



DETROIT METRO • WILLOW RUN  
WAYNE COUNTY AIRPORT AUTHORITY

# 2021 Water Quality Report



The Wayne County Airport Authority wants you to know the water we supply to our customers complies with all Federal and State standards for quality and safety.

**Water System Serial Number (WSSN):**  
01798

# Consumer Confidence Report

Drinking water quality is important to communities near Detroit Metropolitan Airport (DTW). The Wayne County Airport Authority (WCAA) and the Great Lakes Water Authority (GLWA) are committed to meeting state and federal water quality standards, including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, GLWA consistently delivers safe drinking water to Detroit Metro Airport. The WCAA operates the system of water mains that carry this water to Airport buildings. The Water Quality Report highlights the performance of GLWA and WCAA water professionals in delivering some of the nation's best drinking water. Together, GLWA and WCAA remain committed to protecting public health and maintaining open communication with the public concerning DTW's drinking water.

## Our Water is Safe

Last year DTW's tap water met all standards required by the U.S. Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ). This 2021 Annual Water Quality Report describes water sources, lists test results, and contains important information about water and health. This report is intended to provide consumers with an understanding of drinking water issues and to heighten awareness of the need to protect drinking water resources. For more information on these testing results, please see the water quality tables and definitions as provided. The WCAA hopes you find this report helpful.

## 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 at (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 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, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organics, 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.

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. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

## PEOPLE WITH SPECIAL HEALTH CONCERNS

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. USEPA/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).

