WATERFORD TOWNSHIP
1999 WATER QUALITY REPORT

Hear-ye! hear-ye! Waterford Township presents the second annual Drinking Water Quality Report! The Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ) require us to report to you the quality of your drinking water. While a statutory requirement, Waterford Township 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 to bring this report to you and feel that the information we are providing you is important. If you have any questions or want more information about this report, please contact Tom Coburn, Phone: 248-674-2278 Ext. 27, Fax: 248-674-8658, Email: tcoburn@twp.waterford.mi.us 5240 Civic Center Drive, Waterford, MI 48329-3715.

Where does my drinking water come from?

The Waterford Township water supply is pumped from 14 wells located throughout the township at 10 different locations. At these Plants, a variety of treatment processes occur. For example, chlorine is added to disinfect the water before it reaches your tap. Additional chemicals are added that control other contaminants such as lead and phosphorous.

Why are there contaminants in my drinking 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 potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Around the country sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. The Waterford Twp. system is pumped exclusively from wells, that are not under the influence of surface water. 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.

- ✓ **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 orm water runoff, and septic systems.

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.

Do I need to take special precautions?

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 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/Centers 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 Water Drinking Hotline (800-426-4791).

What contaminants are in my water?

The Water Quality Data Table on the last page of this report lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The following health effects

are associated with these contaminants if the contaminant is found over the Maximum Contaminant Level (MCL), the highest level of a contaminant that is allowed in drinking water, or Action Level (AL), the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. However, Waterford Township's water falls below the MCL or AL for all parameters monitored.

- ✓ **Copper** is an essential nutrient, but some people who drink water-containing copper in excess of the action level over a relatively short amount of time could 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 doctor.

- ✓ 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.

- ✓ 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 home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking water Hotline (800-426-4791).

- ✓ Infants and children who drink water-containing **lead** in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Trihalomethanes (THMs) are a category of organic contaminants that are a by-product of disinfecting water with chlorine. Under the Information Collection Rule (ICR), we are required to monitor four specific contaminants in this category. The four contaminats are: Dichlorobromomethane, Bromoform, Chlorodibromomethane, and Chloroform.

- ✓ For more information about this rule view the EPA website summary page at: http://www.epa.gov/OGWDW/icr_sum.html.

Should I be concerned about Arsenic, Nitrate and Chloride?

Three contaminants – **Arsenic**, **Nitrate**, and **Chloride** have become a particular concern for some groundwater supplies throughout Oakland County. Waterford Township's has not exceeded any health limits for these contaminants. We are however, concerned about the potential risk of contamination and will continue to monitor these levels in your water. The following is a brief description of these contaminants taken from an U.S. Geological Survey study done for Oakland County. Copies of this study are available at the Township hall.

