

Charter Township of West Bloomfield

Water & Sewer Department 2005 Consumers Annual Report On Water Quality

Attention: This Is An Important Report On Water Quality And Safety

The West Bloomfield Water and Sewer Department is proud of the fine drinking water it supplies and is honored to provide this report to you. The 2005 Consumers Annual Report on Water Quality shows the sources of our water, lists the results of our tests, and contains important information about water and health. The West Bloomfield Water and Sewer Department will notify you immediately if there is ever any reason for concern about our water. We are pleased to show you how we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ).

About our system

The Detroit Water and Sewerage Department, from who West Bloomfield Water and Sewer purchases drinking water, provides drinking water to approximately 4.2 million people in 126 southeastern Michigan communities. The system uses water drawn from two intakes in the Detroit River; one to the north near the mouth of Lake St. Clair and one to the south near Lake Erie. The water is directed to four (4) large water treatment plants for processing. A fifth water treatment plant located in St. Clair County uses surface water from Lake Huron.

Your source water comes from the lower Lake Huron watershed, the watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environmental Quality in partnership with the U.S Geological Survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment to determine the susceptibility of potential contamination. The susceptibility rating is on a six-tiered scale from very low to high based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

If you would like to know more about this report please contact West Bloomfield Water and Sewer at (248) 451-4785.

How do we know the water is safe to drink?

Treatment facilities operate 24 hours a day, seven days a week. The treatment process begins with disinfecting the source water with chlorine to kill harmful microorganisms that can cause illness. Next, a chemical called Alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle to the bottom. Fluoride is also added to protect our teeth from cavities and decay.

The water then flows through fine sand filters called beds. These filters remove even more particles and certain microorganisms that are resistant to chlorine. Finally, a small amount of phosphoric acid and chlorine are added to treated water just before it leaves the treatment plant. The phosphoric acid helps control the lead that may dissolve in the water from your household plumbing systems. The chlorine keeps the water disinfected as it travels through water mains to reach your home.

In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment, and throughout the distribution system. Hundreds of samples are tested each week in certified laboratories by highly qualified, trained staff. Detroit water not only meets safety and health standards but also ranks among the top 10 in the country for water quality and value.

Opportunities for Public Participation

We invite public participation in decisions that affect drinking water quality. The Board of Trustees for West Bloomfield Township meets the first and third Monday of each month. There are also public hearings and meetings open to the public. To confirm dates and times, or for information on other activities happening in the Department, please contact the Township Clerk's office at (248) 451-4848.

We welcome your comments and opinions about this report and will be happy to answer any questions you may have. Please direct your comments or questions to Edwin J. Haapala, Director, at (248) 451-4785

Other Monitoring

In addition to testing they are required to perform, Detroit Water and Sewerage voluntarily tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of the highest quality. If you are interested in a more detailed report, contact the Detroit Water and Sewerage Department's website at www.dwsd.org or contact Mary Lynn Semegen, (313) 935-7106 or semegen@dwsd.org.

Continuing Programs

The Water Department is currently engaged in a Residential Water Meter Change-Out Program, whereby several thousand older-type meters are being replaced along with the installation of a new radio-read drive-by meter reading system. Residents should anticipate being called upon by the Township's Water and Sewer Billing Department to accommodate the scheduling of one hour appointments to perform meter conversions between 8:30am and 3:00pm, Monday thru Friday.

Additionally, all water system fire hydrants will be flushed in October/November of every year. Should you experience a discoloration or air in your water due to nearby flushing operations, running cold water through your faucets for approximately ten minutes typically assists in alleviating discoloration or entrained air in your water. If the problem persists please contact the Water Department at (248) 451-4780 and a representative will address your concern.

*The West Bloomfield Water and Sewer Department
wants you to know your tap water is safe to
drink and that it meets or surpasses all federal
and state standards for quality and safety.*

West Bloomfield
Water & Sewer Department
2400 Hagerly Road
West Bloomfield, Michigan 48323

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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 Environmental Protection Agency's **Safe Drinking Water Hotline** at (800) 426-4791.

Additional Information

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

The 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 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 come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salt 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, urban storm runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm runoff and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

People with special health concerns

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as 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** at (800) 426-4791.

