



2019 WATER QUALITY REPORT

- ◆ Where your water comes from
- ◆ How we make your water safe to drink
- ◆ Results of EPA-required testing
- ◆ Addressing concerns about lead and other contaminants
- ◆ Where to find more information



LETTER TO OUR CUSTOMERS

The Tampa Water Department is pleased to present your 2019 Water Quality Report. Delivering safe, clean drinking water to the estimated

716,000 people who live and work within our 211-square-mile service area is a responsibility that we take very seriously.

This report reflects the dedication of almost 300 Water Department employees who are committed to ensuring that your water is safe every time you turn on your tap. From scientists and

lab technicians, field technicians and equipment operators, engineers, drafting technicians, conservation specialists, plant operators, mechanics, meter readers, procurement specialists, to call center representatives—we're on call 24 hours a day, seven days a week.

Providing you with high-quality water is our top priority.

In September 2019, the Tampa City Council passed a \$2.9 billion funding plan for large-scale sewer and water infrastructure improvements. This public works project, known as the Progressive Infrastructure Plan to Ensure Sustainability (PIPES), represents the

largest public works project in the City's history. Over 550 miles of deteriorating pipes will be replaced over a 20-year period, helping to ensure that Tampa continues to enjoy safe drinking water both now and for generations to come.

We hope you take this opportunity to learn more about your drinking water. Please reach out to us if you have any questions, concerns or suggestions. Our contact information is listed on the back of this report.

Chuck Weber, P.E.
City of Tampa Water Director

82 MILLION GALLONS A DAY

Tampa's Average Daily Drinking Water Demand



Aerial view of the Hillsborough Dam

WHERE YOUR WATER COMES FROM

Tampa Water Department customers rely on the Hillsborough River as their primary source of water. When the river supply cannot meet community demands during dry periods, we can augment our supply by using up to 1.2 billion gallons of finished water stored in underground aquifers. When necessary, the City of Tampa will purchase additional drinking water from Tampa Bay Water (TBW). During 2019, none of Tampa's drinking water was purchased from TBW.

The Water Department works with the Florida Department of Environmental Protection (FDEP) to conduct periodic source water assessments to determine the susceptibility of local drinking water to contamination. These assessments are updated every year. The 2019 assessment identified six potential sources of contamination in the vicinity of our system with susceptibility levels ranging from low to high. The assessment results are available on the FDEP Source Water Assessment and Protection website at www.dep.state.fl.us/swapp.

What are the pH and hardness levels of our drinking water?

The average pH of our finished water during 2019 was 7.86. The average total hardness of our finished water was 182 mg/L or 10.6 grains/gallon.

HOW WE MAKE YOUR WATER SAFE TO DRINK

The Tampa Water Department delivers water to over 716,000 people every day. Ensuring that Tampa residents, business employees and visitors have access to high-quality water is our top goal. Like most public water systems around the country, we employ a multi-step treatment process to ensure that your water is safe to drink. We conduct extensive testing at the David L. Tippin Water Treatment Facility, relying on field and lab testing as well as online analyzers to help ensure that the water we produce meets or exceeds federal drinking water standards.

Once the water leaves the treatment plant, the Water Department collects samples throughout our 211-square-mile service area, which includes some portions of unincorporated Hillsborough County. Taking these samples allows us to monitor the quality of the water as it travels through the pipes to your tap.

The Tampa Water Department monitors for drinking water contaminants in accordance with federal and state guidelines. Except where indicated otherwise, this report reflects monitoring results for the 2019 calendar year. Data obtained before January 1, 2019 and presented in this report is from the most recent testing done in accordance with applicable laws, rules and regulations.

TABLE DEFINITIONS

Many of the terms and abbreviations contained in this report may not be familiar since they are unique to the water industry. Below is a brief explanation of the terms that appear on the following pages.

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

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 has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goals (MRDLG): The level of a drinking water disinfectant below which there is no known or

expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A: Not applicable.

ND: Not detected. Indicates that the substance was not found by laboratory analysis.

Nephelometric Turbidity Unit (NTU): Measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable to the average person.

