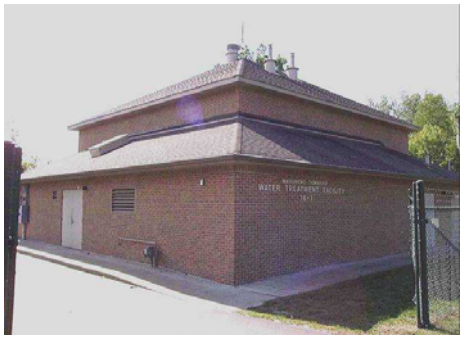
Charter Township of Waterford

Waterford Township DPW



2007 Annual Water Quality Report

Waterford Township Department of Public Works (DPW) Presents
The 10th Annual Drinking Water Quality Report

The Waterford Township Department of Public Works (DPW) presents its' tenth annual Drinking Water Quality Report! The Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ) require water utilities to report the quality of your drinking water. While this is a statutory requirement, the DPW considers it a priority to inform you, our customers, about the safety of the water you drink and the importance of protecting our water supply. We are excited and proud to bring this report to you and feel that the information we are providing is important and timely. The DPW is also very pleased to announce that there were no treatment or monitoring violations for Operational Year 2007. If you have any questions or desire more information about this report or any other subject related to your water quality, please contact Tom Coburn (Water and Sewer Division Superintendent), Phone: 248-674-2278 Fax: 248-674-8658, Email: tcoburn@twp.waterford.mi.us

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. The DPW utilizes wells to provide drinking water. As water travels over land surface 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. 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 EPA's Safe Drinking Water Hotline (800)426-4791.

Where does my drinking water come from?

The Township water supply is obtained from fifteen (15) wells located at twelve (12) different locations throughout Waterford Township. The water is treated through a variety of processes at eleven (11) Water Treatment Plants including iron and manganese removal. Additional chemicals are also added to disinfect the water and to control other contaminants such as lead and copper. In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
- 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 storm water runoff, and septic systems.
- Pesticides and Herbicides, which may come from a variety of sources such as agricultural and residential uses.
- Radioactive contaminants, which are naturally occurring or be the result of oil and gas production and mining activities.

What contaminants are in my water?

The following is a list of some common contaminants and their associated health effects when the Maximum Contaminant Level (MCL) is exceeded. If a particular MCL or Action Level (AL), is exceeded, additional treatment or other action may be required. However, the Township's water falls below the MCL's and AL's for these and all other parameter's monitored.

Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short period of time may 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 physician.

Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth. The DPW treatment process does not add Fluoride to its finished water. However, fluoride occurs naturally in ground water. Please refer to the data table on the last page for the levels of fluoride observed in 2007. Please consult with your health care provider for fluoride supplement recommendations.

Lead: 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 DPW 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 or at *http://www.epa.gov/safewater/lead*. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Arsenic: Used in the manufacturing of pesticides, metal products, pigments and dyes, and medicine, arsenic is a naturally occurring element in our environment and can be found in groundwater. While a known carcinogen, the health effects of arsenic depend on the amount consumed. The current MCL for arsenic is 10ppb, which was lowered from 50ppb by the EPA. In operational year 2007, Township water met or exceeded the new stringent arsenic criteria. Please visit our website for further information regarding the Township's arsenic levels at http://www.twp.waterford.mi.us/publicworks/ARSENIC.htm
Even though your drinking water meets EPA arsenic standards, it does contain naturally occurring low levels. The EPA standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The EPA continues to research on 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.

Nitrate: Nitrate is formed when oxygen in the air or dissolved with water combines with nitrogen. While nitrate is naturally occurring, concentrations can rise from septic tank leachate and fertilizers, which are rich in nitrogen. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. The MCL for nitrate is 10ppm and Township water was not detected to have any nitrates for the samples taken in Operational Year 2007.

TTHM's and HAA5: Total Trihalomethanes (TTHM's) and Haloacetic (HAA5) are a group of chemicals that are formed along with other disinfection by-products when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic material in water.

Waterford Township Wellhead Protection

Waterford Township is also pleased to announce that the National American Water Works Association (AWWA) has selected Waterford Township as the recipient of the Exemplary Source Water Protection Award for 2007.