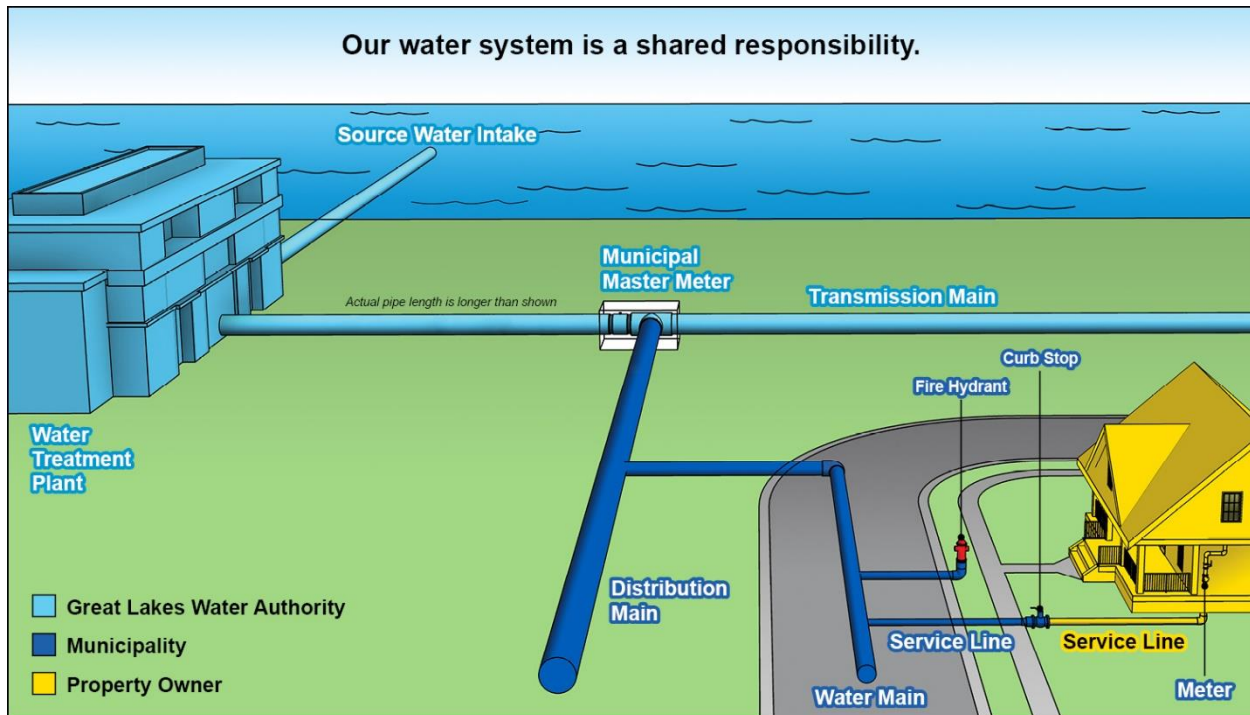
## LEAD & COPPER INFORMATION

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and children who drink water containing lead could experience delays in their physical and 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. Lead in drinking water is primarily from materials and components associated with lead services lines, corrosion of household plumbing including fittings and fixtures, erosion of natural deposits. Copper in drinking water is primarily from corrosion of household plumbing system, erosion of natural deposits, leaching from wood preservatives. The WCAA 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 have a lead service line it is recommended that you run 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 1-800-426-4791 or <http://www.epa.gov/safewater/lead>.

<b>Number of Lead Service Lines</b>	<b>0</b>	
<b>Number of Service Lines of Unknown Material</b>	<b>0</b>	
<b>Number of Service Lines in the Supply</b>	<b>52</b>	

## SOURCE WATER INFORMATION

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, watersheds 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 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 Springwells water treatment plant that draws 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. In 2021, the Michigan Department of Environmental, Great Lakes and Energy approved the GLWA's Updated 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 (313 926-8102).

WCAA and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please contact us with any questions or concerns about your water.

**For more information please contact:**

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 Mon-Fri, 8:00am to 4:30pm

## Key to the Detected Contaminants Table

<b>Symbol</b>	<b>Abbreviation</b>	<b>Definition/Explanation</b>
AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
>	Greater than	
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, di-bromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
Level 1	Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our system.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
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.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.
MRDL	Maximum Residual Disinfectant Level	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.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	not applicable	
ND	Not Detected	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	The average of all analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
µmhos	Micromhos	Measure of electrical conductance of water



## 2021 Detroit Metro Airport (DTW) Detected Contaminants Table(s)

Lead and Copper Monitoring at the Customer's Tap in 2021 – Detroit Metro Airport (DTW)								
Regulated Contaminant	Unit	Year Sampled	Health Goal MCLG	Action Level AL	90 <sup>th</sup> Percentile Value*	Range of Individual Samples Results	Number of Samples Over AL	Major Sources in Drinking Water
Lead	ppb	2021	0	15	0	0 – 6.0	0	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits.
Copper	ppm	2021	1.3	1.3	0.6	0 – 1.0	0	Corrosion of household plumbing system; Erosion of natural deposits.

\* The 90<sup>th</sup> percentile value means 90 percent of the homes tested have lead and copper levels below the given 90<sup>th</sup> percentile value. If the 90<sup>th</sup> percentile value is above the AL additional requirements must be met.

2021 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System, Detroit Metro Airport (DTW)								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
(TTHM) Total Trihalomethanes	2021	ppb	n/a	80	31	31	No	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2021	ppb	n/a	60	14	14	No	By-product of drinking water chlorination

2021 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System, Detroit Metro Airport (DTW)								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	# of Samples	Total Detections	Violation	Major Sources in Drinking Water
Total Coliform	2021	MPN	ND	ND	89	2 *	Yes	By-product of drinking water chlorination
E.Coli	2021	MPN	ND	ND	5	ND	No	By-product of drinking water chlorination

* 2021 Triggered Water Assessments		
Type of Assessment	Triggering Event	Assessment Findings / Action Plan
Level 1 Assessment	Positive Total Coliform Test Result	Two (2) routine coliform water samples indicated Total Coliform Presence in excess of 5% of samples. Sampling taps changed out to superior sampling device(s). Follow Up Samples tested negative for E.Coli & Coliform
Level 1 Assessment	Missed EGLE deadline for follow up testing for Positive Coliform Test Results	Process for results changed to a two – tier positive / negative response email & communication process between operators, with response required in all cases.
Level 2 Assessment	Two Level 1 Assessments in one Calendar Year (2021)	WCAA instituted a two tier communication plan for sampling results, reviewed sampling instructions and protocols against EGLE Standards. Sampling taps modified. Storage bottle storage process was modified as a precaution in addition to other steps.