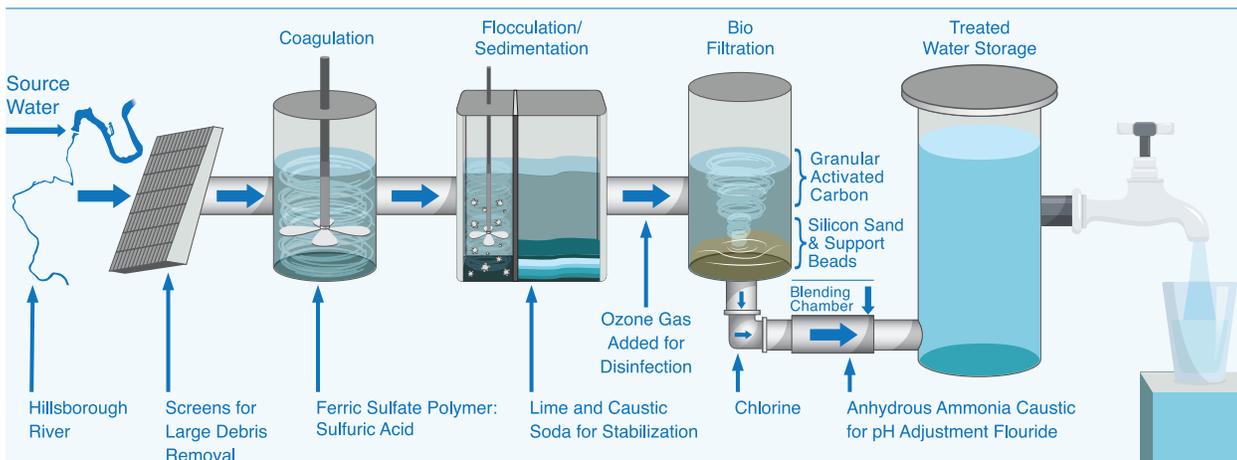
Parts Per Billion (ppb) or Micrograms Per Liter (ug/L): Equivalent to 1 billion parts by weight of the water sample.

Parts Per Million (ppm) or Milligrams Per Liter (mg/L): Equivalent to 1 million parts by weight of analyte.

Picocurie Per Liter (pCi/L): Measure of the radioactivity in water.

Trihalomethanes: Compounds formed during chloramination (disinfection) of drinking water. 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.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.



Our Water Treatment Process

2019 CITY OF TAMPA WATER QUALITY REPORT

Microbiological Contaminants

Contaminant	Dates of Sampling (mo/yr)	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL	Likely Source of Contamination
E. coli **	June 2019	No	1	0		Routine and repeat samples are total coliform positive and either is E. coli positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze total coliform positive repeat sample for E. coli

**E. coli: The total number of EC+ positive samples taken to comply with the RTCR must be reported, even if they are not MCL violations. A Public Water System (PWS) will receive an E. coli MCL violation when there is any combination of an E. coli positive (EC+) sample result with a routine/repeat TC+ or EC+ sample result. E. coli MCL violations occur with the following sample result combinations: Routine EC+ and Repeat TC+.

Turbidity

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	The Highest Single Measurement	The Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Turbidity (NTU)	Daily: Jan – Dec 2019	N	0.31	100%	N/A	TT	Soil runoff

The result in the lowest monthly percentage column is the lowest monthly percentage of samples reported in the Monthly Operating Report meeting the required turbidity limits. 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. High turbidity can hinder the effectiveness of disinfectant.

Radioactive Contaminants

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	March & May 2017	No	3.0	ND - 3.0	0	15	Erosion of natural deposits
Radium 226 + 228 (pCi/L)	March & May 2017	No	1.2	1.0 - 1.2	0	5	Erosion of natural deposits

Results in the level detected column for radioactive contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point depending on the sampling frequency.

Inorganic Contaminants

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	May 2019	No	0.25	0.25	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	May 2019	No	0.012	0.012	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	May 2019	No	0.55	0.55	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Nitrate (as Nitrogen) (ppm)	May 2019	No	0.28	0.28	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) *	May 2019	No	47	47	N/A	160	Salt water intrusion, leaching from soil

Results in the level detected column are the highest detected level at any sampling point. *The Florida Department of Environmental Protection (FDEP) has set the drinking water standard for sodium at 160 parts per million (ppm) to protect individuals who are susceptible to sodium sensitive hypertension or diseases that cause difficulty in regulation body fluid volume. Sodium is monitored so that individuals who have been placed on sodium (salt) restricted diets may take into account the sodium in their drinking water. Drinking water contributes only a small fraction (less than 10 percent) to the overall sodium intake. If you have been placed on a sodium-restricted diet, please inform your physician that our water contains 47 ppm of sodium.

Stage 1 Disinfectants and Disinfection By-Products

Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Bromate (ppb)	Monthly 2019	No	3.11	1.40 – 4.31	MCLG = 0	MCL = 10	By-product of drinking water disinfection
Chloramines (ppm)	Daily 2019	No	3.3	0.6 - 6.2	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

For bromate and chloramines the level detected is the highest running annual average (RAA), computed quarterly, from the monthly averages of all samples collected. The range of results is the range of results of all the individual samples collected during the past year.

