

2013 Annual Drinking Water Quality Report
City of Rockwood
June 16, 2014

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality of water and the services we provide to you every day. Our constant goal is to provide 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 protect our water resources. We are committed to ensuring the quality of you water.

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, in the U.S. and parts of the Thames River, Little river, Turkey Creek and Sydenham watersheds in Canada. 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 susceptibility of our Detroit River source water intakes were determined to be highly susceptible to potential contamination. However, all four Detroit water treatment plants that use source water from Detroit River have 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 your local water department.

I'm pleased to report that our drinking water is safe and meets or exceeds federal and state requirements. 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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Detroit Water and Sewer Department routinely monitors for contaminants in the City of Rockwood's drinking water according to federal and state laws. The table provided shows the results of our monitoring for the period of January 1st to December 31st, 2013. The State allows us to monitor for certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as a person 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).

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).

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 in source water:

- ◆ 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 agricultural, storm water runoff, and residential uses.
- ◆ 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.
- ◆ Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 material and components associated with service line and home plumbing. The City of Rockwood 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 and cooking. If you are concerned about lead in your water, you may wish to have your water tested. Info on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

In the table provided you would find many of these terms and abbreviations unfamiliar. To help you better understand these terms we provided definitions:

1. 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.
2. Maximum contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLG as feasible using the best available treatment technology.
3. Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
4. 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.
5. Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or one penny in \$10,000.
6. Parts per billion (ppb) – one part per billion corresponds to one minute in 2,000 years or a penny in \$10,000,000.
7. Nephelometric Turbidity Unit (NTU) – the unit of measure for the clarity of water. Turbidity in excess of 5 NTU is just noticeable to an average person.
8. Action Level (AL) – concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, a water system must follow.
9. Treatment Technique – a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
10. Turbidity – Turbidity has no health effects, however, turbidity can interfere with disinfections and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, diarrhea, cramps, and associated headaches.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

If you have any questions about this report or concerning your water utility, please contact Adam Grabetz, Director of Public Works at (734) 379-9496. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held every month on the first and third Wednesday at 32409 Fort Street, Rockwood Mi, 48173 at 7:00pm.

Copies of this report are available at the Rockwood City Hall 32409 Fort St. Rockwood Mi 48173.

**Southwest Water Treatment Plant
2013 Regulated Detected Contaminants Tables**

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
Fluoride	5/13/2013	ppm	4	4	0.71	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	5/13/2013	ppm	10	10	0.69	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	6/9/2008	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Disinfection By-Products – Monitoring in Distribution System Stage 2								
Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2013	ppb	n/a	80	51.4	13.6-51.4	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2013	ppb	n/a	60	19	8-19	no	By-product of drinking water disinfection.

Disinfection – Monitoring in Distribution System								
Regulated Contaminant	Test Date	Units	Health Goal	Allowed Level	Highest RAA	Range of Detection	Violation	Major Sources in Drinking Water
Disinfectant Total Chlorine Residual	2013	ppm	MRDGL 4	MRDL 4	0.85	0.47-0.88	no	Water additive used to control microbes.

2013 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	Major Sources in Drinking Water
0.15 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.

2013 Microbiological Contaminants – Monthly Monitoring in Distribution System					
Regulated Contaminant	MCLG	MCL	Highest Number Detected	Violation	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	in one month	no	Naturally present in the environment.
<i>E.coli</i> or Fecal Coliform Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E.coli</i> positive.	entire year	no	Human waste and animal fecal waste.

2011 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Violation	Major Sources in Drinking Water
Lead	2011	ppb	0	15	1.1	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	.025	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 lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Contaminant	Treatment Technique	Running annual average	Monthly Ratio Range	Violation	Typical Source of Contaminant
Total Organic Carbon (ppm)					Erosion of natural deposits

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.

2013 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	5.54	Erosion of natural deposits