



VILLAGE OF BROOKLYN WATER SYSTEM

Consumer Confidence Report

For 2016

Quality On Tap: Our Commitment/Our Profession

The Village of Brooklyn strives to provide you with the best drinking water possible. The purpose of this report is to provide you with information about your drinking water. The report explains where your water comes from and the treatment it receives before it reaches your tap. The report also lists all the contaminants detected in your water and an explanation of any violations in the past year. In order to ensure that your tap water is safe, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water produced by public water systems.

Since 1952 the Village of Brooklyn has supplied water to its residents. Over the years the water system has been improved in the following ways:

- In 2012, an active electric mixer was added to the 300,000-gallon water tower to continually keep the water mixed 24/7.
- In 2012, upgrades were made to the water plant to be able to maintain constant water pressure throughout the system during preventative maintenance of the water tower or in the event of an emergency.
- In 2014, the installation of six (6) new, more efficient fire hydrants to the system, helping with fire protection.
- In 2014, the installation of new 8 and 12-inch water main replacing smaller main on Marshall St and Water St, which will make for better flow throughout the Village.
- In 2015, the Village's water tower was taken off line, drained, chemically cleaned and inspected as part of our continued asset management program.
- In 2015, the exterior of the water tower was power washed, primed and recoated with a two part epoxy paint as part of our continued asset management program.

Brooklyn Village water is obtained from ground water pumped from deep wells located in the village limits. As water travels through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. These include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, wildlife and livestock.
- Inorganic contaminants, such as salts and metals, which can be natural or may result from storm runoff, wastewater discharges, oil and gas production, and farming.
- Organic chemicals including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can, also originate from gas stations, storm runoff, and septic systems.
- Radioactive substances, which can be naturally occurring or be the result of oil and gas production and mining activities.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

The aquifer from which this groundwater is obtained is characterized as "unconfined". Michigan Department of Environmental Quality determined that Brooklyn's public wells possess a "high" susceptibility to contamination. However, no Maximum Contaminant Level (MCL) violations have occurred, the well construction meet state and federal standards, there are no potential sources of contamination within the standard isolation area, and known sources of contamination within the wellhead protection area are being remediated to prevent movement of contamination to the municipal wells. The Village of Brooklyn is a cooperating member of the Jackson County Wellhead Protection program. Source water assessment information is available at the Village Office, 121 N. Main Street, Brooklyn, MI, or by email to info@villageofbrooklyn.com.

After the water comes from the wells it is aerated and filtered to remove iron, then treated with fluoride to preserve dental health and with chlorine to protect you against microbial contaminants. The water is routinely sampled and tested for various contaminants as required by law. The table below lists all contaminants that were found in tests required by the State in 2016. In some cases where the concentrations of contaminants are not expected to change frequently, monitoring tests are done less than annually. The most recent results of those tests are also shown in the table. Violations would be printed in **bold** and explained fully. As of this report, the Village water is within all quality limits as required by the Michigan Safe Water Drinking Act, #399 PA 1976. Drinking water, including bottled water, may reasonably be expected to contain at least some small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about the contaminants and potential harmful effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

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 transplants, people with HIV/AIDS or other immune system disorders, some elderly persons 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 (1-800-426-4791).

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.

The public is welcome to comment on or question this report at any meeting of the Brooklyn Village Council. Regular meetings are held on the 2nd and 4th Mondays of each month at 6:00 PM in the Brooklyn Village Office, 121 N Main Street, Brooklyn, Michigan, or by sending written comments to Village of Brooklyn, PO Box 90, Brooklyn, MI 49230, by fax to 517.592.2277, or by email to info@villageofbrooklyn.com.

REPORT OF REGULATED SUBSTANCES DETECTED IN BROOKLYN WATER --- 2016

During 2016 no violations were observed, and all regulated substances detected were well within stringent Federal and State limits.

Substance	Highest detected level	MCL	MCLG	Range of Detections	Most Recent Sample Date	Violation	Typical Source of Contaminant
Inorganics							
Fluoride	0.33 ppm	4 ppm	4 ppm	N/A	07/15/2016	No	Erosion of Natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Sodium ¹	16 ppm	N/A	N/A	N/A	07/15/2016	No	Erosion of natural deposits
Chlorine (MRDL)	.83 ppm	4 ppm MRDL	4 ppm MRDLG	0.66-1.01 ppm	Monthly	No	Disinfectant used to control microbes.
Lead ²	4 ppb	15 ppb	0 ppb	0 of 10 tested homes exceeded action level	09/11/2015	No	Corrosion of household plumbing; erosion of natural deposits
Copper	230 ppb	1300 ppb	1300 ppb	0 of 10 tested homes exceeded action level	09/11/2015	No	Corrosion of household plumbing; erosion of natural deposits
Arsenic ³	3ppb	10 ppb	0	N/A	09/02/2011	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	0.10ppm	2ppm	2ppm	N/A	09/03/2008	No	Discharges of drilling wastes; Erosion of natural deposits; Discharge from metal refineries;

Organics

Haloacetic Acids (HAA5)	3 ppb	60 ppb	N/A	N/A	07/20/2016	No	By-product of drinking water Disinfection.
Total Trihalomethanes (TTHM)	7.9 ppb	80 ppb	N/A	N/A	07/20/2016	No	By-product of drinking water Chlorination

Radionuclides

Gross alpha emitters	2.9 pCi/L	15 pCi/L	0 pCi/L	N/A	8/28/2013	No	Erosion of natural deposits
Radium-226/228	1.5 pCi/L	5 pCi/L	5 pCi/L	N/A	8/28/2013	No	Erosion of natural deposits

Additional analyses were done in 2014 to detect the presence of numerous organic compounds. All such tests were negative and none of these substances were detected. Additional analyses were done in 2014 to detect antimony, beryllium, cadmium, chromium, mercury, nickel, selenium, thallium, and, also in 2014, to detect numerous carbamates, herbicides and pesticides. All such tests were negative and none of these substances were detected.

¹Sodium levels are provided for individuals with particular dietary and health concerns.

² 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 Brooklyn 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 two 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>.

³ “While your drinking water meets EPA’s standard for arsenic, it does contain low levels of arsenic. The EPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. The 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.”

Terms and Abbreviations:

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLGs as possible using the best treatment technology.
- **N/A=Not Applicable**
- **Maximum Residual Disinfectant 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 Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below, which there is no known or expected health, risk. MCLGs allow for a margin of safety.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below, which there is no known or expected health risk. MRDLGs do not reflect the benefit of the use of disinfectants to control microbial contaminants.
- **Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **pCi/L:** picocuries per liter (a measure of radioactivity) **ppb:** parts per billion **ppm:** parts per million **N/A:** not applicable **ND:** not detected

For additional information about your drinking water or the contents of this report, contact the Director of Public Works at 121 N. Main Street, P.O. Box 90, Brooklyn, MI 49230, or call 517.592.5873 or email keithkotsch@villageofbrooklyn.com Individual copies of the 2016 Consumer Confidence Report will not be mailed, but copies may be obtained at the Village of Brooklyn Office at 121 N. Main St. Brooklyn, MI 49230.