Stage 1 Disinfectants and Disinfection By-Products

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	TT Violation Y/N	Lowest Running Annual Average, Computed Quarterly, of Monthly Removal Ratios	Range of Monthly Removal Ratios	MCLG	MCL	Likely Source of Contamination
Total organic carbon (ppm)	Weekly 2019	No	2.14	1.78 – 2.84	N/A	TT	Naturally present in the environment

The monthly total organic carbon (TOC) removal ratio is the ratio between the actual TOC removal and the required TOC removal. The lowest running annual average is the lowest removal ratio computed quarterly of the monthly removal ratios.

Stage 2 Disinfection By-Products

Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Haloacetic Acids (five) (HAA5) (ppb)	February 2019 May 2019 August 2019 November 2019	No	24.69	5.38 – 32.83	N/A	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	February 2019 May 2019 August 2019 November 2019	No	22.46	6.17 – 31.95	N/A	80	By-product of drinking water disinfection

The results in the level detected for haloacetic acids and total trihalomethanes are based on a locational running annual average. The range of results is lowest to highest at individual sampling sites.

Assessments

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that another potentially harmful waterborne pathogen may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year one Level 2 assessment was required to be completed for our water system. One Level 2 assessment was completed. In addition, we were required to take one corrective action and we completed one corrective action.

Update About The Morris Bridge Pumping Station

In 2019, the Tampa Water Department obtained a permit to make improvements to the water pressure within the water distribution system near the Morris Bridge Pumping Station. The improvements we made to the Morris Bridge Pumping Station improved our ability to deliver consistent water pressure throughout our service area. We installed new valves and a new booster pump and made some much needed modifications to our electrical and instrumentation systems.

We completed these updates as planned, however, we inadvertently placed that project into service without first notifying or obtaining the approval

of the Florida Department of Health-Hillsborough County (FDOH). We were then served with a notice of violation by the FDOH. The Tampa Water Department immediately took steps to obtain the needed clearances from FDOH, providing them with all the tests and documents they requested. The issue was resolved in just eight days.

Water quality was never affected. We have continued to provide high quality water that meets or exceeds federal drinking standards. The Tampa Water Department has updated our protocols to ensure that no facilities, including water mains, are placed into service before we receive FDOH clearance.

WHAT ABOUT UNREGULATED CONTAMINANTS?

As part of the 1996 Safe Drinking Water Act, the Environmental Protection Agency (EPA) requires public water systems to monitor for unregulated contaminants under the Unregulated Contaminant Monitoring Rule (UCMR).

Unregulated contaminant monitoring enables the EPA to develop a better understanding about whether or not certain contaminants may be present in public water systems and whether new regulations are required.

The Tampa Water Department is

participating in the EPA's fourth round of UCMR testing, known as UCMR4. At present, no health standards (for example, maximum contaminant levels) have been established for unregulated contaminants.

To view the latest results of our samplings, visit tampagov.net/water/info/water-quality.

If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule (UCMR), please call the Safe Drinking Water Hotline at (800) 426-4791.



9,000
Water Samples
Taken in 2019

40,000
Water Analyses
Conducted in 2019

Unregulated Contaminants: Metals

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	Levels Detected* (Average)	Range	Likely Source of Contamination
Manganese (ug/L)	June 2019 September 2019 December 2019	0.55	ND-1.10	It is a naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient

**Levels Detected: The levels detected reflect analytical results covering three combined quarterly sampling events for DLT Water Treatment Facility and Morris Bridge Treatment Facility at the entry point to the distribution system.*

Unregulated Contaminants: Disinfection By-Products

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	Levels Detected* (Average)	Range	Likely Source of Contamination
Bromochloroacetic acid (ug/L)		3.23	1.51 - 5.49	
Bromodichloroacetic acid (ug/L)		1.03	ND - 2.19	
Chlorodibromoacetic acid (ug/L)		0.72	ND - 3.36	
Dibromoacetic acid (ug/L)	June 2019	1.04	ND - 2.30	By-product of drinking water disinfection
Dichloroacetic acid (ug/L)	September 2019	7.47	1.77 - 16.0	
	December 2019			
Monobromoacetic acid (ug/L)		0.130	ND - 0.407	
Tribromoacetic acid (ug/L)		0.46	ND - 3.04	
Trichloroacetic acid (ug/L)		1.64	0.654 - 9.25	

**Levels Detected: The levels detected reflect analytical results covering three combined quarterly sampling events for 12 locations located in the City of Tampa's water distribution system.*

Unregulated Contaminants: David L Tippin Water Treatment Facility: Untreated Hillsborough River Raw Water Source