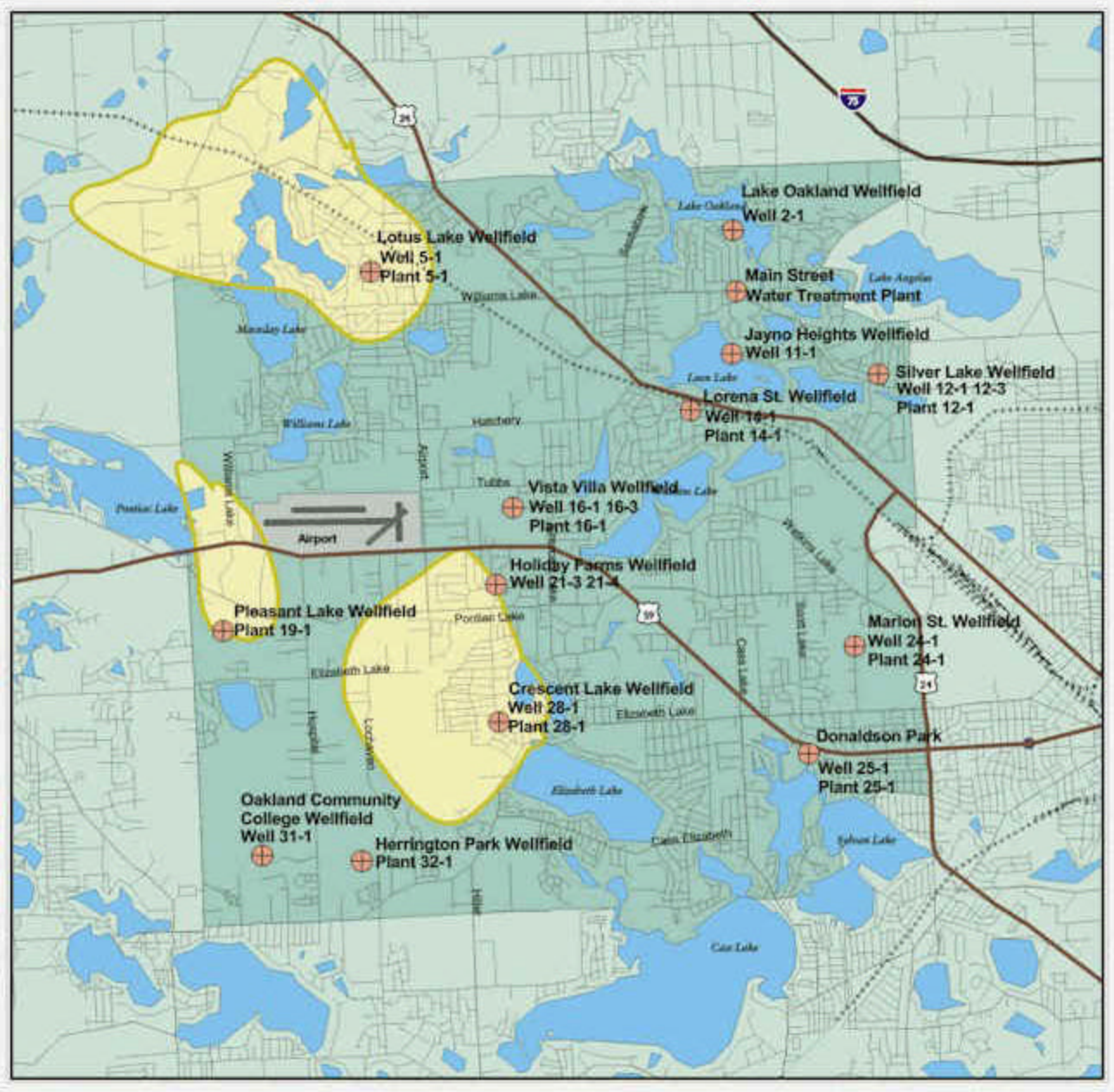
- ✓ **Arsenic**, while used in the manufacturing of pesticides, metal products, pigments and dyes, and medicine, is a naturally occurring element in our environment and therefore, can be found in groundwater. While a known carcinogen, the health effects of arsenic depend on the amount consumed. The MCL for arsenic is 50 ppb and 1999 tests indicate that arsenic was not detected at or above the MCL limit in Waterford Township's Water System. Please visit our web page for further information regarding arsenic levels in Waterford Water. http://www.twp.waterford.mi.us/publicworks/arsenic.htm

- ✓ **Nitrate** is formed when oxygen in the air or dissolved in 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 10 ppm and our water was detected to have .4 ppm.

- ✓ **Chloride** can be found in most common salts, such as road salt, table salt, and water-softener salt. It can infiltrate the ground from de-icing roads in the winter or from septic tank leachate from water softening. Chloride has a secondary MCL of 250 ppm and is not considered to be a health concern. Waterford Township water was tested to have 78 ppm.

What's being done to protect our water supply?

