



WATER RESOURCES COMMISSIONER

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2009 Water Report

 **WRC**
WATER RESOURCES COMMISSIONER
John P. McCulloch

2009 Water Report



Is Your Water Safe to Drink?



CONSUMER CONFIDENCE REPORT

This is Your Annual Report on Drinking Water Quality.

Consumer Confidence Report

The Safe Drinking Water Act (SDWA) is the federal law that ensures the quality of Americans' drinking water. Under SDWA, the Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the state, local municipality and water supplier who implements those standards. Amendments to the SDWA require all public water systems with at least 15 service connections or a system that regularly serves at least 25 individuals to publish and distribute a Consumer Confidence Report (CCR) annually.

The CCR increases the availability of information to water customers. Informed and involved customers can be strong allies

of their water systems, large and small, as they take action on water issues. Also, an increase in public awareness can give sensitive sub-populations the information that they may need for their protection.

In order to maintain water quality within your home, it is suggested by the Oakland County Water Resources Commissioner's office (WRC) that you remove and clean each faucet aerator twice annually. Aerators are the screens that screw into the end of the faucet. In addition, it is also recommended that you annually flush out the water heater and that you regularly maintain any in-home treatment equipment, such as water filters and softeners.

Special Health Information

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 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).

Lead Information

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.

WRC 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 at 800-426-4791 or <http://www.epa.gov/safewater/lead>.

Contaminants

The sources of drinking water (both tap water 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, in some cases, 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 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.

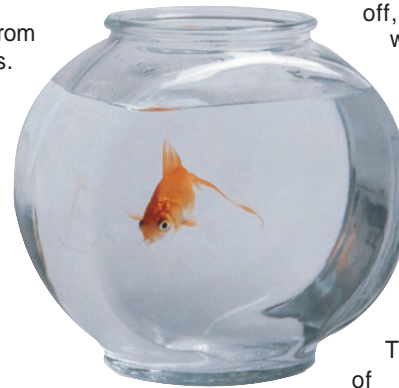
Pesticides and herbicides, which may come from a variety of sources such as agriculture,

storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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

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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by simply calling the EPA Safe Drinking Water Hotline at (1-800-426-4791).



Cross Connection Control Program

The Michigan Department of Natural Resources and Environment (DNRE) approved WRC Cross Connection Control Program (CCCP) was designed to protect your potable (drinking) water. A cross-connection is a link between a possible source of pollution

and a potable water supply. A pollutant may enter the potable water system by backpressure and/or via a back-siphon. The CCCP helps prevent backflow contamination protecting the quality of the water system, the safety and the public health of all water customers.



2009 Water Report

Charter Township of Royal Oak Water Supply System



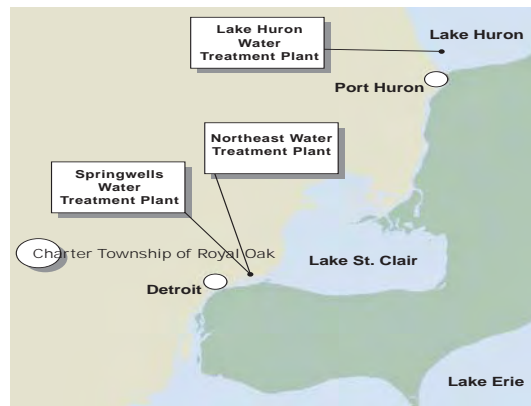
2009 Consumer Confidence Report

The Charter Township of Royal Oak has employed the Oakland County Water Resources Commissioner (WRC) to act as the Township's water system supply (WSSN #5840) agent. Title XIV of the United States Public Health Service Act, (Chapter 373, 88 Stat. 1660), popularly known as The Safe Drinking Water Act, and The Michigan Safe Drinking Water Act (1976 PA399, amended to 1998 PA56) require a supplier of water to provide Consumer Confidence Reports (CCR) to its customers. The Charter Township of Royal Oak, along with the WRC, is pleased to present the Annual Drinking Water Quality Report (CCR) for the year 2009.

This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water.

Your drinking water is from two separate sources; surface water from the lower Lake Huron watershed via the Lake Huron Water Treatment Plant in Port Huron and surface water from the Detroit River intakes via the Springwells and Northeast Water Treatment Plants. We purchase the water from the Detroit Water and Sewerage Department (DWSD.) The State has completed source water assessments and categorized the Lake Huron intake as having a moderately low susceptibility to potential contaminant sources and the Detroit River intake as highly susceptible to potential contaminant sources.

The DWSD water treatment plants have historically provided satisfactory treatment of the source water to meet drinking water standards. Please visit www.dwsd.org or contact Mary Lynn Semegen at 313-926-8102 or semegen@dwsd.org for more source water information.



We are pleased to report that your drinking water is safe and meets Federal and State requirements. If you have questions about this report, or your water utility, please contact your WRC representative, **Connie Sims, at 248-858-1441.** We want our valued customers to be informed about their water utility.

System Design and Improvements

The Charter Township of Royal Oak Water Supply System, like many water systems, is looped to provide a duplicate water supply. This looping is an important way of reducing the possibility of water supply loss to our customers during incidents such as water main breaks or system repairs.

