

Wayne County Airport Authority
Infrastructure and Engineering Department
2011 Water Quality Report

The Operations Division's Infrastructure and Engineering Department's "Utility Management Unit" handles the distribution of water that is purchased from the City of Romulus, which in turn receives its source water from the Detroit Water and Sewerage Department (DWSD). We want you to know that your tap water is safe to drink and it meets or surpasses all federal and state standards for quality and safety.

The Wayne County Airport Authority owns and operates one of the nation's largest privately operated water distribution systems. Ownership of the Airport's Water and Sewerage Infrastructure was transferred from the City of Romulus to the Authority in 2002. The system consists of approximately 90,000 linear feet or 17 miles of multiple-diameter pipes ranging in size from 4" to 24" in diameter (steel, ductile, iron and concrete). The Michigan Department of Environmental Quality (MDEQ) Water Quality Division provides oversight and conducts complete recordkeeping and field audits of our Water Management Unit on an annual basis. These audits include, but are not limited to, the following areas of concern:

1. Recordkeeping: System layouts, monthly Water Sample Chain of Custody documents, quality test results, etc. **(Perfect compliance records ten (10) years in a row).**
2. All bacteriological results for Coliform and E-coli. **(Zero violations in the past ten (10) years).**
3. Chlorine residual, lead and copper sampling results. **(All within EPA standards, no violations).**
4. Fire Hydrant Maintenance Program for flushing, painting and repairs. **(All functional, none found to be out of service, 100% functionality).**
5. Water valve maintenance (exercising, repairs and upgrades). **(All functional, no violations).**
6. Water main breaks and Capital Improvement work to the distribution system. **(Excellent results).**
7. Emergency Management Plan **(Acceptable).**
8. Cross Connection Inspections, including documenting all Airport facilities. **(Complete and up-to-date. All repairs and violations corrected 100%).**

9. Backflow Preventer recordkeeping and testing of all devices throughout the buildings. **(Complete and up-to-date. All violations and repairs complete 100%).**
10. All water main documents pertaining to system alterations. **(All As-Builts are complete and up-to-date).**
11. A thorough site tour of the system's meter wells, fire hydrants, etc. throughout the Airport. **(No violations).**

The latest MDEQ audit and site inspection was performed in June, 2012. Having a perfectly-compliant system ten years in a row is a testament to the dedication and professionalism of our field staff who despite the challenges they face with an older system and limited resources have been facing up to the challenge. Congratulations to Mr. James Warner (our licensed Water Distribution Operator) on a job well done!

Keep in mind, the Authority's Infrastructure and Engineering Department's "Utility Management Unit" will notify you immediately should there ever be reason of concern about our water.



DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY



2011

Water Quality Report

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

2011 Consumer Confidence Report

Spanish (Espanol)

Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien.

French (Francais)

Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quequ'un qui le comprend bien.

Is my water safe?

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Local water vigilantly safeguards its water supplies and once again we are proud to report that the Wayne County Airport Authority's System has not violated a maximum contaminant level or any other water quality standard.

Do I need to take special precautions?

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 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. The EPA/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

Wayne County Airport Authority's water is supplied to us by the City of Romulus through multiple combination systems connected to the City of Detroit's water system. Our water comes from the Detroit River situated within Lake St. Clair, Clinton River and Rouge River watersheds. The MDEQ, in partnership with U.S. Geological Society Survey, Detroit Water and Sewage Department (DWSD), and the Michigan Department of Public Health performed a source water assessment to determine the susceptibility of potential contamination. The rating is on a six tier scale from very low to high; based primarily on geologic sensitivity, chemistry, and contaminant source. The susceptibility of our Detroit water treatment plant(s) intakes determined to be highly susceptible to contaminants and historically provide satisfactory treatment for source water

Source water assessment and its availability

The 2011 Annual Report on Water Quality shows the sources of our water, lists the results of our tests and contains important information about water health.

We are pleased to show you how we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department Environmental Quality (MDEQ). If you would like to know more about this report, please visit the DWSD website at www.dwsd.org or contact May Lynn Semegen at 313-935-7106.

Why are there contaminants in my 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 (EPA) 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. Water can also pick up substances resulting from the presence of animals or from human activity as follows: microbial contaminants, such as viruses and bacteria, that 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 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; and 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, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for this.

How can I get involved?

Customers having questions may contact Jim Warner @ 734-942-3720, between the hours of 7:00 a.m. to 3:30 p.m.

Results of voluntary monitoring

Total Coliform bacteria tested weekly from four different service connections. No violations detected. All testing met EPA and MDEQ requirements for the year of monitoring.

WATER SAVING TIPS

Toilet leaks are the most common reason for water loss in a household. To determine if you have a leak, place a few drops of food coloring into the tank; DO NOT FLUSH. Wait 10-30 minutes; if the food coloring appears in the toilet bowl, you have a silent water leak.

An automatic dishwasher uses between 9-12 gallons of water; washing dishes by hand can use as much as 20 gallons.

PROTECTING OUR SOURCE WATER

Keep fertilizers, pesticides and herbicides off of paved surfaces and out of drainage paths. When choosing a fertilizer, select a slow-release formula, one with a low phosphorous concentration.

Clean and repair vehicles ONLY in areas where spilled chemicals cannot flow toward storm drains.

Have your septic tank inspected if it shows signs of failure such as lush grass around the drain field and unpleasant odors.

About Our Water System...

The 2011 Annual Report on Water Quality shows the sources of our water, lists the results of our tests and contains important information about water health.

The Wayne County Airport Authority and/or the Detroit Water and Sewerage Department will notify you immediately if there is reason for concern about our water. We are pleased to confirm we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ).