Because Waterford's water source is derived from wells, it is in the community's best interest to safeguard this resource. Part of this protection includes the Township's development of ten (10) Well Head Protection Areas (WHPAS), which have been approved by the Michigan Department of Environmental Quality. These areas define the boundaries of the 10-year zone of capture for a specific wellhead. If untreated, a contaminant release at the edge of the boundary would, theoretically, take approximately 10 years to reach the wellhead. As a result, this powerful analytical tool allows for the development of an action plan to resolve the problem before the wellhead would become contaminated. Please remember, you can do your part by disposing of contaminants properly, as well as reporting spills and dumping. The Township wells range in susceptibility from moderately low to high as defined by the Source Water Assessment Report. For more information on this topic please feel free to contact Tom Coburn, Water Superintendent at: 248-618-7462.

In April 2002, the DPW received approval of its' Well Head Protection Plan (WHPP) from the MDEQ and continues to implement and update the plan. Some of the main components include public education and signage around the various Well Head Protection Area's located within Waterford. Look for these signs around our community. The signs are being placed wherever main roads intersect wellhead protection areas.

Abandoned Well Management Program

The DPW was awarded a grant from the MDEQ to locate and plug improperly abandoned wells in the Township. The Abandoned Well Management Program was very successful and resulted in thousands of potential sites being evaluated and over 260 actual wells being properly abandoned. The program was discontinued by the MDEQ in 2007 due to lack of funding. It is our hope that the MDEQ will have funds available in the future for continuation of this effort.

Frequently Asked Questions (F.A.Q.'s)

Do I need to take special precautions with my drinking water?

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, people with HIV/AIDS or other immune disorders, some elderly, and infants can be particularly at risk for infection. These people should seek advice about drinking water from their health care providers. EPA/Center for Disease Control (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. The Water Quality Data Table on the last page of this report lists all of the drinking water contaminants that were detected during the calendar year of this report. Additionally, the second and third pages of this report break down possible contaminants in your water and the methods the DPW uses to protect the water supply. The presence of these possible contaminants in the water does not necessarily indicate that the water poses a health risk.

Does the Township recommend a water softener?

While DPW treatment facilities substantially remove iron from the water, hardness remains and water softeners are recommended. Water hardness realized by property owners will vary depending on the source of ground water utilized at a treatment facility in a given area. We suggest customers set their water softener units at 18 grains initially and subsequently adjust as necessary. In operational year 2007, the average grains per gallon was 18.42 based on sampling. Please feel free to call the Water Treatment Branch at: 248.618.7483 for individual settings for your water softener.

What should I know about hydrant flushing?

Water hydrant flushing is conducted to improve water quality and is conducted in the spring and fall of each year as necessary. The DPW conducts hydrant flushing at night to minimize service interruption and inconvenience to customers. However, it is not uncommon to experience rusty looking water immediately following flushing. This condition should clear up in a short time after flushing.

Is there an easier way to pay my water/sewer bill?

The DPW offers customers the convenience of paying their water and sewer bills via an auto-debit from their checking or savings accounts. Please visit the DPW website for enrollment forms. The DPW also offers customers the convenience of viewing their account status, as well as the option of paying their water and sewer utility bills online with a credit card 24 hours a day. The account viewing service is free of charge. A convenience charge of 3% of the bill is applied by the 3rd party processing company for credit card payments. Please visit the DPW web site at: www.twp.waterford.mi.us/publicworks

Reverse 911 Community Notification System

In 2007 the DPW initiated a program that allows messages to be rapidly broadcast throughout the community in the event of water quality and other incidents. The system can execute large call volumes to residents in a short period of time to announce the incident as well as follow up information. If you would like more information on the system, please visit the Township web site.

Did you know?

