The Village of Hesperia
2020 Annual Water
Quality Report
June 26, 2021

We are pleased to present the you this year's Annual Drinking Water Quality Report. The Village of Hesperia is proud of the fine drinking water it provides. This annual water quality report shows the source or our water, lists the results of our tests, and contains much important information about water and health. This report shows the results of our monitoring for the period of January 1st to December 31st of 2020.

Is our water safe to drink?
We are pleased to report that our drinking water is safe and meets all EPA and EGLE standards for drinking water.

If you have any questions about this report and/or concerning your water utility, please contact your licensed water operator Mike Stanaway at 231-854-1821 or if you want to learn more, please attend the regularly scheduled Village meetings. The meetings are held every second Monday of the month at 7:30 pm. and are held at the Village Hall, 33 E. Michigan Avenue, Hesperia.

Overview;
The Village of Hesperia Water Utility pumped a total of approximately 33,043,000 gallons of water in 2020 with a daily average of approximately 91,000 gallons per day.

Water Sources;
Our water source consists of three (3) wells. Two are located at 26 S. Division Street and both of these wells are ten (10) inches in diameter and are set at a depth of 135 feet. The third well is located at 374 S. Division Street and has a diameter of four (4) inches with a depth of 95 feet and 11 inches. At present time our water is not treated in any way.

Sources of drinking water (both tap 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, radio active material and can pick up substances resulting from the presence of animals or from human activity.

In 2014, the DEQ now know as EGLE, performed a source water assessment on our water supply. It was found that wells number 1 and 2 have a moderate susceptibility to contamination while number 3 has a moderately high susceptibility to contamination. For a copy of this report or more information, please contact the Village Clerk at 231-854-6205.

Contaminates that may be present in source water include:

- Microbial contaminates, 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 results from urban storm water run-off, 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, urban storm water run-off and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production and can also come from gas station, urban run-off and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the results 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 amounts of certain contaminants in water provided by public water system. Food and Drug Administration regulation establishes limits for contaminants in bottled water which must provide the same protection for public health.

What Is PFAS, PFOA and PFOS?

Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made chemicals that include perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). PFAS have been used globally during the past century in manufacturing, firefighting and thousands of common household and other consumer products such as but not limited to:

- water and stain repellent products,
- non-stick pots and pans
- personal care products (e.g. cosmetics, lotions),
- insect repellants and sunscreens,
- food packaging wrappers

PFAS chemicals are persistent in the environment and in the human body - meaning they don't break down and they can accumulate over time. In recent years, experts have become increasingly concerned by the potential effects of high concentrations of PFAS on human health. PFAS move easily through the ground and may get into groundwater that is used for some water supplies or for private drinking water wells. When spilled into lakes or rivers used as sources of drinking water, they can get into drinking water supplies.

Health Effects for PFAS Group of Chemicals

Some scientific studies suggest that certain PFAS may affect different systems in the body. The National Center for Environmental Health (NCEH)/Agency for Toxic Substances and Disease Registry (ATSDR) is working with various partners to better understand how exposure to PFAS might affect people's health. Although more research is needed, some studies in people have shown that certain PFAS may:

- Lowering a woman's chance of getting pregnant
- Increasing the chance of high blood pressure in pregnant women
- Increasing the chance of thyroid disease
- Increasing cholesterol levels
- Changing immune response
- Increasing chance of cancer, especially kidney and testicular cancers

At this time, scientists are still learning about the health effects of exposures to mixtures of PFAS. If you are concerned about exposure to PFAS in your drinking water, please contact the MDHHS Toxicology Hotline at 800-648-6942 or the CDC/ATSDR: **www.cdc.gov/cdc-info/** or 800-232-4636

Health Effects for Lead and Copper

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 disabilities. Adults who drink water over many years could develop kidney problems or high blood pressure.
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 Hesperia 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 up 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.eps.gov/safewater/lead.

Copper: Copper is an essential nutrient, but some people who drink water-containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water-containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential source of lead in the household should be identified and removed or reduced.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The cost of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

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 transplant, 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 lesson the risk of infections by cryptosporidium and other microbiological contaminants are from the Safe Drinking Water Hotline (800-426-4791)

In the following table you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms, we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present.

Parts per Million (ppm) or Milligrams per Liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Part per Billion (ppb) or Micrograms per Liter - one part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.

Part per Trillion (ppt) or Nanograms per Liter - one part per trillion corresponds to one minute in 2,000,000 years or a single Penny in $10,000,000,000.

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

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of contaminant in drinking water.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

N/A - Information is not available.

The Village of Hesperia is not required to test for all of the listed contaminants every year. These test results are the newest results available.

Lead, Copper and PFAS
Distribution Monitoring Results

Contaminant	Date Tested	Number of Sites Tested	90th Percentile	Number of sites over Action Level	Action Level/ Units of Measurement	Likely Source of Contaminant
Lead (ppb)	7/31/2020	10	5	0	15 (ppb)	*Corrosion of household plumbing system*
Copper (ppm)	7/31/2020	10	0.1	0	1.3 (ppm)	*Corrosion of household plumbing system*
Contaminant	**Date Tested**	**Number of sites tested**	**PFOA Levels/ppt**	**Treatment used**	PFOA MCL (PPT)	*Industrial and Household use*
PFAS	7/31/2020	Well 1/Well 3	9(ppt) (Well 3)	Discontinue use of well 3	8 (ppt)	*Only 1 of the 14 levels tested over MCL*

Water Supply
Wells #1, #2 & #3

Inorganic Contaminants	Analyst Date	MCL	MCLG	Detected Level	Violation Y/N	Typical Source of Contaminant
Fluoride (mg/l)	08/04/2020	4	4	0.236-0.254	N	*Erosion of natural deposits*
Nitrate (mg/l)	08/04/2020	10	10	0.1-1.16	N	*Runoff from fertilizer use Erosion of natural deposits*
Chloride (mg/l)	08/04/2020	N/A	N/A	52 – 68.3	N	*Erosion of natural deposits*
Hardness (mg/l)	08/04/2020	N/A	N/A	312-349	N	*Erosion of natural deposits*
Iron (mg/l)	08/04/2020	N/A	N/A	.262-.454	N	*Erosion of natural deposits*
Sodium (mg/l)	08/04/2020	N/A	N/A	18.7 – 38.3	N	*Erosion of natural deposits*
Sulfate (mg/l)	08/04/2020	N/A	N/A	24 - 40	N	*Erosion of natural deposits*

If you would like more information about these contaminants, feel free to contact us any time.

What does all this mean?
We have, through our monitoring and testing, found that some contaminants have been detected. The EPA has determined that your water is safe at these levels.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including bottled water, may reasonably be expected to contain at least a small amount 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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791)

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a "one in a million" chance of having the described health effect.

EPA/CDC guidelines on appropriate means to lesson the risk of infections by cryptosporidium and other microbiological contaminants are from the Safe Drinking Water Hotline (800-426-4791)