

NSA Panama City 2023 - Annual Water Sampling Summary

Naval Support Activity Panama City purchases potable water from the City of Panama City Beach. A summary of the City of Panama City Beach's water sampling results is provided in their annual Consumer Confidence Report (attached). NSA PC conducts additional periodic water sampling. The results are summarized below.



Total Coliform Bacteria ¹

Contaminant	Sampling Period	MCL	Positive Occurrences	MCL Compliance
Total Coliforms	JAN - DEC 2023	Positive	0	COMPLIANT

¹ Six samples were collected monthly for a period of 1 year, resulting in a total of 72 samples analyzed.

MCL = "Maximum Contaminant Level" - Refers to the highest permissible level of a contaminant that is allowed in drinking water

Disinfection Byproducts (DBPs) ²

Contaminant	Sampling Period	MCL (ppb)	Levels Detected (ppb)		MCL Compliance ³	Likely Source of Contaminant
			Range	RAA ³		
Total Haloacetic Acids (HAA5)	FEB, MAY, AUG, NOV 2023	60	Range	3.8 - 115.0	EXCEEDS	By-product of drinking water disinfection; formed when organic materials react with chlorine in water.
			RAA ³	41.5 - 63.4		
Total Trihalomethanes (TTHM)	FEB, MAY, AUG, NOV 2023	80	Range	27.42 - 118.9	COMPLIANT	By-product of drinking water disinfection; formed when organic materials react with chlorine in water.
			RAA ³	41.4 - 60.3		

ppb = "parts per billion" = µg/L

Exceedant Location:
(1) FH #19 (B468)
Avg Level Detected: 63.4 ppb

² Data was collected quarterly from six locations across NSA PC and analyzed. Values are range of the 24 sample results and range of Running Annual Average (RAA) for each location's quarterly results.

³ Compliance is determined by the RAA of 4 consecutive quarters. Contaminant maximum values occurred during August 2023.

! NOTICE: HAA5s Exceedance

An exceedance of the MCL occurred during the calendar year of 2023 at one location; Fire Hydrant 19.

According to the National Institutes of Health (NIH), the presence of high levels of haloacetic acids – bromated haloacetic acids in particular- are linked to an increased risk of bladder and other cancers. Reproductive health effects have also been linked to disinfection byproducts, such as birth defects and miscarriages.

The most likely source of the exceedance at NSA Panama City Beach is flushing of previously stagnant systems which occurred due to the change in sampling locations. Due to concerns with missing or inaccurate data, standard locations for quarterly sampling were established in 2023, including the fire hydrants mentioned above. Because HAA5 concentrations returned to acceptable levels by 2024, no additional treatment steps are currently planned, but we will continue monitoring to ensure the safety and quality of NSA PC's drinking water.

Inorganic and Secondary Contaminants ⁴

Contaminant	Sample Results	Average Level Detected	MCL	MCL Compliance	Likely Source of Contaminant
Aluminum	0.06 ⁵ - 0.075 ⁵	0.0675 mg/L	0.2 mg/L	COMPLIANT	Natural occurrence from soil leaching
Barium	0.0072 - 0.012	0.0096 mg/L	2 mg/L	COMPLIANT	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	ND ⁶ - 0.0002 ⁵	0.00015 mg/L	0.004 mg/L	COMPLIANT	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium	ND ⁶ - 0.0001 ⁵	0.0001 mg/L	0.005 mg/L	COMPLIANT	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chloride	14 - 14	14 mg/L	250 mg/L	COMPLIANT	Water additive used to control microbes
Fluoride	0.81 - 0.84	0.825 mg/L	4 mg/L	COMPLIANT	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Manganese	0.0014 ⁵ - 0.0016 ⁵	0.0015 mg/L	0.05 mg/L	COMPLIANT	Leaching from soil
Nickel	0.0021 ⁵ - 0.0021 ⁵	0.0021 mg/L	0.1 mg/L	COMPLIANT	Leaching from metal pipes or fittings
Sodium	5.3 - 5.4	5.35 mg/L	160 mg/L	COMPLIANT	Saltwater intrusion; leaching from soil
Sulfate	6.5 ⁵ - 11 ⁵	8.75 mg/L	250 mg/L	COMPLIANT	Runoff from fertilizer use; erosion of natural deposits
Odor	1.0 - 6.0	TON	3 TON	EXCEEDS	Naturally occurring organics.
pH	7.0 - 7.0	7.0	6.5 - 8.5	COMPLIANT	Measure of acidity/alkalinity
Total Dissolved Solids	64 - 72	68 mg/L	500 mg/L	COMPLIANT	Soil runoff
Zinc	0.084 - 0.11	0.097 mg/L	5 mg/L	COMPLIANT	Erosion of natural deposits; corrosion of galvanized pipe; naturally occurring in source aquifers

mg/L = milligrams per liter

TON = Threshold Odor Number

Exceedant Location:
 Southside RV Backflow
 Avg Level Detected: 6 TON
 Retested in 2024: 2 TON

MDL = Method Detection Limit
PQL = Practical Quantitation Limit

⁴ One sample was collected at two separate inlet locations at NSA PC, summarized in the above table. Sampling occurred in AUG 2023.