Cryptosporidium

Cryptosporidium is a disease-causing parasite that lives in the intestinal tract of many animals including dogs and cats. Symptoms of infection include diarrhea, abdominal cramps, headaches, nausea, and vomiting. The disease is typically spread through contact with feces of an infected animal or person and by consuming contaminated food or water. Cryptosporidium can be introduced into bodies of water by way of surface water runoff containing animal waste, and sewage discharge. The Detroit Water and Sewerage Department has been testing for Cryptosporidium since 1994 and has not detected it in any of the source water supplies.

National Primary Drinking Water Regulation Compliance

In 2005 West Bloomfield had no monitoring violations; no samples were returned positive for coliform. The regulations require confirmation of any positive result by re-sampling the location in question and sampling points surrounding the location within twenty-four (24) hours of notification or the next business day.

Turbidity - Monitored every 4 hours at Plant Finished Water Tap			
Highest Single Measurement	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation Yes/No	Soil Runoff
0.15 NTU	100%	No	

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. For turbidity levels 5 NTU or above a treatment technique (TT) is required.

2005 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.47	Erosion of natural deposits

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.

Regulated Contaminant	Treatment Technique	Running Annual Average	Monthly Ratio Range	Violation Yes/No	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits

West Bloomfield Township Lead and Copper Results

Lead and Copper Monitoring at Customer's Tap							
Contaminants	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Major Source in Drinking Water
Lead	2005	ppb	0	15	0 ppb	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	2005	ppm	1.3	1.3	.052 ppm	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL, additional requirements must be met.

Lake Huron Water Treatment Plant 2005 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detected	Violation Yes/No	Major Sources in Drinking Water
Inorganic Chemicals - Annual Monitoring at Plant Finished Water Tap								
Fluoride	8/9/05	ppm	4	4	1.41	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/9/05	ppm	10	10	0.41	n/a	No	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.

Disinfectant Residuals and Disinfection By Products - Monitoring in Distribution System (level detected is the highest running annual average based on quarterly averages)								
Total Trihalomethanes (TTHM)	Feb-Dec 2005	ppb	n/a	80	19.9	10.7-23.2	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	Feb-Dec 2005	ppb	n/a	60	16.2	5.7-13.8	No	By-product of drinking water disinfection.
Disinfectant (chlorine) Residual (ppm)	Jan-Dec 2005	ppm	MRDGL 4	MRDL 4	0.75	0.53-0.75	No	Water additive used to control microbes

Radioactive Contaminants - Plant Finished Water Tap								
Alpha Emitters	11/16 2001	pCi/l	0	15	3.19	n/a	No	Erosion of Natural Deposits

Microbiological Contaminants - Monthly Monitoring in Distribution System 2005				
Contaminant	MCLG	MCL	Highest Number Detected	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria ≥ 5% on monthly samples	0	Naturally present in the environment.
E.coli	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.	0	Human waste and animal fecal waste.

Key to Detected Contaminants Tables

Symbol	Abbreviation for	Definition / Explanation
MCLG	Maximum Contaminant Level Goal	The level of contaminants in drinking water below which there is no known expected risk to health.
MCL	Maximum Contaminant Level	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.
MRDLG	Maximum Residual Disinfectant Level Goal	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.
MRDL	Maximum Residual Disinfectant Level	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.
ppb	Parts per billion	The ppb is equivalent to microgram per liter. A microgram = 1/1000 milligram.
ppm	Parts per million	The ppm is equivalent to milligram per liter. A milligram = 1/1000 gram.
NTU	Nephelometric Turbidity Unit	Turbidity is a measure of the cloudiness of the water.
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic and trichloroacetic acids. Compliance is based on the total.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.
pCi/l	picocuries per liter	a measure of radioactivity
n/a	Not applicable	
≥	More than or equal to	

Important Health Information

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your homes plumbing but based on the age of homes in West Bloomfield, the Water & Sewer Department believes very few homes have lead service lines or piping.

However, if your home has a lead service line or piping that has lead soldered joints you can take the following precautions to minimize your exposure to lead that may have leached into your drinking water from your pipes.

- Run your water for 30 to 60 seconds, or until it feels cold. This practice should be followed anytime your water has not been used for more than 6 hours.

- Always use cold water for drinking, cooking or making baby formula.
- Use faucets and plumbing material that are either lead free or will not leach unsafe levels of lead into your water.

Additional information is available from the **Safe Drinking Water Hotline** (800) 426-4791.