## 2021 Southwest Regulated Detected Contaminants Table

2021 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap - GLWA								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	04/13/2021	ppm	4	4	0.58	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	04/13/2021	ppm	10	10	0.37	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	05/16/2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

2021 Disinfection Residual - Monitoring in the Distribution System- GLWA								
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2021	ppm	4	4	0.60	0.47-0.70	no	Water additive used to control microbes

2021 Turbidity - Monitored Every 4 Hours at the Plant Finished Water Tap - GLWA				
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
0.09 NTU	100%		no	Soil Runoff

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.

2021 Special Monitoring - GLWA						
Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	04/13/2021	ppm	n/a	n/a	4.52	Erosion of natural deposits

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon ppm	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC is measured each quarter and because the level is low, there is no requirement for TOC removal.	Erosion of natural deposits

Radionuclides - Monitored at the Plant Finished Tap in 2014 - GLWA							
Regulated Contaminant	Test Date	Unit	MCLG	MCL	Level Detected	Violation	Major Sources in Drinking Water
Combined Radium Radium 226 and 228	5-13-14	pCi/L	0	5	0.65 ± 0.54	no	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2021 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The data is representative of the water quality, but some are more than one year old.

## About Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants.

### 2021 Southwest Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.
<b>Turbidity</b>	NTU	0.23	0.03	<b>0.09</b>
<b>Total Solids</b>	ppm	172	97	<b>133</b>
<b>Total Dissolved Solids</b>	ppm	150	75	<b>124</b>
<b>Aluminum</b>	ppm	0.115	0.023	<b>0.049</b>
<b>Iron</b>	ppm	0.2	0.1	<b>0.2</b>
<b>Copper</b>	ppm	0.001	ND	<b>0.000</b>
<b>Magnesium</b>	ppm	8.3	5.9	<b>7.5</b>
<b>Calcium</b>	ppm	29.9	20.8	<b>26.1</b>
<b>Sodium</b>	ppm	6.0	4.1	<b>5.2</b>
<b>Potassium</b>	ppm	1.3	0.8	<b>1.0</b>
<b>Manganese</b>	ppm	0.002	ND	<b>0.000</b>
<b>Lead</b>	ppm	ND	ND	<b>0.000</b>
<b>Zinc</b>	ppm	ND	ND	<b>0.000</b>
<b>Silica</b>	ppm	2.6	1.3	<b>2.1</b>
<b>Sulfate</b>	ppm	31.3	20.7	<b>24.4</b>
<b>Chloride</b>	ppm	13.5	9.4	<b>10.8</b>

Parameter	Units	Max	Min.	Avg.
<b>Phosphorus</b>	ppm	0.45	0.30	<b>0.37</b>
<b>Free Carbon Dioxide</b>	ppm	10.7	0.7	<b>7.0</b>
<b>Total Hardness</b>	ppm	108	96	<b>101</b>
<b>Total Alkalinity</b>	ppm	76	64	<b>72</b>
<b>Carbonate Alkalinity</b>	ppm	0	0	<b>0</b>
<b>Bi-Carbonate Alkalinity</b>	ppm	76	64	<b>72</b>
<b>Non-Carbonate Hardness</b>	ppm	40	21	<b>29</b>
<b>Chemical Oxygen Demand</b>	ppm	3.9	ND	<b>1.1</b>
<b>Dissolved Oxygen</b>	ppm	12.3	7.9	<b>10.1</b>
<b>Nitrite Nitrogen</b>	ppm	ND	ND	<b>0.0</b>
<b>Nitrate Nitrogen</b>	ppm	0.55	0.21	<b>0.37</b>
<b>Fluoride</b>	ppm	0.76	0.17	<b>0.57</b>
<b>pH</b>		8.30	7.13	<b>7.37</b>
<b>Specific Conductance @ 25 °C</b>	µmhos	241	194	<b>224</b>
<b>Temperature</b>	°C	24.0	1.8	<b>13.4</b>



