DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

2020 Water Quality Report

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

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 DTW's water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to DTW. The WCAA operates the system of water mains that carry this water to Airport buildings. This year's 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.

DTW'S 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 2020 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 is 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/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 & COPPER 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. 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/drink/info/lead.

*1. Number of lead service lines - 0
2. Number of service lines of unknown material – 0
3. Number of service lines in the supply - 50

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. However, all four GLWA water treatment plants that service the city of Detroit and draw water from the Detroit River have historically provided satisfactory treatment and meet 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 2016, the Michigan Department of Environmental Quality approved the GLWA Surface Water Intake Protection Program plan. The programs include seven elements that include the following: 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 the WCAA Environmental Department @ (734) 247-1428.

For more information please contact:

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Key to the Detected Contaminants Table

Symbol	Abbreviation	Definition/Explanation
>	Greater than	
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, Dibromoacetic, 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 the water system.
Level 2	Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
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.
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. MRLDG'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 analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	An MCL which involves a biological, chemical or physical characteristic of water that may adversely affect the taste, odor, color or appearance (aesthetics), which may thereby affect public confidence or acceptance of the drinking water.
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.
µohms	Microohms	Measure of electrical conductance of water

2020 Springwells Regulated Detected Contaminants Table

2020 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap								
Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MCLG**	**Allowed Level MCL**	**Highest Level Detected**	**Range of Detection**	**Violation**	**Major Sources in Drinking Water**
Fluoride	3-10-2020	ppm	4	4	**0.63**	**n/a**	**no**	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	3-10-2020	ppm	10	10	**0.37**	**n/a**	**no**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5-16-2017	ppm	2	2	**0.01**	**n/a**	**no**	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

2020 Disinfection Residual - Monitoring in the Distribution System								
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	2020	ppm	4	4	**0.70**	**0.60-0.79**	**no**	Water additive used to control microbes

2020 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System								
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	2020	ppb	n/a	80	30	n/a	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2020	ppb	n/a	60	20	n/a	no	By-product of drinking water chlorination

2020 Turbidity - Monitored Every 4 Hours at the 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**
0.21 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.			

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

Lead and Copper Monitoring at the Customer's Tap in 2020									
Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MCLG**	**Action Level AL**	**90th Percentile Value***	**Number of Samples Over AL**	**Range of Individual Samples Results**	**Violation**	**Major Sources in Drinking Water**
Lead	2020	ppb	0	15	0 ppb	0	0 ppb - 11ppb	**no**	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits"
Copper	2020	ppm	1.3	1.3	0.4 ppm	2	0 ppm-1.9 ppm	**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.									

2020 Special Monitoring						
Contaminant	**Test Date**	**Unit**	**MCLG**	**MCL**	**Highest Level Detected**	**Source of Contaminant**
Sodium	3-10-2020	ppm	n/a	n/a	**5.37**	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2020 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. All of the data is representative of the water quality, but some are more than one year old.

2020 GLWA Cryptosporidium – Giardia Statement:

GLWA voluntarily monitors our source water for the presence of Cryptosporidium and Giardia In 2020. The presence of Cryptosporidium and Giardia were detected in the source water at the Belle Isle Detroit River Intake serving Water Works Park, Springwells and the Northeast treatment plants. Cryptosporidium was detected once in March and Giardia once in April. All other samples monitored in 2020 were absent for the presence of Cryptosporidium and Giardia. Current test methods do not enable us to determine if these organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing sever, life threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium must be ingested for it to cause disease and may be passed through other means than drinking water. Surface water treatment systems like GLWA must provide treatment so that 99.9% Giardia is removed or inactivated.

2020 Springwells Mineral Analysis

Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	0.19	0.03	**0.08**
Total Solids	ppm	165	76	**136**
Total Dissolved Solids	ppm	140	98	**121**
Aluminum	ppm	0.106	0.014	**0.045**
Iron	ppm	0.177	ND	**0.110**
Copper	ppm	0.008	ND	**0.001**
Magnesium	ppm	7.82	5.93	**7.32**
Calcium	ppm	31.2	23.5	**27.3**
Sodium	ppm	5.94	4.51	**5.01**
Potassium	ppm	1.06	0.89	**0.98**
Manganese	ppm	ND	ND	**ND**
Lead	ppm	ND	ND	**ND**
Zinc	ppm	ND	ND	**ND**
Silica	ppm	2.4	ND	**1.8**
Sulfate	ppm	31.8	21.9	**25.9**

