2012 Water Quality Report for the City of Bessemer

This report covers the drinking water quality for Bessemer, for the calendar year 2012. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards

The supply comes from ground water wells at the Black River well field located north of town between Stone Road and the Black River. This well field consists of three (3) drilled wells. In its effort to supply you with the safest and most pleasing product the City filters out iron and manganese that cause staining and odors then adds chlorine for a disinfectant. A Wellhead Protection Plan for this well field has been approved by the Michigan Department of Environmental Quality.

- **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 the 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. Immuno-compromised 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 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 and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from wells. As water travels over 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 animals or human activity.

- **Contaminants that may be present in source water include:**
  M**icrobial 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 are 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.

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.
The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. 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.
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 City of Bessemer 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 1-800-426-4791or at http://water.epa.gov/drink/info/lead/index.cfm.

Water Quality Data

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 Goal (MRDG): 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 disinfectant 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: picocurles per liter (a measure of radioactivity).

Action level: The concentration of a contaminant which, if exceeded, triggers other requirements that a water system must follow.

Regulated Contaminant	**MCL**	**MCGL**	**Level Detected**	**Sample Date**	**Violation Yes/No**	**Typical Source of Contaminant**
Fluoride (ppm)	4	4	0.12	8/12	No	**Erosion of natural deposits**
Barium (ppb)	2000	2000	130	9/02	No	**Erosion of natural deposits**
Chlorine	MRDL **4**	MRDLG **4**	**.14 AVG. (.02-1.07)**	**Daily**	**No**	**Water additive used to control microbes**
TTHMs {total trihalommethanes}	NA	80	1	2010	No	By-product of drinking water disinfection

Radioactive Contaminant	**MCL**	**MCLG**				
Alpha emitters (pCi/L)	15		0.12	11/02	No	Erosion of natural deposits
Combined Ra226/228	5		0.18	11/02	No	Erosion of natural deposits

Special Monitoring and Unregulated Contaminant*	**Level Detected**	**Sample Date**	**Typical Source of Contaminant**
Arsenic (ppb)	1.1	8/12	Erosion of natural deposits
Sodium (ppb)	9.2	8/12	Erosion of natural deposits

Contaminant Subject to an Action Level	**Action Level**	**90% of Samples < This Level**	**Sample Date**	**Number of Samples Above AL**	**Typical Source of Contaminant**
Copper (ppb)	1300	290	8/12	0	Corrosion of household plumbing
Lead (ppb)	15	.81	8/12	0	Corrosion of household plumbing

Microbial Contaminants	**MCL**	**MCGL**	**Number Detected**	**Violation Yes/No**	**Typical Source of Contaminant**
Total Coliform Bacteria	1 positive monthly sample (Positive in > 5% of samples		0	No	Naturally present in the environment

* 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.

This report will not be automatically mailed to individual utility customers of the City of Bessemer; however, a copy of this report may be obtained at City Hall, 411 S. Sophie St., Bessemer, MI 49911
For more information contact Dennis Gustafson at the Dept. of Public Works garage (667-0453).
For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.