2015 Water Quality Report For Deltona Water

Deltona Water Quality

We're 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. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

SOURCE WATER

Our water source is groundwater from the Floridan Aquifer. The treatment conducted includes aeration, addition of chlorine and ammonia (chloramines) for disinfection, and a corrosion control chemical. Deltona Water also provides water to Stone Island and Enterprise. Deltona Water also provides water to other county locations through system interconnects as needed

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.

SOURCE WATER ASSESSMENTS

The Florida Department of Environmental Protection (DEP) under the Federal Safe Drinking Water Act has created the Source Water Assessment and Protection Program. The program is designed to ensure the safety of drinking water at the source. Contamination of ground water can occur from contaminants such as hazardous chemicals, storm water runoff, waste disposal sites and underground storage tanks. *The Department of Environmental Protection updated the Source Water Assessment on our system in 2015. The assessment was updated to provide information about any potential sources of contamination in the vicinity of our wells. There was only one (1) unique potential contaminant source identified for our system with a low susceptibility level or level of concern. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or they can be obtained from Deltona Water at 255 Enterprise Rd., Deltona, FL 32725.*

ABOUT THIS REPORT

This report shows our water quality results and what they mean. Please address any concerns about this report or the quality of your water to Deltona Water at 1-386-575-6800. You may visit the DEP website at www.myflorida.com or the Volusia County Health Department at www.volusiahealth.com. You can also contact the EPA Safe Drinking Water Hotline at 1-800-426-4791. We encourage our valued customers to be informed about their utility. If you want to learn more, attend a City Commission meeting. The Deltona City Commission meets the 1st and 3rd Monday of each month, in the City Hall Commission Chambers located at 2345 Providence Blvd.

Deltona Water 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, 2015. Data obtained before January 1, 2015, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

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

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.

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

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

Parts per million (ppm) or Milligrams per liter (mg/l) – one part by weight of analyte to 1 million parts by weight of the water sample.

"ND" means not detected and indicates that the substance was not found by laboratory analysis

Parts per billion (ppb) or Micrograms per liter (µg/l) – one part by weight of analyte to 1 billion parts by weight of the water sample.

Locational Running Annual Average (LRAA): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Picocurie per liter (pCi/L) - measure of the radioactivity in water

Water Quality Test Results

PRIMARY CONTAMINANTS TABLE

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (positive samples)	1/2015-12/2015	N	2.1%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% of monthly samples.	Naturally present in the environment

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)	4/2014	N	3.6	0 – 3.6	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	4/2014	N	2.1	0 – 2.1	0	5	Erosion of natural deposits

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)	4/2014	N	2.9	0 – 2.9	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	4/2014	N	.03	.01 - .03	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	4/2014	N	7.4	0 – 7.4	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Nitrate (as Nitrogen) (ppm)	1/2015	N	3.4	0 – 3.4	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	4/2014	N	118	11.1 - 118	N/A	160	Salt water intrusion, leaching from soil

Stage 2 Disinfectants and Disinfection By-Products (DBP's)

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 and Chloramines (ppm)	1/2015 – 12/2015	N	3.1	0.3 – 4.50	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

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)	2/2015,4/2015, 7/2015,10/2015	N	46.75	7.90 – 22.10	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2/2015,4/2015, 7/2015,10/2015	Y	99.22	15.60 – 43.6	N/A	80	By-product of drinking water disinfection

The level detected is reported as the highest *Locational Running Annual Average (*LRAA) from an individual sampling site and was calculated using 3 previous quarters of sampling results collected prior to the conversion from chlorine to chloramine disinfection which occurred in February 2015.

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)	4/2015 – 11/2015	N	0.44	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	4/2015 – 11/2015	N	1.6	1	0	15	Corrosion of household plumbing systems; erosion of natural deposits

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 Deltona 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.
In 2015 the City of Deltona conducted two separate sampling events for lead & copper analyzing a total of 120 samples. The results of the sampling indicated that only one residence, which is over thirty years old, had a sample result slightly over the action level for lead. There is the potential for improperly maintained water softeners to increase the corrosivity of the water, which could cause increased lead and cooper levels.

In February of 2015 Deltona Water switched from chlorine to chloramines as a disinfectant for the drinking water. The change to chloramines as a disinfectant immediately lowered the levels of DBP's (TTHM and HAA5) that were formed. The first round of quarterly samples collected in 2015 after this switch to chloramines, and every sampling event since then, has had TTHM levels well below the MCL of 80 ppb. The level of TTHMs detected in this report is calculated as the highest LRAA (Locational Running Annual Average) from an individual sampling site and was calculated using 3 quarters of sampling results from 2014 - prior to the conversion to chloramines. In the first quarter of 2015 (January – March), Deltona Water exceeded the LRAA for TTHMs at one sample collection site located at 1029 Doyle Road. This resulted in a violation for TTHMs that we must report. 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 systems, and may have an increased risk of getting cancer.

Unregulated Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	Average Level	Range of Results
Chromium (ppm)	3/2015,9/2015, 12/2015	0.000167	ND-0.00038
Molybdenum (ppm)	3/2015,9/2015, 12/2015	0.00565	ND-0.0146

Strontium (ppm)	3/2015,9/2015, 12/2015	0.515	ND-1.07
Vanadium (ppm)	3/2015,9/2015, 12/2015	0.000379	ND-0.00088
Chromium Hexavalant (ppm)	3/2015,9/2015, 12/2015	0.0000085	ND-0.00028
Chlorate (ppm)	3/2015,9/2015, 12/2015	0.684	ND-2.44
1,4 Dioxane (ppm)	3/2015,9/2015, 12/2015	0.0000456	ND-0.000072
Chloromethane (ppm)	3/2015,9/2015, 12/2015	0.000198	ND-0.00030
Perfluorooctanoic Acid (ppm)	3/2015,9/2015, 12/2015	0.0000077	ND-0.0000079
Perfluorooctanesulfonic Acid (ppm)	3/2015,9/2015, 12/2015	0.000038	ND-0.000038
Perfluorohexanesulfonic Acid (ppm)	3/2015,9/2015, 12/2015	0.000012	ND-0.000012

The City of Deltona 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 detected analytical results of our UC monitoring in our annual water quality report. For the complete list of results, including the non-detected contaminants, contact Customer Service at 386-575-6800 or Email at wdinfo@deltonafl.gov. 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.

SECONDARY CONTAMINANTS TABLE

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Total Dissolved Solids (ppm)	4/2014, 5/2014	Y	582	38 - 582	NA	500	Natural occurrence from soil leaching

Our water system had a secondary standard MCL violation for Total Dissolved Solids (TDS) in 2014. TDS has a secondary rather than a primary standard because there are no potential adverse health effects.

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 1-800-426-4791.*

VULERNABLE 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. 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 (800-426-4791).

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

The Environmental Protection Agency (EPA) requires monitoring of over 100 drinking water contaminants. Those contaminants listed in the table are the only contaminants detected in your drinking water.