City of Tampa Florida

2014 Annual Drinking Water Quality Report

Respect • Integrity • Teamwork • Excellence

Letter from the Director

This Consumer Confidence Report is issued annually to provide details about the quality of Tampa's potable water. Unlike most utilities in Florida, Tampa uses surface water as its raw water supply source, treating an average of 77 million gallons of water a day from the Hillsborough River. Surface water, especially a river, presents a few more treatment challenges than other sources, with one of the biggest challenges being that surface water quality can change drastically in just hours. That is why our production team includes highly trained operators, maintenance and laboratory personnel working around the clock to ensure that your water is safe and clean every time you turn on your tap.

The Tampa Water Department is a proven leader in the water supply industry. We provide our customers superior drinking water, reclaimed water and utility support services with an ongoing commitment to quality.

In 2013, the Department earned the 15-year Directors Award from Partnership for Safe Water. The Partnership for Safe Water is sponsored by the American Water Works Association, Association of Metropolitan Water Agencies, National Association of Water Companies, and the Water Research Foundation. Tampa is one of only 25 utilities nationwide and the only water utility in Florida to receive this prestigious water quality award. We look forward to continuing to treat Tampa's water to high quality levels and to achieving the 20-year Directors Award in 2018.

Delivering quality drinking water to Tampa is so important that we have dedicated an entire section in our Strategic Plan to "Water Quality and Supply." The goals in this section are lofty and include these measures:

- Completing multiple research projects to improve finished water quality at reduced costs
- Obtaining an operating permit for the Aquifer Storage and Recovery system
- Exceeding Partnership for Safe Water goals

The Tampa Water Department is committed to delivering only the highest quality drinking water to our community. We recognize that quality drinking water is not only a basic need but essential to continued economic growth and development in Tampa and unincorporated Hillsborough County. I give you my pledge that we will continue improvements to our production and delivery systems to ensure that our customers have superior water for generations to come.

In 2014, we collected approximately 8,000 water samples and performed approximately 35,000 analyses of both our "raw," or untreated, and "finished," or treated water. This report lists only those compounds found in our finished water during calendar year 2014. As authorized and approved by the Environmental Protection Agency (EPA), the state has reduced monitoring requirements for certain contaminants to less than once per year because the concentrations of those contaminants are not expected to vary significantly from year to year. Some of our data, though representative, are more than a year old.

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How Tampa's Water is Used

1. Approximately 10% of the water the City of Tampa produces is used for system maintenance and fire protection.
2. Tampa produces an average 77 million gallons of drinking water every day to meet community needs.
3. Quality water for work and for play is an important part of Tampa's quality of life.
4. An estimated 20% of the water produced by the City of Tampa is used for residential and commercial irrigation.
5. Non-irrigation residential demands for drinking water consume about 35% of the water produced by the City of Tampa.
6. Tampa's commercial sector draws about 35% of Tampa's water production for business and industry.

This report is a requirement of the Safe Drinking Water Act Amendments of 1996. It is provided to share with you what the Tampa Water Department does to make protecting public health and safety are a priority for Tampa.

En Espanol: Este es un importante informe sobre la calidad de su agua. Si no tienes a alguien que pueda traducir este informe, llame al Departamento de Aguage de la Ciudad de Tampa at (813) 274-8121 para obtener ayuda.

Water Department
306 E. Jackson Street, 5th Floor East
Tampa, FL 33602
(813) 274-8121
Visit us at tampagov.net/WaterQuality

Is My Drinking Water Safe?

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 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 that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants such as salts and metals that 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 that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Radioactive contaminants that can be naturally occurring result from oil and gas production and mining activities.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production. Other sources include gas stations, urban stormwater runoff, agricultural application, and septic systems.

To ensure tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish similar limits for contaminants in bottled water to provide the same public health protection. Drinking water, including bottled water, may reasonably be expected to contain very 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Where Does Tampa's Drinking Water Come From?

The Hillsborough River is the surface water source that supplies most of Tampa's drinking water, an average of 77 million gallons a day. During the dry season, usually April through June, Tampa's river supply may be augmented with water stored in the City's Aquifer Storage and Recovery system. This system stores finished water in deep aquifers during the rainy season when the raw water supply typically is more abundant and withdraws water for additional treatment during the dry season when the raw water supply is less abundant. In addition, the City utilizes regionally developed groundwater, surface water and desalinated seawater purchased from the regional supplier of potable water, Tampa Bay Water (TBW). During 2014, less than 1 percent of the water supplied to our customers was purchased from TBW.

Tampa's primary water source is the Hillsborough River.

As a City of Tampa enterprise department, our legislative branch is the Tampa City Council, which holds hearings on budget and other financial matters, approves contracts and considers contracts and ordinances, some affecting the operation of the Tampa Water Department. City Council meets on Thursdays at 9 a.m. in City Hall, 315 E. Kennedy Blvd. Meetings are televised live on the local government access channel, and agendas for upcoming meetings may be requested from the City Clerk's office, (813) 274-8397, or viewed online at TampaGov.net.

