant flushing is conducted to improve water quality and is conducted three times each year. It is not uncommon to experience rusty looking water immediately following flushing. This condition should clear up in a short time after flushing.

What improvements were made in 2015

The Village of Athens replaced the filter media in all five filters

Village of Athens Wellhead Protection

In 1998, the Village of Athens initiated a Wellhead Protection Program which was updated in 2015 and is to protect the village well water supply from potential contamination. The Village of Athens has defined the wellhead delineation recharge area based on a 10-year time travel of groundwater flow in reaching the village wells. The delineation recharge area extends East from the wells located on the Southwest end of town to 5 1/2-Mile Road. Because the delineation recharge area is outside the village, the township has also adopted an ordinance to help protect the village ground water. Ultimately with the administration of the wellhead protection area the threat to the village existing and future water supply will be minimized. Our next step is to educate people on how they can help protect our ground water. The Village of Athens has qualified for a 50% matching grant put together by the DEPARTMENT OF ENVORNMENTAL QUALITY (DEQ) for educational materials to be distributed and to be used for educating people on how to protect our ground water.
To date we have purchased brochures that were sent out in the fall of 2009. We have purchased several books "Plain Talk About Drinking Water". Look for them at the library and in the school's library.

Source Water Assessment

In January of 2015 our Source Water Assessment was completed. The state performed an assessment of our source water to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is moderately low. Significant sources of contamination include general agriculture practices within the ground water capture zone. We are making efforts to protect our sources by routine sampling and abiding by our Wellhead Protection Program. A hard copy is available upon request.

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 naturally occur or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, and mining or farming.
Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
Radioactive Contaminants, which can naturally occur or be the result of oil and gas production and mining activities.

In order to ensure that your tap water is safe to drink

The EPA provides regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration 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. 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 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 (1-800-426-4791).

Village of Athens water quality data

The table below lists all the drinking water contaminants that were detected. The detected concentration can be either below or above the state/federal safe drinking water standard, (also known as the Maximum Contamination Level). If the detected concentration is above the safe drinking water standard, a violation has occurred, and a "**YES**" in bold will be indicated in the violation column. EPA requires water suppliers to report the most recent sampling results within a five-year period from 2012 to 2016. The state requires The Village to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.

Terms & Abbreviations Used Below

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

Maximum residual disinfectant level: (MRDL): means the highest level of a disinfectant allowed in drinking water based on a (**RAA)** Running Annual Average.
Maximum residual disinfectant level goal: (MRDLG): means the level of a drinking water disinfectant below which there is no known, or expected risk to health.
Maximum Contamination Level: (MCL): The highest level of a contaminant that is allowed in drinking water. MCL are set as close to the MCLGs as feasible using the best available treatment technology.
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.
n/a: not applicable.
nd: not detectable at testing limit
ppm: parts per million or milligrams per liter.
ppb: parts per billion or micrograms per liter.
90th Percentile: 90% of the samples collected do not exceed this level.
Treatment Technique: (TT) A required process intended to reduce the level of a contaminant in drinking water.
RAA: running annual average.

Regulated Monitoring:

Contaminants	*Highest Level Allowed (MCL)*	*EPA Goal (MCLG)*	*Athens WATER*	*Range of Detection's*	*Sampling Date*	*Testing Violation*	*Likely Sources of Contaminant*
Volatile Organic Compounds							
Benzene (ppm)	0.005	0.005	n/d	n/d	4/13/16	No	Discharge from factories leaching from gas storage tanks
1,1,1-Trichloroethane (ppm)	0.2	0.2	n/d	n/d	4/13/16	No	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppm)	0.2	0.2	n/d	n/d	4/13/16	No	Discharge from industrial chemical factories

Special Monitoring:

Substance	MRDLG	MRDL	Athens Water	Range of Detection's	Sampling Date	Testing Violation	Likely sources Of contaminant
Sodium (ppm)	n/a	n/a	25	n/a	4/13/16	No	Erosion of Natural deposits
Chlorine (ppm)	4.0	4.0	.6 (RAA)	0.3 to .9		No	Water additive for disinfectant
Arsenic (ppm)	.010	.010	n/d	n/d	7/28/16	No	Erosion of natural deposits

Distribution Monitoring:

Lead / Copper	(AL)	EPA Goal (MCLG)	90th Percentile	No. of sites found above the (AL)	Sampling Date	Likely sources of Contaminant
Lead (ppb)	15	0	2	0 of 10	9/1/15	Corrosion of household plumbing
Copper (ppb)	1300	0	1300	1 of 10	9/1/15	Corrosion of household plumbing

Contaminants	Highest Level Allowed (MCL)	EPA Goal (MCLG)	Athens WATER	Range of Detection's	Sampling Date	Testing Violation	Likely Sources of Contaminant
total Trihalomethanes (ppm)	*0.080*	*0*	*0.0359*	*n/a*	*8/24/16*	*No*	*Byproduct of Chlorine used for disinfectant*
Total Haloacetic Acids (HAA5) (ppm)	*0.060*	*0*	*0.008*	*n/a*	*8/24/16*	*No*	*Byproduct of Chlorine used for disinfectant*

In addition to the above contaminants, there were more contaminants analyzed in the period from 2012 to 2016 and their concentrations either were not detected, or meet the state Safe Drinking Water Standards

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 Athens 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 (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

Our village board meets on the second Tuesday of each month at 7:00 PM in the village hall, at 129 E. Burr Oak Street. Please feel free to participate in these meetings.

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