The Wayne County Airport Authority, along with the majority of surrounding communities, purchases water from the Detroit Water and Sewerage Department (DWSD). The Detroit Water Department provides drinking water to approximately 4.2 million people in 126 Michigan communities. The system uses water drawn from two intakes in the Detroit River, one to the north near the mouth of Lake St. Clair and the other to the south near Lake Erie. The water is directed to four large water treatment plants for processing. A fifth water treatment plant located in St. Clair County uses surface water from Lake Huron. This water is then passed through various combination systems to wholesale customers.

The Wayne County Airport Authority has four water connections off of the City of Romulus system. These four connections serve the Airports water demand.

How Our Water Becomes Safe To Drink?

The treatment facilities operate 24 hours a day, seven days a week. The treatment process begins with disinfecting the source water with chlorine to kill harmful micro-organisms that can cause illness. Next, a chemical called alum is mixed with the water to remove the fine particles that make the water cloudy. Alum causes the particles to clump together and settle to the bottom. Fluoride is also added to protect our teeth from cavities and decay.

The water then flows through fine sand filters called beds. These filters remove even more particles and certain micro-organisms that are resistant to chlorine. Finally, a small amount of phosphoric acid and chlorine are added to the treated water just before it leaves the treatment plant. The phosphoric acid helps control the lead that may dissolve in the water from interior plumbing systems. The chlorine keeps the water disinfected as it travels through water mains.

In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment and throughout the distribution system. Hundreds of samples are tested each week in certified laboratories by highly qualified, trained staff. Detroit water not only meets safety and health standards but also ranks among the top 10 in the country for quality and value.

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. WCAA is responsible for providing high quality drinking water, but cannot control the variety of materials used in interior plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing the tap for 30 seconds to two minutes before using the water. If you have concerns about lead in the 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>.

For more information please contact:

James R. Warner

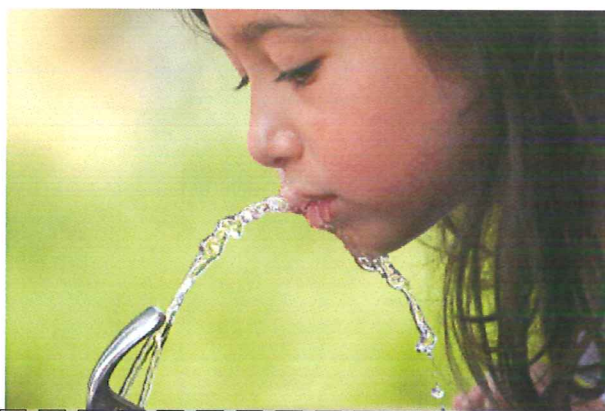
Address:

Wayne County Airport Authority - L.C. Smith Terminal – Mezzanine
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Springwells Water Treatment Plant

2011 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap								
Fluoride	8/14/2011	ppm	4	4	0.75	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/14/2011	ppm	10	10	0.18	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.
Selenium	6/9/2008	ppb	50	50	1	n/a	no	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System								
Total Trihalomethane (TTHM)	Feb-Nov 2011	ppb	n/a	80	26.5	10.8 – 45.1	no	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Feb-Nov 2011	ppb	n/a	60	15.1	8.2 – 21.0	no	By-product of drinking water disinfection
Disinfectant Chlorine residual	Jan-Dec 2011	ppm	MRDGL 4	MRDL 4	0.70	0.62 - 0.76	no	Water additive used to control microbes

2011 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
0.3 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.			

2011 Microbiological Contaminants – Monthly Monitoring in Distribution System				
Contaminant	MCLG	MCL	Highest Number Detected	Violation yes/no
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	in one month	
E. coli or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E. coli positive.	entire year	
		Major Sources in Drinking Water		
		Naturally present in the environment.		
		Human waste and animal fecal waste.		

2011 Lead and Copper Monitoring at Customers' Tap								
Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2011	ppb	0	15	0	0	n	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	0.265ppm	0	n	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.								

Regulated Contaminant	Treatment Technique	Running annual average	Monthly Ratio Range	Violation Yes/No	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 was measured each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits

2011 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	6.28	Erosion of natural deposits

Collection and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen.

Key to Detected Contaminants Tables

Symbo l	Abbreviation for	Definition/Explanation
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
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.
MRDL G	Maximum Residual Disinfectant Level Goal	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.
MRDL	Maximum Residual Disinfectant Level	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.
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.
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
ND	Not Detected	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
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.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.
n/a	not applicable	
>	Greater than	

Southwest Water Treatment Plant 2011 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap								
Fluoride	8/14/2011	ppm	4	4	0.77	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/14/2011	ppm	10	10	0.21	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.
Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Feb-Nov 2011	ppb	n/a	80	33.1	11.9 – 49.2	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	Feb-Nov 2011	ppb	n/a	60	16.8	10.3 – 26.0	no	By-product of drinking water disinfection.
Disinfectant (Total Chlorine) Residual)	Jan-Dec 2011	ppm	MRDGL 4	MRDL 4	0.77	0.60 – 0.86	no	Water additive used to control microbes.

2011 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
0.3 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.			

2011 Microbiological Contaminants – Monthly Monitoring in Distribution System					
Contaminant	MCLG	MCL	Highest Number Detected	Violation yes/no	Major Sources in Drinking Water
Total Coliform bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	in one month		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		Human waste and animal fecal waste.

2011 Lead and Copper Monitoring at Customers' Tap								
Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2011	ppb	0	15	0	0	n	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	0.265ppm	0	n	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.								

Regulated Contaminant	Treatment Technique	Running annual average	Monthly Ratio Range	Violation Yes/No	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 was measured each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits

2011 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	5.02	Erosion of natural deposits

on and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen.