Contact Information

Water Treatment Plant: (810) 787-6537

Request a water test.
Request a tour of the facility.
Ask questions about water quality.

Water Service Center: (810) 766-7202

Report a water leak or other system issues.

Water Pollution Control: (810) 766-7210

Inquiries related to wastewater treatment
Inquiries related to converting methane gas into energy

Customer Service: (810) 766-7015

Questions about your water and sewer bill.

City of Flint
Department of Utilities - Water Treatment Plant
4500 N. Dort Highway
Flint, MI 48505

Annual Water Quality Reports for the 2015 calendar year

CITY OF FLINT – DEPARTMENT DIRECTORY

Administration

Mayor's Office – (810) 766-7346
City Administrator's Office – (810) 766-7346 ext 2025
City Clerk's Office (Licensing) – (810) 766-7416
City Clerk's Office (Elections) – (810) 766-7413
City Council Office – (810) 766-7418
City Attorney's Office – (810) 766-7146

Finance

Finance Administration – (810) 766-7266
Customer Service Center (Water/Tax Bills)/Treasury/Income Tax – (810) 766-7015
Accounts Payable – (810) 766-7263
Assessing – (810) 766-7255
Purchasing – (810) 766-7340
Human Resources and Labor Relations – (810) 766-7280
Information Technology Services – (810) 766-7155
Payroll – (810) 766-7266
Employee Health Clinic – (810) 766-7380
Fleet Management – (810) 766-7420

Public Safety

911 for Emergencies
68th District Court – (810) 766-8968
Fire Department Administration – (810) 762-7336
Arson Tip Line – (800) 44-ARSON
Police Department Main Desk – (810) 237-6800
Police Patrol Bureau – (810) 237-6801
Police Criminal Investigation Bureau – (810) 237-6901
Police Record Bureau – (810) 237-6870
Community Tip Line – (810) 237-6812
Blue Badge Volunteer Corps. – (810) 237-6926
Crimestoppers – (800) SPEAK-UP

Public Works

Transportation Division – (810) 766-7165
Traffic Engineering – (810) 766-7135
Street Maintenance – (810) 766-7343
Sanitation/Waste Collection (Republic Services) – (800) 438-0966
Sanitation/Recycling (Republic Services) – (888) 872-7455
Water Service Center – (810) 766-7202
Water Treatment Plant – (810) 787-6537
Water Pollution Control – (810) 766-7210

Planning and Development

Building & Safety Inspections/Blight Elimination – (810) 766-7284
Planning & Zoning – (810) 766-7355
Community and Economic Development/Parks & Recreation/Master Planning – (810) 766-7426

Labor Unions

AFSCME Local 1600 – (810) 766-7001
AFSCME Local 1799 – (810) 282-5176
Firefighters Union – (810) 767-1234
Flint Police Officers Association (Patrol Desk) – (810) 237-6801
Flint Police Sergeants (Patrol Desk) – (810) 237-6801

FLINT 2015 Annual Water Quality Report

Dear Customer:

We are providing the annual report summarizing the quality of the drinking water provided to you during the past year. This Consumer Confidence Report is required by the Federal and State of Michigan Safe Drinking Water Acts (SDWA). This report discusses the source of your tap water, the results of tests that we regularly conduct to assure the quality of your water and additional information that you may wish to know about your drinking water. We are required to update this report before July 1st each year with information about the previous calendar year's water supply.

As our customers already know, 2015 was a difficult year for the City of Flint. Both our customers and our employees were faced with repeated water quality challenges. The water quality information included in this report will confirm some of those difficulties. For example, the level of disinfection byproducts detected present in the first half of 2015 continued to exceed the drinking water standard until installation of new treatment methods reduced these levels and the drinking water returned to compliance after June of 2015. In addition, you will see two separate tables of water quality information. One table contains the results for the time frame when the city was using the water treatment plant to produce drinking water, and one table is for the time period that the city was purchasing water from the Great Lakes Water Authority.

We also wish to openly acknowledge that other water quality data collected during 2015 and included in this annual report may not have accurately measured the condition of Flint's drinking water at the time. Recent events have shown that not all sampling sites used by the City of Flint – Water Treatment Plant for compliance with the lead and copper rule qualified as high risk sites defined in the regulation. Therefore, the compliance results reported by the City likely did not accurately represent the water quality this monitoring is intended to reveal by targeting high risk sites.

