2018 Water Quality Report for the Village of Holly

This report covers the drinking water quality for the Village of Holly for the 2018 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2018. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from four (4) wells located on the West side of town. Wells are approximately 210 feet deep and are embedded into sand stone (Marshall Formation). The State performed an assessment of our source water in 2003. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based on geologic sensitivity, well construction, and water chemistry and contamination sources. The susceptibility of our source is moderately high.

Several existing sources of contamination exist in the Holly Wellhead Protection area:
Leaking Underground Storage Tank (LUST) sites are located at Adelphian Academy, 820 Academy Road; Village of Holly, 201 Elm Street; Holly Area Schools, 800 Elm Street; Fresh Air Society, 4236 Grange Hall Road; Holly Volunteer Ambulance, 504 Maple Street; Mobil Oil, 15241 North Holly Road; Muffler Man of Holly, 503 North Saginaw; Wilkinson's Auto Repair, 402 North Saginaw; Mabel O. Barnes Trust, 1125 North Saginaw Street; Holly Gas Company Inc., 114 North Saginaw; Beacon & Bridge Market, 820 North Saginaw; and Larry Winklemann, 220 Elm Street.
Four Part 201 sites of environmental contamination include Delta Tube and Fabrication Corporation, 4149 Grange Hall Road; Carl Spencer, 422 North Saginaw Street; Larry Winklemann, 220 Elm Street; and E and S Trucking, 15391 Fish Lake Road.

Potential sources of contamination include Underground Storage Tank (UST) sites, Aboveground Storage Tank (AST) sites, and groundwater discharge permit sites. Abandoned wells provide a direct conduit for surface run-off and contaminants to easily reach the groundwater and may pose a potential problem. To ensure that these wells are not a potential threat, they should be searched and properly plugged.

We are making efforts to protect our sources by participating in the Wellhead Protection Program.

If you would like to know more about the SWAP report please contact Brian Klaassen at 248-634-2202, or via email at bklaassen@hollyvillage.org.

- **Contaminants and their presence in water:** 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 **EPA's Safe Drinking Water Hotline (800-426-4791)**.
- **Vulnerability of sub-populations:** Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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 (800-426-4791).
- **Sources of drinking water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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 result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
  - **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
  - **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
  - **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff, and septic systems.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2018 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2018. The State allows us 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. All of the data is representative of the water quality, but some are more than one year old.

Terms and abbreviations used below:

- 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 available treatment technology.
- Maximum Residual Disinfectant Level (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 (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.
- N/A: Not applicable ND: not detectable at testing limit ppb: parts per billion or micrograms per liter ppm: parts per million or milligrams per liter pCi/l: picocuries per liter (a measure of radioactivity).
- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL	MCLG	Your Water	Range	Sample Date	Violation Yes / No	Typical Source of Contaminant
*Arsenic (ppb)	10	0	6	5-6	Quarterly	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.13	NA	2010	No	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Selenium (ppb)	1	1	.001	NA	2010	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	.56	.1 - 4	2018	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
TTHM - Total Trihalomethanes (ppb)	.08	N/A	.0257	.0093 - .00643	2018	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	.06	N/A	N/D	N/D	2018	No	Byproduct of drinking water disinfection
Chlorine (ppm)	MRDL	MRDLG	0.42	0.21-1.02	Monthly	No	Water additive used to control microbes
	4	4					
Special Monitoring and Unregulated Contaminant **			**Your Water**	**Range**	**Sample Date**	**Typical Source of Contaminant**	
Sodium (ppm)			77	NA	2018	Erosion of natural deposits	

Contaminant Subject to AL	Action Level	MCLG	90% of Samples ≤ This Level	Sample Date	Number of Samples Above AL	Typical Source of Contaminant
***Lead (ppb)	15	0	5.0	2017	1	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppb)	1300	1300	140	2017	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Radioactive Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Beta emitters (pCi/L)	50 *	0	N/D	N/D	2014	NO	Decay of natural and man-made deposits
Alpha emitters (pCi/L)	15	0	7	0-7	2014	NO	Erosion of natural deposits
Combined radium (pCi/L)	5	0	1.52	N/D-1.52	2017	NO	Erosion of natural deposits

* EPA considers 50 pCi/l to be the level of concern for beta particles.

* While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

** 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.

*** **Information about lead:** 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 Holly 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.

Infants and children who drink water containing lead in excess of the action level 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.

We will update this report annually and will keep you informed of any problems that may occur throughout the year as they happen. On July 1, 2018 copies of this report will be available at the Village of Holly Municipal Offices located at 300 East St., Holly, MI, office hours Monday through Thursday, 7:30 am to 5:30 pm. The Department of Public Works Offices can also provide copies; their office is located at 201

Elm St. Holly Mi. 48442, office hours Monday through Thursday, 6:00 am to 4:30 pm. **This report will not be sent to you.**

We invite public participation in decisions that affect drinking water quality. Village of Holly Council meeting are the 2nd Tuesday of the month at the Council Chambers, at 920 Baird St. Holly MI.48442. For more information about your water, or the contents of this report, contact Brian Klaassen at 248-634-2202, or via email at bklaassen@HollyVillage.org. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.