We work continually to provide high quality water to every tap. In order to maintain a safe and dependable water supply, we may need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. We ask that all our customers help us conserve and protect our water resources, which impact our present life style and our children's future. Please call the WRC office at 248-858-1441 if you have questions or visit our web site at www.oakgov.com/water.

Your Water Quality

The Charter Township of Royal Oak Water Supply System is routinely monitored, in accordance with the Public Acts, for contaminants in your drinking water. The following tables show the results of our monitoring for the period of January 1 to December 31, 2009. In addition, other test results are shown for the year they were required, since annual testing is not required for some contaminants. The most recent test date for detected contaminants is listed in the tables.

Maximum Contaminant Level (MCL) is the highest level of a contaminant that is allowed in drinking water and is set at a very stringent level. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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. Beginning in July 2008 - April 2009, the DWSD began monitoring quarterly for unregulated contaminants under the Unregulated Contaminant Monitoring Rule 2 (UCMR2.) All the UCMR2 contaminants monitored on List 1 and List 2 in 2008 - 2009 were undetected.

As you can see by the tables, **the system had no violations.** We are proud that your drinking water meets or exceeds all Federal and State requirements. The EPA has determined that your water is safe at the levels detected.

NOTICE TO NON-RESIDENTIAL CUSTOMERS

Federal Regulations require that as the billing customer, it is your responsibility to ensure that all water consumers at your facility (whether business, educational institute, apartments, etc...) have access to the report. Please post this CCR in a visible area. Additional copies are available for your distribution by contacting the WRC office at 248-858-1441.

Regulated Contaminants Table

| Contaminant | Test Date | Units | Health Goal MCLG | MCL | Detected Level | Range of Detection | Violation Yes/No | Major Sources in Drinking Water |
|---|--------------|-------|---|-----------------|-----------------------|---------------------------|--|---|
| Inorganic Chemicals - Annual Monitoring at Plant Finished Water Tap | | | | | | | | |
| Barium | 6/9/2008 | ppm | 2 | 2 | 0.01 | NA | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| Fluoride | 8/31/2009 | ppm | 4 | 4 | 1.26 | NA | No | Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate | 8/31/2009 | ppm | 10 | 10 | 0.55 | NA | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| Selenium | 6/9/2008 | ppb | 50 | 50 | 1 | NA | No | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines. |
| Disinfectant Residuals and Disinfectant By-Products - Monitoring in Distribution System | | | | | | | | |
| Total Trihalomethanes (TTHM) | Feb-Nov 2009 | ppb | NA | 80 | 23.4 | 7.2 - 46.5 | No | By-product of drinking water chlorination. |
| Haloacetic Acids (HAA5) | Feb-Nov 2009 | ppb | NA | 60 | 13.2 | 1.2 - 20.2 | No | By-product of drinking water disinfection. |
| Disinfectant Residual (chlorine) | Jan-Dec 2009 | ppm | MRDLG 4 | MRDL 4 | 0.83 | 0.52- 0.85 | No | Water additive used to control microbes. |
| 2009 Turbidity - Monitored every 4 hours at Plant Finished Water Tap | | | | | | | | |
| Highest Single Measurement Cannot exceed 1 NTU | | | Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%) | | | Violation Yes/No | Major Sources in Drinking Water | |
| 0.28 NTU | | | 100% | | | No | Soil Runoff. | |
| 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. | | | | | | | | |
| Lead and Copper Monitoring at Customers' Tap | | | | | | | | |
| Contaminant | Test Date | Units | Health Goal MCLG | Action Level AL | 90th Percentile Value | Number of Samples Over AL | Violation Yes/No | Major Sources in Drinking Water |
| Lead | 2008 | ppb | 0 | 15 | 2.5 | 0 | No | Corrosion of household plumbing system; Erosion of natural deposits. |
| Copper | 2008 | ppm | 1.3 | 1.3 | 0.151 | 0 | No | Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives. |
| The 90th percentile value means 90 percent of the homes tested have copper levels below the given 90th percentile value. If the 90th percentile value is above the AL, additional requirements must be met. | | | | | | | | |

Important Definitions:

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

Haloacetic Acids (HAA5) - HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.

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 Contaminant Level Goal (MCLG) - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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 Residual Disinfectant Level Goal (MRDLG) - 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.

Nephelometric Turbidity Units (NTU) - Turbidity is a measure of the cloudiness of the water.

Not Applicable (NA)

Parts Per Billion (ppb) - The ppb is equivalent to microgram per liter. A microgram = 1/1000 milligram. A ppb is equivalent to one penny in \$10,000,000.

Parts Per Million (ppm) - The ppm is equivalent to milligram per liter. A milligram = 1/1000 gram. A ppm is equivalent to one penny in \$10,000.

Total Trihalomethanes (TTHM) - A family of four (4) halogenated organic chemicals. Reporting is based on running annual average.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

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.

2009 Special Monitoring - Unregulated Contaminants Table

| Contaminant | MCLG | MCL | Level Detected | Source of Contamination |
|--------------|------|-----|----------------|------------------------------|
| Sodium (ppm) | NA | NA | 5.62 | Erosion of natural deposits. |