

BARTON HILLS VILLAGE

WATER CONSUMER CONFIDENCE REPORT for 2018

Introduction As required by the Safe Drinking Water Act, Barton Hills Village (BHV) provides this annual report to its water consumers. It includes information on where BHV water comes from, what it contains, and compliance with federal and state testing requirements to ensure that BHV water meets quality standards.

Water Testing In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. BHV water is treated according to EPA regulations, which are administered by the State of Michigan Department of Environmental Quality (MDEQ). Water samples are tested monthly by a certified laboratory to ensure that any contamination is dealt with immediately. In addition, periodic tests are performed for over 100 possible contaminants. *BHV had no water sample violations in 2018.*

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. Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health as drinking water standards do for public water systems. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Lead BHV has been testing for lead and copper in drinking water according to EPA standards since 1989. The 2018 lead/copper test results are listed in the table on Page 3. *BHV levels of lead in drinking water are well below the allowable limit. There are no known lead service lines in BHV.*

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. Barton Hills Village 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 at 1-800-426-4791) or at <http://water.epa.gov/drink/info/lead>.

1,4 Dioxane Due to the presence of 1,4 dioxane in water sources west of BHV, testing for this contaminant was conducted in May 2016. *No 1,4 dioxane was detected in BHV source water.* New testing was also required by MDEQ in 2016 for cyanide; none was detected in BHV water.

BHV Water Sources BHV water comes from two groundwater well sites, with two primary and one back-up well to service the village's 145 customers. The wells draw from aquifers extending to the north and northeast of BHV. A Wellhead Protection Plan, first approved by the MDEQ in April 1997 with an update approved in December 2013, identifies BHV water sources, possible risks of contamination, and strategies to ensure the future safety of the water supply. The complete Wellhead Protection Plan is available from the BHV Clerk's office (734-222-5209, bhvclerk@bartonhillsvillage.org), and online at www.bartonhillsvillage.org. *There are no significant sources of contamination in the BHV water supply.*

Source Water Assessment The MDEQ performed an assessment of BHV source water in 2003 to determine the susceptibility, or relative potential, of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very high" based on geologic sensitivity, well construction, water chemistry and contaminant sources. Data from all BHV wells indicate that the groundwater is obtained from a confined aquifer, and the geologic sensitivity for a confined aquifer is characterized as "low." For more information about the Source Water Assessment report, contact the BHV Clerk's Office (734-222-5209, bhvclerk@bartonhillsvillage.org)

Contaminant Review The contaminant source inventory developed for the BHV Wellhead Protection Plan lists residential septic systems, agricultural areas, transportation corridors and cemeteries as potential contaminant sources within the Wellhead Protection Area. BHV maintains contact with neighboring township leaders to aid in protection of source water resources. BHV records indicate a consistently high rate of resident compliance with Barton Hills Village Code Chapter 8, originally adopted in 2001. *The BHV Code requires regular maintenance of BHV residential septic systems*

Contaminant Sources The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. BHV 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 stormwater 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 also come from gas stations, urban stormwater runoff, and septic systems.

At Risk Populations 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, persons 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 and Center for Disease Control 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).

BHV Water The following table lists all the drinking water contaminants that were detected in BHV water during the 2018 calendar year (January 1-December 31). The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The MDEQ allows for monitoring 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 is more than one year old. Terms and abbreviations used in the table are listed following the table.

	MCL	MCLG	Barton Hills Water	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Inorganic Contaminants							
Arsenic (ppb)	10	0	3	3	8/26/14	No	Erosion of natural deposits Runoff from orchards Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.22	0.18-0.22	8/26/14	No	Erosion of natural deposits Discharge of drilling wastes Discharge of metal refineries
Fluoride (ppm)	4	4	0.46	0.40-0.46	9/5/18	No	Erosion of natural deposits Discharge from fertilizer and aluminum factories
Sodium (ppm) (not a regulated contaminant)	n/a*	n/a*	19	14-19	9/5/18	No	Naturally occurring in groundwater
Bacteriological Monitoring							
Total coliform	More than 1 positive sample in 1 month	0	0 positive monthly sample	0		No	Naturally present in the environment
Chlorine Residual at the Sampling Site (ppm)	MRDL 4	MRDLG 4	0.27	0.14-0.45	Monthly	No	Water additive used to control microbes
Lead/Copper Monitoring at Customer's Tap				# of samples > AL			
Lead (ppb)	AL 15	0	4	0	9/5/18	No	Corrosion of household plumbing systems
Copper (ppm)	AL 1.3	1	0.69	0	9/5/18	No	Erosion of natural deposits

Terms and abbreviations used in the table:

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 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.

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

Maximum Residual Disinfection Level (MRDL): 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 Disinfection Level Goal (MRDLG): the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's 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

Violations None. While coliform bacteria may be present in monthly samples, this is not a violation of standards. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. *No coliforms or harmful bacteria were found in BHV water testing during 2018.*

Iron BHV water meets or exceeds federal/state water quality standards; however it does contain a high level of iron. Iron does not make the water unsafe but it does present aesthetic concerns. Well maintained water filtration/softening systems can minimize the impact of the iron content. All BHV water mains are either cast iron or cement-lined ductile iron, and phosphate/chlorine are added to BHV water to minimize corrosion.

Water System Improvements The BHV Water Committee continued to devote a considerable amount of time researching the history, current status and projected future needs of the BHV water system. While the increase in water rates enacted in 2017 (from \$.33 to \$.99 per 100 cubic feet with an increase in minimum charge from \$10 to \$120 per year) has been a positive step, funding is still significantly below maintenance costs, without factoring in any major improvements. The Water Committee will continue to research funding options for the future, and work on development of the Capital Plan. Distribution of a water information primer for BHV residents is anticipated in early 2019, as well as an equipment upgrade at the well sites. Other repairs and maintenance issues during 2018 were typical.

Water Quality Programs BHV continued stormwater protection activities under their state-issued Municipal Separate Storm Sewer System Jurisdictional General Permit, including membership in the Huron River Watershed Council and the Community Partners for Clean Streams.

Looking Ahead Barton Hills Village will continue efforts to ensure the highest quality water possible. Residents are encouraged to participate by maintaining septic systems, using fertilizers sparingly and disposing of hazardous materials properly. Concern for water conservation, especially during the summer months, requires prudent use of sprinkling systems. Information regarding water resources is included in the Barton Bulletin, which is distributed to BHV residents every few weeks. Residents may also relay concerns to the Board of Trustees, which meets the second Monday of each month at 6:00 PM at Walter Esch Hall. For more information, contact the Barton Hills Village Clerk's Office at bhvclerk@bartonhillsvillage.org or 734-222-5209.