Since discovering this fact, the City of Flint – Department of Utilities has been working diligently with the Michigan Department of Environmental Quality and the United States Environmental Protection Agency to develop a sampling program that includes sites that have been confirmed by inspection as posing the greatest risk for containing high levels of lead in water samples. The results of this enhanced lead and copper monitoring that began in February of 2016 and will continue through the end of this year can be found on the internet at: http://www.michigan.gov/flintwater.

We want our customers to know that the lead and copper results from 2015 compliance monitoring are included in this report because it is a requirement of the Federal and State SDWA even though it was discovered after the fact that these sampling sites did not all comply with the selection criteria established for his compliance monitoring.

Water Sources:
The City of Flint began using the Flint River as its water source in May of 2014, and continued until October 16, 2015, when the City began receiving treated water from the Great Lakes Water Authority (GLWA). Flint is located in the middle of the Flint River Watershed. The Flint River Watershed includes the Holloway Reservoir, C.S. Mott Lake, Kearsley Lake, and numerous streams and creeks that drain to these lakes or directly to the Flint River. The Michigan Department of Environmental Quality, in partnership with the U.S. Geological Survey

and the City of Flint Utilities Department, conducted a source water assessment in February 2004 to determine the susceptibility to contamination. The susceptibility rating is a seven-tiered scale ranging from “very low” to “very high” based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Flint River source water intake is categorized as having a very high susceptibility to potential contaminant sources.

Since October 16, 2015, your source water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. 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 potential contamination. The susceptibility rating is a seven-tiered scale ranging from “very low” to “very high” based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

In 2015, DWSD received a grant from The Michigan Department of Environmental Quality to develop a source water protection program for the Lake Huron water treatment plant intake. The program includes seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection area, identification of potential of source water protection area, management approaches for protection, contingency plans, siting of new sources and public participation. If you would like to know more information about the Source Water Assessment report or a complete copy of this report please, contact the Great Lakes Water Authority’s Water Quality Manager, Mary Lynn Semegen at 313-926-8102.

General Information:
To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled 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 (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:

1. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
2. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
3. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
4. 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 stormwater runoff and septic systems.
5. 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. 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).

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 Flint Water Treatment Plant 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 are concerned about elevated lead levels in your home's 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 http://www.epa.gov/safewater/lead.

2015 Drinking Water Concerns:
The City of Flint exceeded the drinking water standard for total trihalomethanes (TTHM) from the fourth quarter of 2014 until August 2015. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

Moving Forward:
The City of Flint joined the Karegnondi Water Authority (KWA) in 2010. The KWA is constructing a raw water pipeline and pumping system to bring raw Lake Huron water to the Flint Water Treatment Plant. This high quality source water will be treated at the Flint Water Treatment Plant and distributed to our customers. The City will also be completing treatment and distribution system optimization studies and making improvements to the water system.

We will also continue to keep you informed through our web site, _ https://www.cityofflint.com/public-works/water-quality-concerns, and through periodic reports. If you have any questions about this report, you may contact the Water Treatment Plant Supervisor at 810-787-6537.

Flint Water Treatment Plant (January 1 – October 16)
2015 Regulated Detected Contaminants Tables

Inorganic Chemicals – Monitoring at the Plant Finished Water Tap

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Barium	**2015**	**ppm**	**2**	**2**	**0.03**	**0.01-0.03**	**NO**	Erosion of natural deposits.
Fluoride	**2015**	**ppm**	**4.0**	**4.0**	**0.87**	**0.57-0.87**	**NO**	Erosion of natural deposits; Water additive, which promotes strong teeth.
Nitrate	**2015**	**ppm**	**10**	**10**	**0.13**	**0-0.13**	**NO**	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits.
Selenium	**2015**	**ppb**	**50**	**50**	**1**	**0-1**	**NO**	Erosion of natural deposits.

2015 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 yes/no	Major Sources in Drinking Water
0.42 NTU	**98.7%**	**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.