Our Water Treatment Process

This filter building, constructed in 1924, remains at the center of the David L. Tippin Water Treatment Facility where our state-certified laboratory continuously monitors the treatment process. Our team of state-licensed water system operators and distribution system operators, and water quality laboratory technicians, work around the clock to ensure safe, reliable, high-quality drinking water for Tampa.

Tampa Water Treated in Six Steps Before Distribution

Rapid Mix: Naturally occurring organic matter found in Florida streams and rivers gives the Hillsborough River its tea-like color. A coagulant, ferric sulfate, and sulfuric acid are added to the water, and they react with the organic matter to form substances called floc. The floc acts as a nucleus to attract the suspended particles in the water.

Flocculation: During this step, polymers are added to the water, which is circulated to allow the floc particles to form larger, heavier floc solids.

Sedimentation: After flocculation, the water is allowed to gently flow vertically into rectangular settling basins. As the water moves down the length of the basin, the floc settles to the bottom. Clear, settled water is collected at the basin ends. Computerized traveling siphon bridges clean the basin bottoms, and settled floc vacuumed from the bottom is further treated and removed.

Stabilization and Disinfection: Clear water is collected at the end of the settling basins and is treated with ozone. Ozone is a strong oxidant capable of destroying harmful bacteria and viruses and inactivating microbial pathogens such as *Giardia* and *Cryptosporidium*. Ozone also destroys taste and odor causing compounds. Lime is added to the water before ozonation to stabilize the pH of the treated water.

Filtration: The treated water is filtered through mixed bed filters containing sand and activated carbon. The filters are periodically backwashed to remove collected particles for dewatering and disposal.

Final Disinfection: After filtration, chlorine and ammonia are added to the treated water to prepare it for storage. The added chemicals combine to produce a disinfectant called monochloramine. This compound serves as the final residual disinfectant for the finished water to ensure its quality from our plant to your tap. Fluoride is added to provide dental health benefits. Sodium hydroxide is added to produce the final desired drinking water pH before storage and distribution.

Water Quality Table

Listed are 17 compounds or compound groups detected in Tampa's drinking water during the 2014 reporting period. Not listed are the hundreds of other compounds for which we tested that were not detected.

TABLE DEFINITIONS

Range of Results - The range, lowest to highest, of compounds detected in finished water processed by the Tampa Water Department.

Units - ppm (Parts Per Million) - The equivalent of 1 cent in $10,000; ppb (Parts Per Billion) - The equivalent of 1 cent in $10 million; pCi/L (picoCuries Per Liter) - A measure of radioactivity; mrem/yr (millirems per year) - A measure of radiation absorbed by the body; MFL (million fibers per liter) - A measure of the presence of asbestos fibers that are longer than 10 micrometers.

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

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

MCLG (Maximum Contaminant Level Goal) - 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.

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.

MRDLG (Maximum Residual Disinfectant Level Goals) - The level of 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.

NTU (Nephelometric Turbidity Unit) - Measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable to the average person. Monitored as an indicator of the effectiveness of filtration systems. High turbidity can hinder the effectiveness of disinfectants.

Sources - The major sources of the compounds detected in the finished 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.

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

Y/N - Y indicates "yes" : N indicates "no."

Contaminants that May Be Present in Source Water Include:

A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

B. Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

C. Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

D. 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.

E. Radioactive contaminants, that may be naturally-occurring or be the result of oil and gas production and mining activities.

Florida's Source Water Assessment and Protection Program (SWAPP) performed a Source Water Assessment for our system in 2014. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of water sources. Three of our ASR wells have a moderate susceptibility for potential contamination from petroleum storage tanks and a hazardous waste facility located nearby. Our surface water system is considered to be at high risk from potential sources of contamination present in the watershed. For additional information about the SWAPP or the assessment for Tampa's source water, contact Florida's drinking water program at (850) 245-2118 or visit **www.dep.state.fl.us/swapp.**

What Special Information Should Immuno-Compromised People Know About Drinking Water?

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. Environmental Protection Agency and Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

What are Cryptosporidium and Giardia?

Cryptosporidium and *Giardia* are microscopic organisms that may enter surface waters from runoff containing animal wastes. If ingested, *Cryptosporidium* and *Giardia* may cause diarrhea, fever and other gastrointestinal symptoms. In the 22 years that the Tampa Water Department has tested for *Cryptosporidium* and *Giardia*, the organisms have never been detected in the finished water. The Tampa Water Department tests for *Cryptosporidium* and *Giardia* in both the raw and finished water. Samples of our finished and raw water were collected an average of twice a month during 2014. In 2014, it was found that 75 percent of the raw water samples were found to contain these organisms. *Cryptosporidium* and *Giardia* were not found in any of the finished water samples.