## 2021 Springwells Regulated Detected Contaminants Table

2021 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap - GLWA								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	04/13/2021	ppm	4	4	0.52	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	04/13/2021	ppm	10	10	0.34	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	05/16/2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

2021 Disinfection Residual - Monitoring in the Distribution System - GLWA								
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2021	ppm	4	4	0.69	0.59 - 0.76	no	Water additive used to control microbes

2021 Turbidity - Monitored Every 4 Hours at the Plant Finished Water Tap - GLWA				
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
0.20 NTU	100%		no	Soil Runoff

GLWA is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards. We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. We did not produce a filter profile for EGLE review within 7 days of an August 1, 2021, **individual filter** exceedance at the GLWA Springwells Water Treatment Plant as required by law. A filter profile is a summary of the turbidity and flow through the filter and is used to identify any trends in filter performance.

\*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 which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. \* These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

**What should I do?** There is nothing you need to do currently. This is not an emergency. You do not need to boil water or use an alternative source of water currently. Even though this is not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

**What happened? What is being done?** The filter profile has since been produced and submitted to EGLE and additional response actions have been implemented at the plant. We are making every effort to ensure this does not happen again.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. This notice is being sent to you by GLWA.

For more information, please contact the Water Quality Manager, at 313 926-8102

2021 Special Monitoring - GLWA						
Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	04/13/2021	ppm	n/a	n/a	4.36	Erosion of natural deposits

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon ppm	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC is measured each quarter and because the level is low, there is no requirement for TOC removal.	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2021 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The data is representative of the water quality, but some are more than one year old.

## About Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants.

## 2021 Springwells Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.	Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	0.12	0.03	0.07	Phosphorus	ppm	0.67	0.37	0.50
Total Solids	ppm	174	94	135	Free Carbon Dioxide	ppm	12.1	8.8	10.2
Total Dissolved Solids	ppm	146	75	120	Total Hardness	ppm	106	82	99
Aluminum	ppm	0.082	0.012	0.037	Total Alkalinity	ppm	76	64	70
Iron	ppm	0.3	0.1	0.2	Carbonate Alkalinity	ppm	0	0	0
Copper	ppm	0.003	ND	0.000	Bi-Carbonate Alkalinity	ppm	76	64	70
Magnesium	ppm	8.3	6.1	7.3	Non-Carbonate Hardness	ppm	35	18	29
Calcium	ppm	29.1	21.3	25.1	Chemical Oxygen Demand	ppm	3.3	ND	1.5
Sodium	ppm	8.4	4.4	5.3	Dissolved Oxygen	ppm	13.4	8.9	10.9
Potassium	ppm	1.3	0.8	1.0	Nitrite Nitrogen	ppm	ND	ND	0.0
Manganese	ppm	0.004	ND	0.000	Nitrate Nitrogen	ppm	0.45	0.23	0.32
Lead	ppm	ND	ND	0.000	Fluoride	ppm	0.71	0.38	0.55
Zinc	ppm	0.001	ND	0.000	pH		7.20	7.07	6.54
Silica	ppm	2.8	1.8	2.2	Specific Conductance @ 25 °C	µmhos	238	191	224
Sulfate	ppm	32.0	22.6	25.9	Temperature	°C	24.3	3.7	14.5
Chloride	ppm	12.9	8.9	10.4					