⁵ Reported value is between the laboratory MDL and the laboratory PQL

⁶ ND = Not Detected

Radioactive Contaminants⁴

Contaminant	Sampling Date	Range	MCL	MCL Compliance	Likely Source of Contaminant
Radium-226	23-Aug-23	0.5 ⁵ - 0.7 ⁵ pCi/L	5 pCi/L	COMPLIANT	<i>Erosion of natural deposits</i>

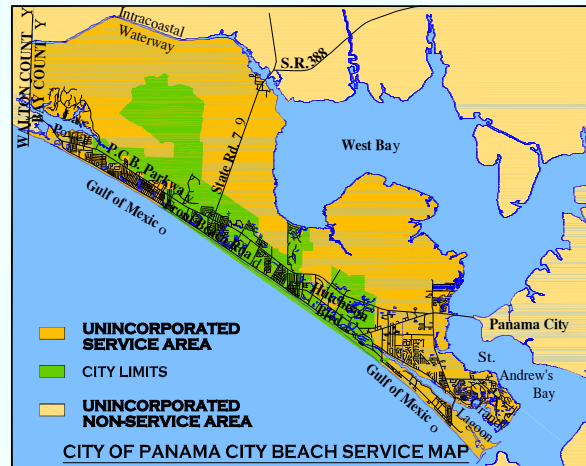
pCi/L = picoCurie per liter

ANNUAL **WATER**
QUALITY
REPORT
REPORTING YEAR 2023



CITY OF PANAMA CITY BEACH
17007 PANAMA CITY BEACH PARKWAY
PANAMA CITY BEACH, FL 32413

We are pleased to provide this year's Annual Water Quality Report to help keep you informed about the water and services delivered to you over the past year. Our goal is to continually provide residents with a safe and dependable supply of drinking water. This annual report is intended to help you understand the efforts we make to continually improve the quality of water delivered to you, and to protect our water resources. The City of Panama City Beach currently purchases all drinking water used in its utility franchise service area from the Bay County Water System.



SURFACE WATER SOURCE

Deer Point Reservoir was created in 1961 to provide a freshwater source for Bay County. The water is pumped several miles to the Bay County Water Treatment Plant. The Bay County 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, which 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 hydrofluosilicic 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 drinking water standards as set by the United States Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP).

Bay County supplies water to both Panama City Beach Ground Storage and Pumping Facilities. Panama City Beach is a wholesale customer of the Bay County system and purchases 100% of its water from the County. The City then provides that water to its customers via our own storage, pumping and transmission system. We do not perform any treatment to the water other than some additional chlorine disinfectant when the levels provided by the County have dropped below the levels needed for the City to maintain chlorination residual requirements set by the EPA and FDEP.

In 2023 the Florida Department of Environmental Protection performed a Source Water Assessment on the Bay County Water System. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the Bay County water system surface water intakes. The surface water system is considered to be at high risk because of many potential sources of contamination present 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.



CROSS CONNECTION CONTROL

Panama City Beach's Water System was in violation of the Cross-Connection Control Requirement as specified in the State CCC Rules, F.A.C. Rule 62-555.360 & .330. The system began implementing a written cross connection control and backflow prevention program as required on July 23, 2020.

WHAT ARE WE DOING TO MEET THIS REQUIREMENT?

We have implemented a new Cross-Connection Control Program (CCCP) plan, which meets the 2014 rule. All future Panama City Beach water customers with dedicated irrigation service connections will need to install the required pressure vacuum breaker (PVB) or reduced pressure (RP) backflow device. All existing customers with dedicated irrigation services will need to install the required PVB or RP devices within a scheduled timeline. As of December 2023, the City has 92% of the required back flow prevention devices installed, well ahead of the required timeline.

Please note, all service connections currently have a dual check backflow device that is approved for standard residential connections; however, the device does not meet minimum protection for dedicated irrigation meters as outlined in the 2014 rule. To help customers understand the plan better, Panama City Beach Utilities will have a Q&A sheet available, along with definitions to unfamiliar terms and abbreviations found in the new plan on our website. Handouts of the material will also be available at Panama City Beach Public Services Building.