Regulated Contaminant	MCL	MCLG	LEVEL FOUND	RANGE	SAMPLE DATE	VIOLATION	Typical Source of Contaminant
Total Organic Carbon (ppm)	**TT**	**n/a**	**68.9% removal (30% is required)**	**57.9-86.9% removal**	**Samples taken monthly**	**NO**	**Naturally present in the environment**

Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these t in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

2015 Raw Water Monitoring – Performed Monthly

Regulated Contaminant	MCL	MCLG	LEVEL FOUND	RANGE	SAMPLE DATE	VIOLATION	Typical Source of Contaminant
Cryptosporidium	**TT**	**0**	**1**	**n/a**	**10/7/15**	**NO**	**Naturally present in the environment**
Giardia lambia	**TT**	**0**	**4**	**n/a**	**10/7/15**	**NO**	**Naturally present in the environment**

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants and small children, and the elderly are a greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Disinfection By-Products – Monitoring in Distribution System, Stage 2 Disinfection By-Products

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	**2015**	**ppb**	**n/a**	**80**	**105**	**10-196**	**YES**	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5)	**2015**	**ppb**	**n/a**	**60**	**33**	**2-64**	**NO**	By-product of drinking water disinfection
Bromate	**2015**	**ppb**	**0**	**10**	**RAA 2.67**	**n.d.-19**	**NO**	By-product of drinking water ozonation

Flint Water Treatment Plant (January 1 – October 16)
2015 Regulated Detected Contaminants Tables
(Continued)

Disinfectant Residuals Monitoring in the Distribution System

Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest LRAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Free Chlorine Residual	**Jan-Oct 2015**	**ppm**	**4**	**4**	**0.97**	**0.05 – 4.00**	**NO**	Water additive used to control microbes

2015 Microbiological Contaminants – Monthly Monitoring in Distribution System

Regulated 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**	**1**	**NO**	Naturally present in the environment.
***E.coli* Bacteria**	**0**	**A routine sample and a repeat sample are total coliform positive, and one is also fecal or *E. coli* positive.**	**0**	**NO**	Human waste and animal fecal waste.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.

2015 Lead and Copper – Residential Monitoring at the Customer's Tap

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	**2015**	**ppb**	**0**	**15**	**11**	**6**	**NO**	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	**2015**	**ppm**	**1.3**	**1.3**	**0.16**	**0**	**NO**	Corrosion of household plumbing system; Erosion of natural deposits.

*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. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or 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.

2015 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	**n/a**	**n/a**	**18-25**	**Erosion of natural deposits**

Lake Huron Water Treatment Plant
(October 16 – December 31)
2015 Regulated Detected Contaminants Tables

Inorganic Chemicals – Monitoring at the Plant Finished Water Tap								
Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MCLG**	**Allowed Level MCL**	**Highest Level Detected**	**Range of Detection**	**Violation yes/no**	**Major Sources in Drinking Water**
Fluoride	**5/11/15**	**ppm**	**4**	**4**	**0.43**	**n/a**	**no**	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	**5/11/15**	**ppm**	**10**	**10**	**0.30**	**n/a**	**no**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residuals Monitoring in DWSD Distribution System by Treatment Plant								
Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MRDLG**	**Allowed Level MRDL**	**Highest RAA**	**Quarterly Range of Detection**	**Violation yes/no**	**Major Sources in Drinking Water**
Total Chlorine Residual	**Oct - Dec 2015**	**ppm**	**4**	**4**	**0.82**	**0.1 - 4.0**	**no**	Water additive used to control microbes

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 was measured each month and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

2015 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**
0.2 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.			

Regulated Contaminant	**Test Date**	**Unit**	**Health Goal MCLG**	**Allowed Level MCL**	**Level Detected**	**Violation yes/no**	**Major Sources in Drinking Water**
Combined Radium Radium 226 and 228	**5/13/2014**	**pCi/L**	**0**	**5**	**0.86 + or - 0.55**	**no**	**Erosion of natural deposits**

2015 Special Monitoring

Contaminant	**MCLG**	**MCL**	**Level Detected**	**Source of Contamination**
Sodium (ppm)	**n/a**	**n/a**	**4.00**	**Erosion of natural deposits**

Key to the Detected Contaminants Table

Symbol	Abbreviation	Definition/Explanation
>	Greater than	
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.
LRAA	Locational Running Annual Average	
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	
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, dibromoochloromethane and bromoform. Compliance is based on the total.
µmhos	Micromhos	Measure of electrical conductance of water
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.