

2022 Drinking Water Quality Report

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 recommended by the Oakland County Water Resources Commissioner (WRC) that you remove and clean each faucet aerator twice annually and flush stagnant water. Aerators are the screens that screw into the end of each 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. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or

other immune systems 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/Center for Disease Control 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 have a lead service line it is recommended that you run your water for at least five minutes to flush water from both your home plumbing and the lead service line. 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 800-426-4791 or at 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 800-426-4791.

Cross Connection Control Program

The Michigan Department of Environment, Great Lakes and Energy (EGLE) approved WRC Cross Connection Control Program 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 back pressure and/or via a back-siphon. The Cross Connection Control Program helps prevent backflow contamination which protects the quality of the water system and the safety and public health of all water customers.

For more information about your water system, visit www.oakgov.com/RoyalOakTwpWater

Charter Township of Royal Oak



2022 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 (Water System Serial Number [WSSN] 5840) agent. 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. The Oakland County Water Resources Commissioner (WRC) is pleased to present the Annual Drinking Water Quality Report (CCR) for the year 2022.

Your drinking water comes from surface water from the Detroit River intakes via the Springwells and Northeast Water Treatment Plants. We purchased the water from the Great Lakes Water Authority (GLWA). The Michigan Department of Environment, Great Lakes, and Energy (EGLE) 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 in 2004 to determine the susceptibility of GLWA's Detroit River source water for potential contamination. The susceptibility rating is based on a seven-tiered scale and ranges from very low to very high determined primarily using geologic sensitivity, water chemistry, and potential contaminant sources. The report described GLWA's Detroit River intakes as highly susceptible to potential contamination. GLWA's Northeast and Springwells water treatment plants that draw water from the Detroit River has historically provided satisfactory treatment and meets drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in the National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. GLWA has a Surface Water Intake Protection plan for the Belle Isle Intake. The plan has seven elements that include: roles and duties of government units and water supply agencies, delineation of a source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, public participation, and public education activities. If you would like to know more information about the Source Water Assessment report please contact GLWA at 313-926-8127.

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, Kathryn DiCea, at wrcwater@oakgov.com or 248-452-9158. We want our valued customers to be informed about their water utility.

System Design and Improvements

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 lifestyle and our children's future. Please call the WRC office at 248-452-9158 if you have questions or visit our web site at www.oakgov.com/water.

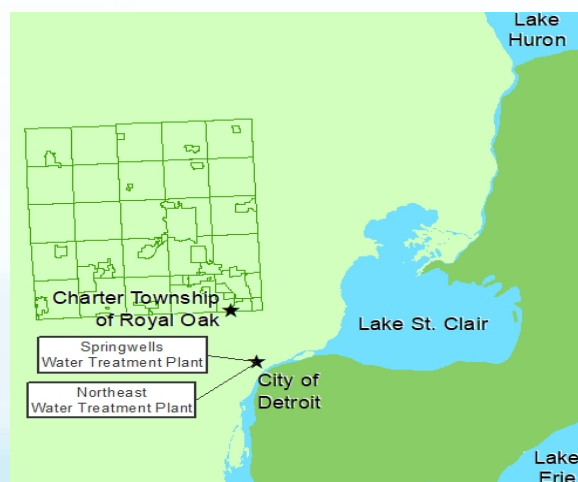
Outdoor Water Use

The Charter Township of Royal Oak Water Supply System is asking all property owners to follow the Irrigation Management Resolution in an effort to control future water rate increases. The resolution strongly encourages manual and automatic irrigation systems to be operated during non-peak times. Non-peak hours are between midnight and 5 a.m. Please contact Kathryn DiCea at 248-452-9158 with water conservation questions.

Your Water Quality

The Charter Township of Royal Oak Water System is routinely monitored, in accordance with the Safe Drinking Water Act (SDWA), for contaminants in your drinking water. The following tables show the results of our monitoring for the period of January 1 to December 31, 2022.

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 Environmental Protection Agency (EPA) has determined that your water is safe at the levels detected.



Regulated Contaminants Table

Contaminant	Test Year	Health Goal MCLG	Allowed Level MCL	Highest Detected Level	Range of Detection	Units	Major Sources in Drinking Water	Violation
Inorganic Chemicals - Monitoring at Plant Finished Water Tap								
Fluoride	2022	4	4	0.60	0.59 - 0.60	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	No
Nitrate	2022	10	10	0.97	0.54 - 0.67	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	No
Disinfectant Residuals and Disinfectant By-Products - Monitoring in Distribution System								
Haloacetic Acids (HAA5)	2022	NA	60	19	NA	ppb	By-product of drinking water disinfection.	No
Total Trihalomethanes (TTHM)	2022	NA	80	31	NA	ppb		No
Disinfectant (chlorine)	2022	MRDLG 4	MRDL 4	RAA 0.91	0.55 - 1.03	ppm	Water additive to control microbes.	No
Running Annual Average (RAA) - The average of analytical results for all samples during the previous four quarters.								
2022 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%)			Major Sources in Drinking Water			Violation
0.25 NTU		100%			Soil runoff.			No
<p>Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.</p> <p>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 quarter and because the level was low, there is no requirement for TOC removal.</p>								
Copper and Lead Monitoring at Customers' Tap								
Contaminant	Test Year	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Range of Detection	Units	Major Sources in Drinking Water	Number of Samples above AL
Copper	2022	1.3	1.3	0.1	0 - 0.2	ppm	Corrosion of household plumbing systems; Erosion of natural deposits.	0
Lead	2022	0	15	0	0 - 0	ppb	Lead service lines, corrosion of household plumbing including fittings and fixtures, erosion of natural deposits.	0
<p>*The 90th percentile value means 90 percent of the homes tested have copper and lead levels below the given 90th percentile value. If the 90th percentile value is above the AL, additional requirements must be met.</p> <p>Per- and polyfluoroalkyl substances (PFAS) were analyzed in 2022 and were not detected.</p> <p>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.</p> <p>Service Line Material - The Township of Royal Oak has a total of 680 service lines. Of which, 8 are lead service lines, 698 are unknown, and 83 do not contain lead.</p>								

Special Monitoring, FAQs, and WRAP

Contaminant	Test Year	MCLG	MCL	Highest Level Detected	Range of Detection	Units	Major Sources in Drinking Water
Sodium	2022	NA	NA	5.6	NA	ppm	Erosion of natural deposits.

Water Quality FAQs

Why is my water cloudy?

White/milky cloudiness is typically little air bubbles. To confirm, fill a clear glass with water and set it on your counter. After a short amount of time, it should start to clear from the bottom up.

Why does my water smell like chlorine?

Chlorine is a disinfectant that is added to the drinking water. The EPA has determined that levels of chlorine up to four parts per million in drinking water is safe for consumption.

Why does my water smell like rotten eggs?

Stagnant water may start to smell like sulfur or rotten eggs. Let the water run for a few minutes and the smell should clear. If the odor is only in the hot water, try flushing out your hot water tank. We recommend this be done at least annually.

Have more questions?

Please email wrcwater@oakgov.com or call 248-452-9158.

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. Copies are available for your distribution by contacting the WRC office at wrcwater@oakgov.com or 248-452-9158.

Water Residential Assistance Program (WRAP)

The Water Residential Assistance Program (WRAP) can help reduce your water bill and pay past due balances. The two-year program provides funding to eligible, low-income homeowners or renters to assist with water bills, water conservation, and self-sufficiency initiatives. Disabled customers and seniors may qualify for a longer period. For more information, call 248-983-5656 or visit <https://unitedwaysem.org/utility-assistance>. WRAP is funded by the Great Lakes Water Authority and administered by United Way of Southeast Michigan.



Important Definitions

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

Halooacetic 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. 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.

Maximum Contaminant Level Goal (MCLG) – The level of contaminant in drinking water below which there is no known or expected risk to health.

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) – Measures 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) – The sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.

MAINTAINING QUALITY DRINKING WATER IN YOUR HOME



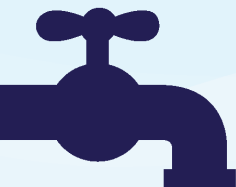
A Shared Responsibility

Maintaining drinking water quality is a shared responsibility between the water supplier and the resident.

We're Committed to...

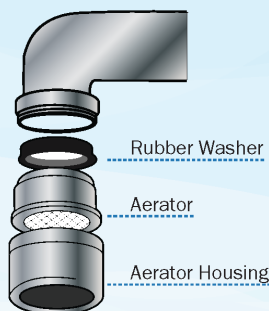
- Protecting public health and wellness.
- Delivering the same clean, high-quality water we've always delivered.
- Providing greater public education.

In order to maintain or improve water quality at home, there are a few things you should remember to do on a regular basis:



Remove and Clean Your Aerator Every 6 Months.

The aerator is that screen on the end of your faucet, and it's important to remove it and clean it every six months.



Also, if you have any plumbing work done, remove and clean the aerators on every faucet to get rid of particles that build up.

Flush Water that Has Been Sitting in Your Pipes.

Overnight, water sits stagnant in your pipes. And the longer it sits there, the more metal it may contain. So, flush your pipes by running the cold water for several minutes before you use it.



Replace Faucets, Fittings or Valves From Before 2014.

Even if marked 'lead-free,' faucets, fittings and valves sold before 2014 may contain higher levels of lead than the current tolerance of 0.25%. It might be time to upgrade.



Drink and Cook With Cold Water

Only use cold water for drinking or cooking. Hot water can sit for long periods of time in a hot water heater and could contain dissolved metals.

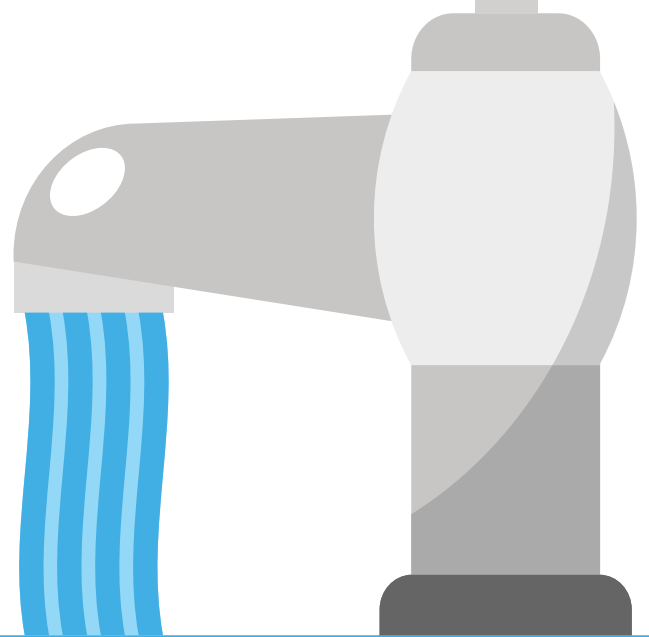
Purely Resourceful

www.oakgov.com/water

NEED ASSISTANCE WITH YOUR WATER BILL?

WRAP CAN HELP!

The Water Residential Assistance Program provides funding to eligible, low-income households. Funding is provided by the Great Lakes Water Authority and is administered in partnership with local community action agencies.



WRAP can help reduce your water bill and pay past due balances!

WRAP Eligibility:

- Reside within an eligible GLWA Member Community (see reverse side for list)
- Responsible for paying your water bill
- At or below 200% of the federal poverty level
- Own or rent your home

200% Federal Poverty Chart

Number of Household Members	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Income Limit (\$)	27,180	36,620	46,060	55,500	64,940	74,380	83,820	93,260	97,980	102,700	107,420	112,140	116,860	121,580

WRAP is administered by local service delivery partners



248-983-5656

<https://uwsem.smapply.org/prog/utilities/>



United Way serves the following communities in Oakland County:

Auburn Hills	Keego Harbor	Royal Oak, City of
Berkley	Lake Angelus	Southfield Township
Beverly Hills	Lake Orion	Southfield, City of
Bingham Farms	Lathrup Village	Sylvan Lake
Birmingham	Madison Heights	Troy
Bloomfield Hills	Novi	Walled Lake
Bloomfield Township	Oak Park	Waterford Township
Clarkston	Oakland Township	West Bloomfield Township
Clawson	Orchard Lake	Wixom
Commerce Township	Orion Township	
Farmington	Oxford Township	
Farmington Hills	Oxford Village	
Ferndale	Pleasant Ridge	
Franklin	Pontiac	
Hazel Park	Rochester	
Huntington Woods	Rochester Hills	
Independence Township	Royal Oak Township	