

# The Water We Drink 2022

## Annual Drinking Water Quality Report of the City of Titusville, Florida

### Sources

Titusville's drinking water source is ground water from Florida's Surficial and Floridan Aquifers. Titusville also purchases treated water from the City of Cocoa. Less than 10% of drinking water was purchased from Cocoa (0.038 MGD=Less than 1%).

### Treatment

At the Mourning Dove Water Treatment Plant, the raw ground water undergoes a three-step treatment process: Coagulation, disinfection and filtration.

Coagulation: Lime and a coagulant are mixed with the raw water in the clarifier to reduce hardness and to remove any suspended solids.

Disinfection: Water exiting the clarifier is injected with chlorine for disinfection, carbon dioxide (CO<sub>2</sub>) to stabilize pH, fluoride to promote dental health and ammonia. The ammonia combines with the chlorine to form chloramines. Chloramines reduce the taste and smell of chlorine in the finished water and helps to maintain disinfectant residual in the distribution system.

Filtration: The treated water then passes through rapid sand filters prior to storage.

System had ZERO (0) violations for the year 2022.

Assessment: Sanitary Survey was completed 9/21 thru 9/23 2022 by Florida Department of Environmental Protection (FDEP). The system was determined to be in compliance with the department rules and regulations. Zero deficiencies were noted at the time of inspection.

During 2022 we treated an average of 4.500 million gallons per day at the Mourning Dove Water Treatment Plant.

### SWAPP

In 2022, the FDEP performed a Source Water Assessment about potential sources of contamination in the vicinity of our wells. It identified 8 unique potential contaminant sources. Susceptibility score ranging from 6.66 to 25 and concern levels from low to moderate. Titusville's assessment results can be obtained from Titusville's Water Production Division, (321) 567-3855 or found on the FDEP's website <https://fldep.dep.state.fl.us/swapp/>.

The City of Cocoa's source water assessment can be obtained from the City of Cocoa, (321) 433-8705 or email [ddowns@cocoafl.org](mailto:ddowns@cocoafl.org) or at FDEP's website <https://fldep.dep.state.fl.us/swapp/>.

### Report Period

The City of Titusville 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, 2022 through December 31, 2022. Data obtained before January 1, 2022 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 Environmental Protection Agency (EPA), the State of Florida 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 year to year. Therefore, some of our data, though representative, is more than one year old.

## Contact Information

This report is available online at [titusville.com/ccr](http://titusville.com/ccr) or through the department pages at [www.titusville.com](http://www.titusville.com). For questions about this report or water quality, contact the Public Works Water Production Superintendent at (321) 567-3877. Copies are available at the Mourning Dove Water Production Plant (2836 Garden Street, Titusville). To request a copy by mail, call (321) 567-3865.

Additional information on drinking water is available from the EPA Safe Drinking Water Hotline (800) 426-4791.

Titusville City Council meetings are regularly held on the second and fourth Tuesday of each month at 6:30 p.m. in the City Hall Council Chamber. City Hall is located at 555 S. Washington Avenue, Titusville, Florida.

## Sources of Drinking Water

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.

In order 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.

## Vulnerable Population

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U. S. Environmental Protection Agency (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.

## Lead

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 Titusville Public Works (formerly Water Resources) 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>.

## *Cryptosporidium* Detection

Cocoa monitors for *Cryptosporidium*, a microbial parasite found in surface water throughout the United States.

Cocoa detected *Cryptosporidium* in its untreated surface water in two out of twenty-five samples tested from 2006 through 2008. Cocoa sampled Taylor Creek Reservoir for *Cryptosporidium* once a month from October, 2006 through October, 2008 in accordance with FDEP's Long Term 2 (LT2) Enhanced Surface Water Treatment Rule. Cocoa again tested per LT2 compliance from March, 2015 to March, 2017. Although filtration can remove *Cryptosporidium*, it does not guarantee 100 percent removal. To ensure the highest possible removal rate, Cocoa ozonates all surface water. Ozone is a powerful disinfectant that destroys *Cryptosporidium*.

*Cryptosporidium* may cause serious illness in immuno-compromised persons. These individuals should consult their health care provider. For further information on Cocoa's water quality, contact the City of Cocoa at (321) 433-8705.

## Terms and Abbreviations

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

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.

N/A: Not applicable.

N/D: Means not detected and indicates that the substance was not found by laboratory analysis.

Parts per billion (ppb): One part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm): One part by weight of analyte to 1 million parts by weight of the water sample.

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL	Likely Source of Contamination
<i>E. coli</i> (at the ground water source) <sup>1</sup>	Monthly (2022)	N	1	0	0	Human and animal fecal waste

Inorganic Contaminants							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected <sup>2</sup>	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	07/20	N	0.70	N/A	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	07/20	N	0.0058	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	07/20	N	11	N/A	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	07/20	N	0.71	N/A	4	4	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
Sodium (ppm)	07/20	N	40	N/A	N/A	160	Salt water intrusion, leaching from soil

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
Chlorine & Chloramines (ppm) <sup>3</sup>	2022 (Monthly)	N	3.0	0.6 - 5.5	MRDLG=4	MRDL=4.0	Water additive used to control microbes

Stage 2 Disinfectants and Disinfection By-Products <sup>4</sup>							
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 (HAA5) (ppb)	2022 (Quarterly)	N	29.92	ND - 40.45	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2022 (Quarterly)	N	21.29	ND - 54.60	N/A	80	By-product of drinking water disinfection

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	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	08/20, 09/20	N	0.0286	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	08/20, 09/20	N	<1.4	1	0	15	Corrosion of household plumbing systems; erosion of natural deposits

## Table Notes

<sup>1</sup>On December 9th, 2022 we learned that a well assessment sample taken on December 8th, 2022 was *E. coli* positive. As required by EPA's Ground Water Rule, one of our follow up steps was to collect additional samples from this well within 24 hours to determine the extent of the problem. Five samples from the affected well were taken on December 9th, 2022. All five samples tested negative for *E. coli*. Additionally, samples collected from treated water in the distribution system on December 9th, 2022 showed no *E. coli* present. The source of the fecal contamination is unknown. The date of the fecal indicator positive source sample was 12/8/2022.

Health Effects: Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

<sup>2</sup>Results in the *Level Detected* column for inorganic contaminants are the highest detected level at any sampling point.

<sup>3</sup>For Chlorine & 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 individual samples collected during the past year.

<sup>4</sup>For Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM), *Level Detected* is the highest RAA, computed quarterly, of quarterly averages of all samples collected. The *Range of Results* is the range of individual sample results (lowest to highest) for all monitoring locations.