Additional Health Information

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:

(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, which 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,** which 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,** 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: 1-800-426-4791.**

For Customers with Special Health Concerns

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/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 (1-800-426-4791).**

How to Reach Us

If you have any questions about this report or concerning your water utility, please contact the FGUA's MacDill AFB Utility Operations Center at (813) 828-3984 or visit the web at http://www.fgua.com

The FGUA office at MacDill AFB is open from 7:30 AM until 4:00 PM, Monday through Friday.

The FGUA encourages its customers to become involved in decisions that may affect the quality of their drinking water. Customers interested in becoming involved may attend regularly scheduled meetings of the FGUA Board of Directors. These meetings are advertised in your local newspaper and also on the FGUA's web site.

Source Water Assessment Plan

In 2019, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment for the City of Tampa Water Department. 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 Program website:

http://fldep.dep.state.fl.us/swapp/

FLORIDA GOVERNMENTAL UTILITY AUTHORITY

MacDill Air Force Base (AFB)
PWS ID# 6296193
2019 Annual Drinking Water Quality Report

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day.

We are committed to ensuring the quality of your water. If you have any questions or concerns about the information provided in this report, please feel free to contact us.

Where Your Water Comes From

The David L. Tippin Water Treatment Facility (DLTWTF) produces the City of Tampa's Drinking Water and is the sole source of drinking water for MacDill AFB. The primary source of water for the DLTWTF is the Hillsborough River with treatment by: coagulation, flocculation, sedimentation, ozonation, pH adjustment, filtration, disinfection, and fluoridation. The City also purchases water from Tampa Bay Water (TBW) that is produced from groundwater, surface water, and desalinated seawater supplies.

The FGUA uses sodium hypochlorite and ammonium sulfate to form the chloramine compounds that supplement the disinfectant provided by the City of Tampa and required by

state and federal regulation. We also use a corrosion control inhibitor to minimize the leaching of lead and copper from water pipes and plumbing fixtures.

How We Ensure Your Drinking Water is Safe

The FGUA's MacDill AFB Water System routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2019. Data obtained before January 1, 2019, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

As authorized and approved by the EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from one year to another. As a result some of our data may be more than one year old.

How to Read the Table

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Action level (AL) – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Location Running Annual Average (LRAA) - the average of sample results taken at a particular monitoring location during the previous four calendar quarters.

Maximum contaminant level or 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 or 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 or 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 goal or 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.

ppm – parts per million or milligrams per liter is one part by weight of analyte to one million parts by weight of the water sample.

ppb – parts per billion or micrograms per liter is one part by weight of analyte to one billion parts by weight of the water sample.

2019 WATER QUALITY SUMMARY TABLE – FGUA MacDill AFB, PWS ID NO. 6296193

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
Chloramines (ppm)	Quarterly 2019	N	2.36	0.6-4.0	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

For chloramines, the level detected is the highest running annual average (RAA), 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 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
Haloacetic Acids (five) (HAA5) (ppb)	Mar, May, Sept, Dec 2019	N	19.825	8.8-31.0	NA	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	Mar, May, Sept, Dec 2019	N	35.395	19.2-64.1	NA	MCL = 80	By-product of drinking water disinfection

For haloacetic acids or TTHM, the level detected is the highest RAA, computed quarterly, of quarterly averages of all samples collected if the system is monitoring quarterly or is the average of all samples taken during the year if the system monitors less frequently than quarterly. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations.

LEAD AND COPPER (TAP WATER)

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	August 2019	N	0.64	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	August 2019	N	2.00	1	0	15	Corrosion of household plumbing systems; erosion of natural deposits

UNREGULATED CONTAMINANTS

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	Level Detected	Range of Results	Likely Source of Contamination
Chromium, Total (ppb)	January 2015, April 2015 & June 2015	0.38	ND – 0.38	Naturally-occurring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chromium - 6 (ppb)	January 2015, April 2015 & June 2015	0.073	ND – 0.073	Naturally-occurring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium (ppb)	January 2015, April 2015 & June 2015	213	184 – 213	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium (ppb)	January 2015, April 2015 & June 2015	0.22	ND – 0.22	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Chlorate (ppb)	January 2015, April 2015 & June 2015	97.9	ND – 97.9	Chlorate compounds are used in agriculture as defoliants or desiccants and may occur in drinking water related to the use of disinfectants such as chlorine dioxide.

The level detected is the highest level detected over a 12 month sampling period for all sites collected.
The FGUA MacDill AFB Water Treatment Facility has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the **Safe Drinking Water Hotline at (800) 426-4791.**

NOTES

A. 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 FGUA's MacDill AFB Water System 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.