Other Important Information For Our Customers

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 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 **www.epa.gov/safewater/lead.**

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)	December 2014	N	0.170	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.

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)	June 2014	N	1.8	1.8	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Asbestos (MFL)	March 2011	N	0.20	0.20	7	7	Decay of asbestos cement water mains; erosion of natural deposits.
Barium (ppm)	June 2014	N	0.011	0.011	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium (ppb)	June 2014	N	1.5	1.5	100	100	Discharge from steel and pulp mills; erosion of natural deposits.
Cyanide (ppb)	June 2014	N	3.5	3.5	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Fluoride (ppm)	June 2014	N	0.70	0.70	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm.
Nickel (ppb)	June 2014	N	4.7	4.7	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate (as Nitrogen) (ppm)	June 2014	N	0.11	0.11	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium (ppb)	June 2014	N	2.4	2.4	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
*Sodium (ppm)	June 2014	N	23	23	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 regulating 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 23 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 2014	N	2.6	ND – 5.6	MCLG = 0	MCL = 10	By-product of drinking water disinfection.
Chloramines (ppm)	Daily 2014	N	3.2	1.0 – 3.9	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes.

For bromate and chloramines the level detected is the highest running annual average, computed quarterly, of 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 2 Disinfection By-Products

Haloacetic Acids (five) (HAA5) (ppb)	August 2014	N	11.2	5.14 – 12.3	N/A	MCL = 60	By-product of drinking water disinfection.
TTHM [Total trihalomethanes] (ppb)	November 2014	N	19.3	8.4 – 30.3	N/A	MCL = 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.

Organic Compounds

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 TOC (ppm)	Weekly 2014	N	2.58	1.92 - 2.84	N/A	TT	Naturally present in the environment.

The monthly TOC removal ratio is the ratio between the actual TOC removal and the required TOC removal.

Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Exceeded (Y/N)	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	July-September 2014	N	0.04	None	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

City of Tampa Water Efficiency

The following services are open to qualifying City of Tampa water account holders. Detailed criteria and information are available online at **tampagov.net/SaveWater** or call (813) 274-8121 to speak to a member of the Water Efficiency Team. These services will be provided as funding remains available.

- **Plumbing Retrofit Kit:**
  Residential account holders may be eligible for free low-volume showerheads and faucet aerators. The kit also includes a Home Water Efficiency Toolkit.

  Multi-family, commercial, industrial and hospitality customers may also be eligible for free showerheads and aerators for their facilities.

- **Rain Sensors:**
  Account holders with operable in-ground irrigation systems using an automatic controller may qualify for a free rain sensor to comply with Florida Statute requiring all irrigation systems be outfitted with a working rain shut-off device or other technology to inhibit or interrupt operation of the irrigation system during periods of sufficient moisture.

Want to Conserve Water But Not Sure Where to Start?

Account holders can take advantage of free water-saving devices and coaching to reduce their water use and their water costs by participating in the "Save Water – Save Cash" program. Customers can compare their monthly potable water usage with other similar users. If they typically use more water than other similar users, they can contact the Water Department to see how they might be able to make some changes to reduce their water use.

For more information about the "Save Water – Save Cash" program or to view average monthly potable water usage for customers in Tampa, log on to TampaGov.net/savewater or contact a Water Efficiency and Conservation Coordinator at (813) 274-8121, option #5.

To continue its role as a leader in the drinking water community, the Tampa Water Department is . . .

- An active member of the Partnership for Safe Water, an organization of more than 200 water utilities voluntarily implementing programs exceeding those required by legislation or regulation. Tampa is the first utility in Florida to receive the Partnership's 15-Year Directors Award by demonstrating our continuing commitment to provide safe water.

- An active member in the Association of Metropolitan Water Agencies, formed in 1981 to represent the interests and concerns of the nation's larger publicly owned drinking water systems. The association's membership serves more than 130 million people from Alaska to Puerto Rico with drinking water.

- An active member in the American Water Works Association, a clearinghouse of water supply information and expertise with more than 60,000 members worldwide.

- A promotional partner in the United States Environmental Protection Agency's WaterSense program, working to protect the future of our nation's water supply by promoting and enhancing the market for water-efficient products and services.

- An active member of the Alliance for Water Efficiency, a stakeholder-based 501(c)(3) non-profit organization, dedicated to the efficient and sustainable use of water. The Alliance serves as a North American advocate for water efficient products and programs, and provides information and assistance on water conservation efforts.

FOR MORE INFORMATION ABOUT . . .

Water Quality:
Call the U.S. Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791

Local Drinking Water Quality:
Call the Hillsborough County Department of Health, Environmental Health Services at (813) 307-8059

Commonly requested information:

Hardness: 140-300 ppm or 8 – 17 grains/gallon

pH: 7.3 – 8.1 (average range, may vary by season)