Waterford Township is making every effort to protect the groundwater source of our drinking water supply. The township voluntarily participates in the Wellhead Protection Program. The basis of this program is the Wellhead Protection Area (WHPA). The WHPA is the area of the surface and subsurface that is expected to contribute ground water to the supply wells typically in the next 10 years. This allows sufficient warning time to take precautionary measures if a petroleum leak or other hazardous substance contaminates the WHPA. The use of certain household hazardous chemicals (like paints, solvents, gasoline, etc.) should be closely monitored in order to eliminate the possibility of groundwater contamination. You can help protect our water supply by using chemicals carefully. If you have unused water well, inform the township to obtain information to have it plugged – open holes are easy conduits for chemicals to travel and contaminate ground water. Look at the attached map to see if you live in a WHPA. Remember: prevention of ground water contamination is far less expensive than ground water cleanup! For more information about this program call the township or view the MDEQ website found at http://www.deq.state.mi.us/dwr/wpu/wellhead/wellhd.html.



<u>Waterford Township Wellhead Protection Map:</u> We currently have three MDEQ approved WHPAs as shown on the map. Ground water in these areas is especially vulnerable to pollution.

Wellhead Delineation's show the area of water source influence on a particular well, as notated with the yellow color on the above map.

<u>Approved WHP Delineation's</u>:
- ✓ Lotus Lake
- ✓ Pleasant Lake
- ✓ Crescent Lake

<u>Currently Not Producing</u>:
O.C.C. Wellfield

<u>WHP Delineation's Pending Approval</u>:
- ✓ Silver Lake
- ✓ Marion Street
- ✓ Vista Villa

<u>For more information contact:</u>

Waterford Township **Attn: Tom Coburn** **5240 Civic Center Drive**
Phone: 248-674-2278 Ext. 27 **Fax: 248-674-8658** **Waterford, MI 48329-3715**
Web Site: http://www.twp.waterford.mi.us/publicworks

1999 Water Quality Data Table

Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data though representative of the water quality, may be more than one year old.

Contaminants	MCLG	MCL	Your Water	Sample Range	Typical Source
Inorganic Contaminants					
Fluoride (ppm)	4	4	0.6	ND-0.6	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	0.4	ND-0.4	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Arsenic (ppb)	N/A	50 ppb	< 5 ppb	ND-< 5 ppb	Used in Agricultural production. Naturally found in the environment.
Organic Contaminants					
TTHM [Total Trihalomethethanes] (ppb)	NA	100	24.1	ND-24.1	By-product of drinking water chlorination
Toluene (ppb)	1000	1000	0.7	ND-0.7	Discharge from petroleum factories
Radioactive Contaminants					
Gross Alpha Emitters (pCi/L)	0	15	1.3	ND-1.3 1996	Erosion of natural deposits.
Microbial Contaminants					
Total Coliform (% of monthly positive samples)	NA	<5%	2.7%	ND-2.7%	Naturally present in the environment.
Contaminants					
Dichlorobromomethane (ppb)	NA	100	8.6	6.8-8.6	By-products of drinking water chlorination. EPA regulations require us to monitor this contaminant while EPA considers setting a limit on it.
Bromoform (ppb)	NA	100	2.6	1.5-2.6	
Chlorodibromomethane (ppb)	NA	100	8.6	7.1-8.6	
Chloroform (ppb)	NA	NR	5.9	4.9-5.9	
Sulfate (ppm)	NR	NR	38	22-38	EPA regulations require us to monitor this contaminant while EPA considers setting a limit on it.
Copper/Lead	**MCLG**	**AL**	**90th Percentile**	**# of sites above action level**	
Copper (ppm)	1.3	1.3	0.858	1 out of 62 sites = 1.6%	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	0	15	< 0.0-5	1 out of 62 sites = 1.6%	Corrosion of household plumbing systems; Erosion of natural deposits

Terms and Abbreviations/Units Descriptions as used above:

MCLG: Maximum Contaminant Level Goal: 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.

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.

AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

pCi/L: picocuries per liter
ppm: parts per million, or milligrams per liter (mg/l)
ppb: parts per billion, or micrograms per liter (µg/l)
% of monthly positive samples: Percent of samples taken monthly that were positive
NA: not applicable
ND: contaminant not detected
NR: not regulated
Your Water Column: Highest Single Value Obtained during the Reporting Period, Unless notated by a (*), which indicates an Annual Average.
Range Column: Lowest Single Value Obtained to the Highest Single Value Obtained during the Reporting Period.