CUSTOMER COMMENTS WELCOME

If you have questions about this report or concerning your water utility, please contact Water Treatment Superintendent Chris Fritze at (850) 236-3039. If you require additional assistance, please contact City Hall at (850) 233-5100. You will be referred to the appropriate Utility Department staff member for your inquiry. The Panama City Beach City Council meets twice monthly, on the second Thursday at 6 p.m. and fourth Thursday at 9 a.m. in the City Hall building, 17007 Panama City Beach Parkway. The public is welcome to participate and comment on policy decisions that may affect the quality of the water. We encourage our valued customers to be informed about their water utility.



The City of Panama City Beach 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, 2023. Data obtained before January 1, 2023, presented in this Report is from the most recent testing done in accordance with the laws, rules, and regulations. For those contaminants that were not required to sample this year, the most recent sampling results are listed. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. It's important to remember that the presence of contaminants does not pose a health risk when the concentration is below the applicable standard.

The sources of drinking water (both tap 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:

MICROBIOLOGICAL CONTAMINANTS, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

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.

PESTICIDES AND HERBICIDES, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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.

RADIOACTIVE CONTAMINANTS, which can be naturally occurring or be the result of oil and gas production and mining activities.

The City of Panama City Beach water system continuously monitors its system for lead. Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and children who drink water containing lead in excess of the MCL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Panama City Beach's 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 www.epa.gov/safewater/lead.

SPECIAL INFORMATION AVAILABLE



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.

2023 WATER QUALITY TABLE

(Sampled by Bay County)

Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	The Highest Single Measurement	The Lowest Monthly % of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
TURBIDITY (NTU)	1/23-12/23	N	0.48	96.8%	N/A	*TT	Soil runoff

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. High turbidity can hinder the effectiveness of disinfectants. The Treatment Technique standard requires that 95% of the turbidity readings 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)	3/17 & 4/20	N	1.54	ND-1.54	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)	4/23	N	0.0069	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
FLUORIDE (ppm)	4/23	N	1.1	N/A	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7 ppm
NITRATE (ppm)	4/23	N	0.035	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
SODIUM (ppm)	4/23	N	4.1	N/A	N/A	160	Saltwater intrusion, leaching from soil

STAGE 1 DISINFECTANTS & DISINFECTION BY-PRODUCTS

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	1/23-12/23	N	1.9	1.0 - 1.8	N/A	TT	Naturally present in the environment

2023 WATER QUALITY TABLE

(Sampled by City of Panama City Beach)

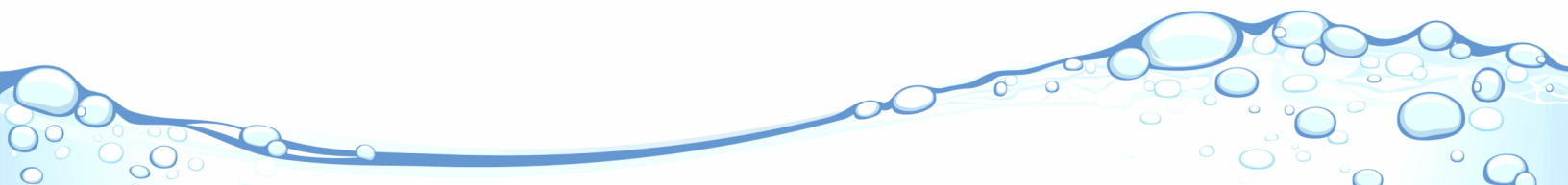
STAGE 1 & STAGE 2 DISINFECTANTS & DISINFECTION BY-PRODUCTS

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 (ppm)	1/23-12/23	N	1.00	0.91 - 1.09	MRDLG = 4	MRDL = 4	Water additive used to control microbes
HALOACETIC ACIDS (five) (HAA5) (ppb)	1/23-12/23	N	24.52	6.1 - 47.7	N/A	MCL = 60	By-products of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	1/23-12/23	N	49.59	34.2 - 88.2	N/A	MCL = 80	By-products 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	Likely Source of Contamination
COPPER (TAP WATER) (ppm)	8/23 – 9/23 (Triennial)	N	0.22	0 of 30	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
LEAD (TAP WATER) (ppb)	8/23 – 9/23 (Triennial)	N	3.5	1 of 30	0	15	Corrosion of household plumbing systems; erosion of natural deposits

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. This includes monitoring for lead at customers' taps. In August 2023, lead levels at one of thirty taps sampled exceeded the action level (AL) of 15 parts per billion (ppb). The 90th percentile result and the number of sampling sites exceeding the AL is shown in the test results table. We reached out to the customer to notify them of the results at their sampling site.



DEFINITIONS

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

Maximum Contaminant Level Goal (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 Contaminant Level (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 Residual Disinfectant Level or MRDL - The highest level of a disinfectant that is 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.

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

Non-Detects (ND) - Not detected and indicates that the substance was not found by laboratory analysis.

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.

Picocuries 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.

In order to ensure that tap water is safe to drink, 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 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**. MCLs 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.

