

2016 Water Quality Report

Charlotte County Public Drinking Water System



Prepared by the Charlotte County Utilities Department

PWS #5084100

We are proud to report that Charlotte County's drinking water meets or exceeds all federal Environmental Protection Agency (EPA) and state established water quality standards.

Mission Statement

To provide essential, safe, reliable water and wastewater service for the community.

The Peace River/Manasota Regional Water Supply Authority (PR/MRWSA) oversees the operations of the Peace River/Manasota Regional Water Supply Facility (PR/MRWSF), which uses the Peace River as its source of supply. The Peace River is a large river, by Florida standards, with a drainage area of 2,300 square miles. Its headwaters originate in the Green Swamp of northern Polk County, flowing through Lake Hancock, the Winter Haven chain of lakes and Lake Hamilton. The mouth of the Peace River is located in Punta Gorda, 120 miles downstream from the headwaters, delivering needed fresh water to the Charlotte Harbor estuary. The PR/MRWSA sells water to Charlotte County, the City of North Port, DeSoto County, and Sarasota County.

The PR/MRWSA is authorized to withdraw water from the Peace River and stores it in an off-stream surface water reservoir. The facility pumps water from the reservoir for treatment and distribution to the public. The treatment process includes the addition of powdered carbon for the removal of algal taste and odor compounds, followed by color removal (coagulation and sedimentation) with alum, disinfection with chlorine and chloramines, filtration by rapid rate multi-media filters and PH adjustment with caustic soda before distribution to the public.

The PR/MRWSA and the Charlotte County Utilities Department routinely monitor for constituents in your drinking water according to Federal and State laws. The table shown in the report are results of our monitoring for the period of Jan. 1, 2016 through Dec. 31, 2016. These same regulations require monitoring to occur in nine-year compliance cycles, made up of three, three-year compliance periods. These three-year periods result in some contaminants being monitored once every three years. This testing analysis may require some contaminant test results to be reported in this document from years other than calendar year 2015. We have learned through our monitoring and testing that some constituents have been detected but not at a level where there is a known or expected risk to health.

We want our valued customers to be informed about their water utility. If you have questions about the data provided in this annual Drinking Water Quality Report or require additional information, please contact our representative, Stephen Kipfinger, at 941-764-4300.

To learn more, please attend any of the PR/MRWSA board of director meetings, which rotate between the County Commission Chambers of Charlotte, DeSoto, Manatee and Sarasota counties. For information on a specific meetings, please visit www.regionalwater.org/schedule.html or call the PR/MRWSA at 941-316-1776.

Director's Message

The Utilities Department is proud to lead Charlotte County's integrated water supply and stewardship strategy – whether it's for our beaches, waterways, health or hydration. We are taking our mission to the next level in 2017 by focusing on three areas to enhance the quality of life for our customers and environment.

Heart of the Harbor

- Improve water quality through septic to sewer conversions

Sustainable Systems

- Improve infrastructure and facilities for future growth

Community Connections

- Improve service, communications and education

In 2016 the Utilities Department celebrated 25 years serving Charlotte County residents. We look forward to continuing our commitment to excellence in service delivery, and appreciate your support in planning ahead for the future generations.

Sincerely,

Gary M. Hubbard, P.E.

How do I read this report? It's easy. The table shown on this report are the results of our water-quality analyses. The column marked "Level Detected" shows the highest results from the last time tests were performed. "Likely Sources" shows where this substance usually originates. Descriptions below explain other important details. 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 that, if exceeded, triggers treatment or other requirements that a water system must follow.

Initial Distribution System Evaluation (IDSE): An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

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" means not applicable

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

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

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.

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.

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

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

WHAT CAN I EXPECT TO FIND IN MY 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 1-800-426-4791.

Source Water Assessment Plan: The Florida Department of Environmental Protection (FDEP) has performed a Source Water Assessment on our system in 2016. These assessments were conducted to provide information about any potential sources of contamination in the vicinity of our wells. Potential sources of contamination were identified to include industrial waste water and domestic wastewater treatment plants with a low level of susceptibility. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

Drinking Water Results

Radioactive Contaminants - Peace River Authority							
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)	1/16-12/16	N	8.9	ND-8.9	0	15	Erosion of natural deposits
Combined Radium (pCi/L)	1/16-12/16	N	1.0	0.2 - 1.4	0	5	Erosion of natural deposits
Inorganic Contaminants - Peace River Authority							
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
Fluoride (ppm)	1/16	N	.190	.190	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels of 0.7ppm.
Nitrate (as Nitrogen) (ppm)	1/16	N	.213	.213	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	1/16	N	44.5	44.5	N/A	160	Salt water intrusion, leaching from soil
Barium (ppm)	1/16	N	.010	.010	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nickel (ppb)	1/16	N	2.0	2.0	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrite (as Nitrogen) (ppm)	1/16	N	0.056	0.056	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Level Detected: Results in the Level Detected column for radiological contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic 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.

Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Parameters - Charlotte County Utilities							
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)	1/16-12/16	N	5.1	.6 - 4.7	4	MRDL = 4.0	Water additive used to control microbes

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Stage 2 Disinfectants and Disinfection By-Products - Charlotte County Utilities

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)	2/16, 5/16, 8/16, 11/16	N	33	12.4-36.9	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2/16, 5/16, 8/16, 11/16	N	41	30.9-49.7	N/A	80	By-product of drinking water disinfection

Lead and Copper (Tap Water) - Charlotte County Utilities

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceedance Y/N	90th Percentile Results	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	6/14	N	0.0315	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (tap water) (ppb)	6/14	N	3.0	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits.

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. Charlotte County Utilities 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 Environmental Protection Agency's -Safe Drinking Water Hotline or at 1.800.426.4791 or at <http://www.epa.gov/safewater/lead>.

Turbidity Contaminants - Peace River Authority

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Single Result	The Lowest Mthly % of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Turbidity (NTU)	1/16-12/16	N	.5	100%	N/A	1.0	Soil runoff

Note: 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 the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organism, including bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

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/Centers for Disease Control and Prevention (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).