Parameter	Units	Max.	Min.	Avg.
Chloride	ppm	11.6	8.5	**9.8**
Phosphorus	ppm	1.17	0.16	**0.53**
Free Carbon Dioxide	ppm	10.4	5.7	**7.4**
Total Hardness	ppm	108	98	**102**
Total Alkalinity	ppm	74	66	**70**
Carbonate Alkalinity	ppm	ND	ND	**ND**
Bi-Carbonate Alkalinity	ppm	74	66	**70**
Non-Carbonate Hardness	ppm	39	26	**32**
Chemical Oxygen Demand	ppm	13.5	ND	**2.8**
Dissolved Oxygen	ppm	13.8	8.8	**11.1**
Nitrite Nitrogen	ppm	ND	ND	**ND**
Fluoride	ppm	0.77	0.49	**0.62**
pH		7.41	7.12	**7.29**
Specific Conductance @ 25 °C.	µohms	243	213	**224**
Temperature	°C	24.6	3.5	**13.4**

2020 Southwest Regulated Detected Contaminants Table

2020 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap								
Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MCLG**	**Allowed Level MCL**	**Highest Level Detected**	**Range of Detection**	**Violation**	**Major Sources in Drinking Water**
Fluoride	3-10-2020	ppm	4	4	**0.71**	**n/a**	**no**	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	3-10-2020	ppm	10	10	**0.61**	**n/a**	**no**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5-16-2017	ppm	2	2	**0.01**	**n/a**	**no**	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

2020 Disinfection Residual - Monitoring in the Distribution System								
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	2020	ppm	4	4	**0.62**	**0.49-0.72**	**no**	Water additive used to control microbes

2020 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System								
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	2020	ppb	n/a	80	30	n/a	**no**	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2020	ppb	n/a	60	20	n/a	**no**	By-product of drinking water chlorination

2020 Turbidity - Monitored Every 4 Hours at the 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**
0.13 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.			

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							
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

Lead and Copper Monitoring at the Customer's Tap in 2020									
Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MCLG**	**Action Level AL**	**90th Percentile Value***	**Number of Samples Over AL**	**Range of Individual Samples Results**	**Violation**	**Major Sources in Drinking Water**
Lead	2020	ppb	0	15	0 ppb	0	0 ppb – 11 ppb	**no**	Lead services lines, corrosion of household, plumbing including fittings and fixtures; erosion of natural deposits"
Copper	2020	ppm	1.3	1.3	0.4 ppm	2	0 ppm- 1.9 ppm	**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.									

2020 Special Monitoring						
Contaminant	**Test Date**	**Unit**	**MCLG**	**MCL**	**Highest Level Detected**	**Source of Contaminant**
Sodium	3-10-2020	ppm	n/a	n/a	**6.81**	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2020 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. All of the data is representative of the water quality, but some are more than one year old.

2020 Southwest Mineral Analysis

Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	0.50	0.04	**0.17**
Total Solids	ppm	167	46	**142**
Total Dissolved Solids	ppm	162	89	**127**
Aluminum	ppm	0.172	0.022	**0.072**
Iron	ppm	0.183	ND	**0.114**
Copper	ppm	ND	ND	**ND**
Magnesium	ppm	8.36	6.88	**7.54**
Calcium	ppm	34.8	24.6	**28.4**
Sodium	ppm	7.78	4.51	**5.35**
Potassium	ppm	1.31	0.93	**1.04**
Manganese	ppm	ND	ND	**ND**
Lead	ppm	ND	ND	**ND**
Zinc	ppm	ND	ND	**ND**
Silica	ppm	2.7	1.6	**2.0**
Sulfate	ppm	37.5	19.7	**26.1**

Parameter	Units	Max.	Min.	Avg.
Chloride	ppm	13.9	8.3	**9.6**
Phosphorus	ppm	1.24	0.12	**0.48**
Free Carbon Dioxide	ppm	16.7	6.0	**8.6**
Total Hardness	ppm	118	95	**104**
Total Alkalinity	ppm	78	66	**73**
Carbonate Alkalinity	ppm	ND	ND	**ND**
Bi-Carbonate Alkalinity	ppm	78	66	**73**
Non-Carbonate Hardness	ppm	40	25	**31**
Chemical Oxygen Demand	ppm	6.0	ND	**2.7**
Dissolved Oxygen	ppm	12.6	7.8	**10.3**
Nitrite Nitrogen	ppm	ND	ND	**ND**
Fluoride	ppm	0.76	0.56	**0.68**
pH		7.39	6.97	**7.25**
Specific Conductance @ 25 °C.	µohms	274	213	**231**
Temperature	°C	24.1	1.8	**12.6**