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	Levels Detected* (Average)	Range	Likely Source of Contamination
Bromide (ug/L)	June, Sept & Dec 2019	58.6	55.7 - 64.1	Naturally present in the environment
Total Organic Carbon (ug/L)	June, Sept & Dec 2019	12687	6300 - 18700	Naturally present in the environment

**Levels Detected: The levels detected reflect analytical results covering three combined quarterly sampling events for the raw water source.*

The following unregulated contaminants were not detected in our testing: Germanium, Alpha-Hexachlorocyclohexane, Chlorpyrifos, Dimethipin, Ethoprop, Oxyfluorfen, Profenofos, Tebuconazole, Permethrin, Tribufos, Butylated hydroxyanisole, o-Toluidine, Quinoline, 1-Butanol, 2-Methoxyethanol, 2-Propen-1-ol, Monochloroacetic acid

COMMON CONCERNS

Should I be concerned about lead?

When lead is found in tap water, it can typically be traced to lead that is leaching from plumbing material. The Tampa Water Department does not have lead service lines in our water distribution system. We also have a strong, proactive corrosion control program and continuously monitor our water, making adjustments to pH levels among other indicators to optimize corrosion control.

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 City of Tampa Water Department 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 lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

What if I'm immuno-compromised?

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

The Tampa Water Department regularly tests for Cryptosporidium and Giardia in raw water. (Raw water is water that has not yet been treated to make it safe to drink.) We collect raw water samples on at least a quarterly basis. Our results revealed that 25 percent of these samples contained these organisms. Fortunately, our multi-step disinfection process is designed to remove a wide variety of bacteria and viruses, including Cryptosporidium and Giardia.

Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	AL Exceeded (Y/N)	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	Action Level (AL)	Likely Source of Contamination
Copper (ppm)	July – Sept 2017	No	0.38	None	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	July – Sept 2017	No	2.4	None	0	15	Corrosion of household plumbing systems; erosion of natural deposits

DRINKING WATER CONTAMINANTS: WHERE THEY COME FROM

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 stormwater 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 stormwater 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 stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

CUSTOMER RESOURCES

Water Quality

- Ask questions about Tampa’s water quality by calling the Water Quality Lab: (813) 231-5253
- Learn more about Tampa’s water quality online: tampagov.net/waterquality
- Learn more about general water quality by contacting the Environmental Protection Agency (EPA)’s Safe Water Drinking Hotline: (800) 426-4791, epa.gov/sdwa
- Get guidance about a variety of health concerns by contacting the Hillsborough County Health Department: (813) 307-8059, hillsborough.floridahealth.gov

Conservation & Rebates

- Talk with a water conservation or water efficiency expert: (813) 274-8121, option #5
- Explore tips, assistance and rebates to help you save water and money on your next water bill: tampagov.net/savewater

Billing

- Manage your account: tampagov.net/cotu
- Speak with a customer service representative, Monday - Friday (8 am - 6pm): (813) 274-8811, option #3
- Income-qualifying homeowners may be eligible to waive the base charges on their water and wastewater bills. Learn more: tampagov.net/pipes

Emergencies

- Report an urgent concern such as a water outage, discolored water or hydrant leaks: (813) 274-8811, option #1
- Sign up to receive emergency alerts: tampagov.net/alert-tampa

ABOUT THIS REPORT

This report contains important information about your water quality. We are pleased to report that Tampa meets or exceeds state and federal requirements. If you have any questions about the information in this report, call the Tampa Water Department at (813) 274-8811 for assistance.

Este es un importante informe sobre la calidad de su agua. Con mucho gusto, le contamos que el agua de Tampa cumple o excede los requisitos estatales y federales. Si no tienes a alguien que pueda traducir este informe, llame al Departamento de Agua de la Ciudad de Tampa a (813) 274-8111 para obtener ayuda.



Water Tower at Sulphur Springs

STAY INFORMED

We want our customers to be informed about our services, programs and initiatives. Tampa Water Department related issues are discussed at Tampa City Council meetings.

Learn about upcoming meetings

Get the agenda for upcoming meetings by contacting the City Clerk’s office at (813) 274-8397 or visiting tampagov.net/city-clerk. You can also access copies of meeting transcripts from the City’s Web site, tampagov.net.

Attend a meeting in person

The City Council meets on Thursdays at 9 a.m. in City Hall, 315 E. Kennedy Blvd, Tampa.

View a meeting from your TV or mobile device

View City Council meetings live via our local government access cable channel, CCTV, as well as via live streaming.

- Channel 15 on Frontier Communications
- Channel 640 on Charter Spectrum