B. Copper is an essential nutrient, but some people who drink water in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor. Copper in drinking water is normally associated with plumbing components (e.g., copper piping in the building's plumbing system or in the tap fixtures themselves) and can be corrected by flushing the tap before using the water. In May 2017, the FGUA initiated corrosion control treatment as recommended by a Corrosion Control Study performed by the Florida Rural Water Association and approved by the Hillsborough County Health Department. The treatment involves the addition of a corrosion inhibitor (polyphosphate) at prescribed and monitored concentrations into drinking water. Water quality data collected since 2017 indicate the treatment has been effective in reducing copper concentrations in drinking water.

C. Please DO NOT FLUSH your unused/unwanted medications down toilets or sink drains. For more information, please go to http://www.dep.state.fl.us/waste/categories/medications/pages/disposal.htm .

D. We work hard to provide top quality water to every tap, and ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

2019 WATER QUALITY SUMMARY TABLE – City of Tampa Water Department
PWS ID NO. 6290327

City of Tampa CCR Data Table for Calendar Year 2019, Final Data Copy Received February 12, 2020

(INCLUDED AS AN ATTACHMENT)

The attached table herein provides a summary of water quality results from the City of Tampa Water Department and is included as an attachment to the FGUA MacDill AFB CCR to inform our customers about the quality of our source water. For questions regarding this information, please contact the City of Tampa Water Department at (813) 274-8121.

You may find some additional unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Million Fibers per Liter (MFL): Measure of the presence of asbestos fibers that are longer than 10 micrometers.

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

Not Detected or ND: Means that the substance was not found by laboratory analysis.

Picocurie per liter (pCi/L): Measure of radioactivity in water.

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

2019 CCR for 2020 Reporting: FINAL 2/12/2020

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*	*N*	*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*	*Human and animal fecal waste*

***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 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 January 1st 2019 – December 31st 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.

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 2017 May 2017*	*N*	*3.0*	*ND - 3.0*	*0*	*15*	*Erosion of natural deposits*
Radium 226 + 228 (pCi/L)	*March 2017 May 2017*	*N*	*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*	*N*	*0.25*	*0.25*	*0*	*10*	*Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes*
Barium (ppm)	*May 2019*	*N*	*0.012*	*0.012*	*2*	*2*	*Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits*
Fluoride (ppm)	*May 2019*	*N*	*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*	*N*	*0.28*	*0.28*	*10*	*10*	*Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits*
Sodium (ppm)	*May 2019*	*N*	*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*	*N*	*3.11*	*1.40 – 4.31*	*MCLG = 0*	*MCL = 10*	*By-product of drinking water disinfection*
Chloramines (ppm)	*Daily 2019*	*N*	*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 2 Disinfection By-Products

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*
Haloacetic Acids (five) (HAA5) (ppb)	*February 2019 May 2019 August 2019 November 2019*	*N*	*24.69*	*5.38 – 32.83*	*NA*	*60*	*By-product of drinking water disinfection*
TTHM [Total trihalomethanes] (ppb)	*February 2019 May 2019 August 2019 November 2019*	*N*	*22.46*	*6.17 – 31.95*	*NA*	*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 (ppm)	*Weekly 2019*	*N*	*2.14*	*1.78 – 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. The lowest running annual average is the lowest removal ratio computed quarterly of the monthly removal ratios.

Lead and Copper (Tap Water)

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

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.*

ug/L = micrograms per liter

ND: Not detected

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)	*June 2019 September 2019 December 2019*	*3.23*	*1.51 - 5.49*	*By-product of drinking water disinfection*
Bromodichloroacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*1.03*	*ND - 2.19*	*By-product of drinking water disinfection*
Chlorodibromoacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*0.72*	*ND - 3.36*	*By-product of drinking water disinfection*
Dibromoacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*1.04*	*ND - 2.30*	*By-product of drinking water disinfection*
Dichloroacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*7.47*	*1.77 - 16.0*	*By-product of drinking water disinfection*
Monobromoacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*0.130*	*ND - 0.407*	*By-product of drinking water disinfection.*
Tribromoacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*0.46*	*ND - 3.04*	*By-product of drinking water disinfection*
Trichloroacetic acid (ug/L)	*June 2019 September 2019 December 2019*	*1.64*	*0.654 - 9.25*	*By-product of drinking water disinfection*

**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.*
ug/L = micrograms per liter
ND: Not detected

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 2019 September 2019 December 2019*	*58.6*	*55.7 -64.1*	*Naturally present in the environment*
Total Organic Carbon (ug/L)	*June 2019 September 2019 December 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.*
ug/L = micrograms per liter
ND: Not detected