THE CITY OF PANAMA CITY PROUDLY PRESENTS THE

2019 ANNUAL DRINKING WATER QUALITY REPORT

We are pleased to report that our drinking water meets all federal and state requirements.

This year's Annual Drinking Water Quality 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 made to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our surface water source is water drawn from Deer Point Reservoir. The City of Panama City purchases water from Bay County Utility Services.

The Bay County Water Treatment Plant uses a conventional treatment process consisting of coagulation, flocculation, sedimentation, filtration, pH adjustment, disinfection, fluoridation and corrosion control. The treatment process includes adding lime occasionally to provide additional alkalinity to the raw water so that it can react with the primary coagulating chemical, ferric sulfate that is added to remove particles and organics. Polymer is also added to assist in the coagulation process. Sodium Hypochlorite is added to maintain disinfection in the distribution system. The addition of zinc orthophosphate reduces the corrosiveness of the water. Fluoride, in the form of hydrofluorosilicic acid, is added as a supplement to prevent tooth decay. Lime is also added at the end of the process to increase the pH. These processes are needed to meet the drinking water standards as set by the United States Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP).

If you have any questions about this report or concerning your water utility, please contact Anna Wright, City of Panama City Laboratory Superintendent at 850-872-3194. We encourage our valued customers to be informed about their water utility. If you would like to learn more, The City of Panama City Commission holds regularly scheduled meetings on the second and fourth Tuesdays at 8:00 am.

The City of Panama City Utilities Department and Bay County Utility Services routinely monitor constituents in your drinking water according to Federal and State laws. 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 laws, rules and regulations. All monitoring contaminants in the table were provided by the Bay County Utility Services except for copper, lead, chlorine, unregulated contaminants and Stage 2 Disinfectants and Disinfection By-Products, which are provided by the City of Panama City Environmental Laboratory.

2019 CONTAMINANTS TABLE

TERMS AND ABBREVIATIONS

Maximum Contaminant Level (MCL) - The " Maximum Contaminant Level" is 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 (MCLG) - The" Goal" is 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 (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 (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

ND -not detected and the substance was not found by laboratory analysis.

NTU - Nephelometric turbidity unit is a 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 per million corresponds to one part by weight of analyte to one million parts by weight of the water sample.

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

Picocuries per liter (pCi/L) - Measure of the radioactivity in water

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

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of Sampling (Mo./Yr.)	MCL/ TT Violation Y/N	The Highest Single Measurement	The Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Turbidity	Jan —Dec 2019	N	0.47	98.9	N/A	TT	Soil Runoff

Turbidity is a measure of cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants. The Treatment Technique (TT) standard requires that 95% of the turbidity readings must be at 0.3 NTU or less.

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
Radium 226+228 or combined Radium (pCi/l)	April 2017	N	1.5	N/A	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
Barium (ppm)	April 2019	N	0.0062	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	April 2019	N	0.67	0.67– 0.67	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7 ppm
Nickel (ppb)	April 2019	N	2.3	N/A	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (ppm)	April 2019	N	0.13	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	April 2019	N	3.8	N/A	N/A	160	Salt water intrusion, leaching from soil.

Stage 2 Disinfectants and Disinfection By-Products

Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling (Mo./Yr.)	MCL or MRDL Violation	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
*Chlorine (ppm) (Stage 1)	Jan - Dec 2019	N	1.01	0.88– 1.2	MRDLG= 4	MRDL= 4.0	Water additive used to control microbes
*Haloacetic Acids (five) (HAA5) (ppb)	Jan – Dec 2019	N	32.1	ND– 29.7	N/A	MCL = 60	By-product of drinking water disinfection
*Total Trihalomethanes (TTHM) (ppb)	Jan – Dec 2019	N	40.8	9.2– 58.5	N/A	MCL = 80	By-product of drinking water disinfection

Total Organic Carbon

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)	Jan - Dec 2019	N	1.6	1.3- 2.4	N/A	TT	Naturally present in the environment

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	Likely Source of Contamination
*Copper (ppm)	Sep 2017	N	0.52	0 of 30	1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
*Lead (tap water) (ppb)	Sep 2017	N	0.96	0 of 30	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 (average)	Range	Likely Source of Contamination
*Manganese (ppb)	Aug 19– Dec 19	7.4	6.8 –8	Naturally-occurring element; commercially used in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
*HAA5 (ppb)	Aug 19– Dec 19	16.0	6.7– 26.6	Unavailable
*HAA6Br (ppb)	Aug 19– Dec 19	5.1	4.0– 6.3	Unavailable
*HAA9 (ppb)	Aug 19- Dec 19	19.8	8.7– 30.2	Unavailable

*These contaminants were sampled by the City of Panama City. All other results were provided by Bay County Utility Services.

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 at 800-426-4791.

The City of Panama City monitored for unregulated contaminants (UCs) in 2019 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) or likely sources have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. All detections are shown on the table, but if you would like a copy of all our 2019 UC data, contact this water system at the number provided in this report.

We will also be monitoring the first 6-month period of 2020 for UCs. They will be published as required in our 2020 Water Quality Report. However, if you would like a copy of the results sooner, please contact Anna Wright at 850-872-3194 to get a copy as soon as they are received by us. 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.

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 Panama City 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 at the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

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, 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 storm water 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 storm water 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 storm water 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 2019, The Department of Environmental Protection performed a Source Water Assessment (SWA) on Bay County's system. The assessment was conducted to provide information about any potential source of contamination in the vicinity of our surface water intakes. The surface water system is considered to be at high risk because of the many potential sources of contamination in the assessment area. 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 Bay County Utility Services by calling 850-248-5010.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that 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 that must provide the same protection for public health. All 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.

A Cross Connection Control (CCC) Program is an organized, legally implemented and structured program to attempt to eliminate the hazards to the municipal potable water supply. In 2016, the Florida Department of Environmental Protection found that our Program was not being fully implemented. Hurricane Michael and a change in personnel has put us behind with the Program. In the past year, the City has been working diligently with our CCC Program and with the help of the GIS department, we plan to be in compliance by December 2020.

Thank you for allowing us to continue providing your family with clean, quality water this year. We at the City of Panama City Utilities Department and at Bay County Utility Services work continually to provide top quality water to every tap. We ask that all of our customers help us to protect our water sources, which are the heart of our community, our way of life, and our children's future.

Contact us: **City of Panama City Utilities Department**
Administrative Office: 850-872-3164 **M-F, 8:00-5:00**
Environmental Laboratory: 850-872-3194 **M-F, 7:00-3:30**
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