- Waterford Township is 36 square miles, but has nearly 350 miles of water main that it operates and maintains.
- Waterford Township is somewhat unique in Southeast Michigan in that it is responsible for the pumping, treatment and distribution of potable safe drinking water to its 24,320 customers. Most of the Southeast Michigan Region is served by the Detroit Water and Sewerage Department (DWSD).
- Waterford Township has some 3,644 Fire Hydrants that it services and maintains.
- Waterford Township is rolling out a radio based Fixed Network (FN) Meter Reading System. Meter Readings and alerts in this system are sent to the DPW without the need to enter customer's property to obtain meter reads.
- Waterford Township DPW pumped over 3.1 billion gallons of water in 2007, with average day demands observed at 8.5 million gallons per day and peak summer time day demands at 22 million gallons per day.

Waterford Township Attn: Tom Coburn, Water Superintendent
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http://www.twp.waterford.mi.us/publicworks

2007 Water Quality Data Table

Per MDEQ and/or EPA monitoring requirements, contaminant-monitoring schedules vary and can exceed calendar years in collection and testing frequency.
Unless otherwise noted, the data presented in this table is from testing done in the calendar year 2007.

	Testing Due	Date Range	MCLG	MCL	Your Water	Sample Range	Major Sources in Drinking Water
Inorganic Contaminants:							
Flouride (ppm)	Yearly	2007	4	4	0.58	0.0 to 0.58	Erosion of natural deposits and discharge from fertilizer and aluminum factories.
Arsenic (ppb)	2007 - 2009	2007	N/A	**10	5.0	0.0 to 5.0	Used in agricultural production and naturally found in the environment.
		2006	N/A	**10	5	0.0 to 5.0	
Selenium (ppb)	2009 - 2012	2001	50	50	5	0.0 to 5.0	Discharge from petrolium, metal refineries, and mines as well as erosion of natural deposits.
Barium (ppm)	2009 - 2012	2001	2	2	0.22	0.07 to 0.22	Discharge of drilling wastes and metal refineries as well as erosion of natural deposits.
Radioactive Contaminants:							
Combined Radium (pCI/L)	2013 - 2016	2003	0	5	1.23	0.42 to 1.23	Erosion of natural deposits.
Organic Contaminants:							
TTHM Total Trihalomethethane (Distribution System) (ppb)	Yearly	2007	N/A	80	*16.63	3.2 to 35.00	By-product of drinking water disinfection
HAA5 Total Haloacetic Acid (Distribution System) (ppb)	Yearly	2006	N/A	60	*4.9	2.0 to 13.00	By-product of drinking water disinfection
2007 Microbial Contaminants - Monthly Monitering in the Distribution System						**Highest# detected**	**Major Sources in Drinking Water**
Total Coliform Bacteria	Yearly	2007	0	>5% of monthly		In one month = 1	Naturally Present in the Environment. No violation in 2007.
E. Coli (fecal) Coliform Bacteria	Yearly	2007	0			In one year =0	Human waste and animal fecal waste. No violation in 2007
Special Monitoring of Contaminants			**MRDLG**	**MRDL**	**Your Water**	**Sample Range**	
Sodium (ppm)	Yearly	2007	NA	NA	50	16 to 50	Erosion of natural deposits.
Chlorine (ppm)	Yearly	2007	4	4	1.8	0.0 to 1.8	Water additive used to control microbes.
Copper/Lead			**MCLG**	**AL**	**90th%**	**Sites above AL**	**Major Sources in Drinking Water**
Copper (ppm)	2008	2005	1.3	1.3	.881ppm	2 out of 30 sites	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead (ppb)	2008	2005	0	15	6.9ppm	0 out of 30 sites	Corrosion of household plumbing systems and erosion of natural deposits.

Terms and Abbreviations

*Indicates an annual average calculation

Your Water: the highest single value obtained during the reporting period unless noted with an *

Sample Range: The lowest to the highest values obtained.

MRDLG: The level of a drinking water disinfectant below which there is no expected health risk.

MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MCLG: The Maximum Contaminant Level Goal is the level below which there are no known health risks. MCLGs allow for a margin of safety.

MCL: The Maximum Contaminant Level is the highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

AL: The action level is the concentration of contaminant which, if exceeded, requires treatment.

90th Percentile: 90% of the homes tested have lead/copper levels at or below the 90th percentile value

MRDL: The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

N/A: Not Applicable **ppb:** Parts per Billion **ppm:** Parts per Million **pCi/l:** Picocuries per liter (a measure of radioactivity).