

2016 Consumer Confidence Water Quality Report



Pinellas County Utilities delivers tap water that is a clean, quality product and proudly reports that the water provided to customers meets all Federal and State standards for safe drinking water. All the information contained in this report has been collected and reported in accordance with the rules and regulations of the Florida Department of Environmental Protection and the United States Environmental Protection Agency. Each day, Utilities employees work around-the-clock to ensure that the water provided meets or exceeds these standards and expectations for safety, reliability and quality; our water system had no violations. We hope that you will take a few minutes to review this important information.

Pinellas County Utilities and Tampa Bay Water routinely monitor 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, 2016**. Data obtained before January 1, 2016, 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 USEPA, the State 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. Some of our data,

though representative, is more than one year old. The USEPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the accompanying tables are the only contaminants detected in your drinking water.

If you would like to request a copy of the Tampa Bay Water 2016 CCR, please contact them at **(727) 796-2355**.

Utilities customers receive potable (drinking) water from sources managed by the regional water supplier, Tampa Bay Water. This regional water supply is a blend of groundwater, treated surface water and desalinated seawater. Eleven regional well fields pumping water from the Floridan Aquifer are the primary sources for the regional groundwater supply. The Alafia River, Hillsborough River, C. W. Bill Young Regional Reservoir, and the Tampa Bypass Canal are the primary sources for the regional treated surface water supply. Hillsborough Bay is the primary source of seawater for the regional desalinated supply.

The groundwater acquired from the Eldridge-Wilde Well field undergoes water treatment processes that are comprised of three steps. First, the water goes through a hydrogen sulfide removal process. Hydrogen sulfide is a natural element that

has a displeasing odor. Next, the groundwater is treated to a standard of 99.99% bacteriological inactivation by adding free chlorine as the primary disinfectant. Then chloramine disinfectant is formed by adding chlorine and ammonia for disinfectant residual maintenance in the distribution system. Lastly, the Eldridge-Wilde Well Field water is blended with the water blend provided by Tampa Bay Water.

All the blended water is further treated by Utilities. The chloramine residual is adjusted with sodium hypochlorite to meet the required level residual set point. The pH (acid-alkali) is adjusted and stabilized using sodium hydroxide. The water is treated with a polyphosphate inhibitor to control corrosion, and then fluoridated for dental health purposes as of March 2013.

This final blend of potable water is transferred to pumping stations where it undergoes additional chloramine residual adjustment, if needed, before being pumped to homes and businesses through 1,722 miles of pipe in the Pinellas County Utilities distribution system.



Terms to *Know*

In the following tables, 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 which, if exceeded, triggers treatment or other requirements that a water system must follow.

Chloramine, (NH₂Cl):

A compound made by chemically combining chlorine with ammonia. Monochloramine, one of three possible combinations, is the desired chloramine form for disinfection of potable water.

Chlorine, (Cl):

An element used in gaseous form that readily combines with other elements in water to disinfect potable water.

Haloacetic Acids, (HAAs):

A group of disinfection by-products formed as a result of the chemical disinfection of water.

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.

Nephelometric Turbidity Unit, (NTU):

A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Not Applicable, (NA):

Not applicable to this contaminant.

Not Detected, (ND):

Not detected; indicates that the substance was not found by laboratory analysis.

Parts per billion, (ppb), or Micrograms per liter, (ug/L):

One part by weight of analyte to 1 billion parts by weight of the water sample.

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.

Picocurie per liter, (pCi/L):

A measure of the radioactivity in water.

Treatment Technique, (TT):

A required process intended to reduce the level of a contaminant in drinking water.

Total Trihalomethanes, (TTHMs):

A group of disinfection by-products formed as a result of the chemical disinfection of water.

Turbidity:

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.



Required Additional Health Information

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

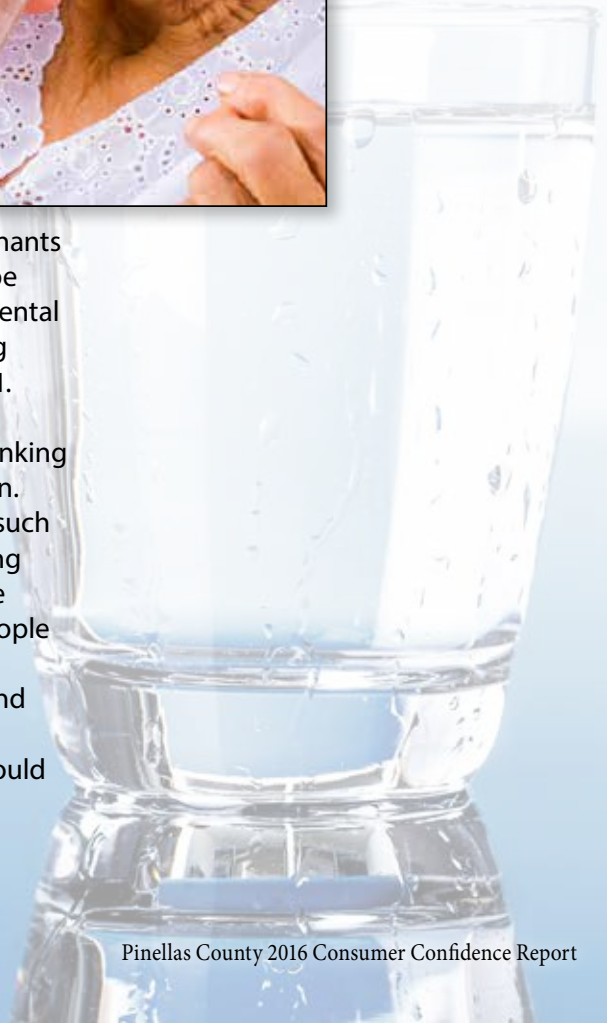
regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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**.

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**).



Lead in Drinking Water

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. Pinellas 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 Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

The current Federal Environmental Protection Agency (EPA) regulatory potable water 90th percentile Lead Action Level is 15 ppb (parts per billion). During 2014 Pinellas County Utilities completed tri-annual Residential Tap Water sampling resulting in a 0.8 ppb 90th percentile for Lead that is well below the 15 ppb Action Level. In addition the Florida Department of Environmental Protection (FDEP) requires lead levels in the source water be analyzed annually to confirm the quality of the source water supply. The 2016 source water lead sample analysis results reported no detection for lead. Pinellas County Utilities shall be collecting Residential Tap Water samples between June and September of 2017 with the results being reported in the 2017 CCR.



Source Water Assessment

In 2015, the Department of Environmental Protection performed a Source Water Assessment for Tampa Bay Water. 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 Tampa Bay Water, 2575 Enterprise Road, Clearwater, FL 33763, phone **(727) 796-2355**.

In 2016, the Department of Environmental Protection performed Source Water Assessments for Tampa Bay Water facilities. The assessments were conducted to provide information about any potential sources of contamination in the vicinity of the Tampa Bay Water surface water intakes. The surface water system is considered to be at high risk because of the 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 Tampa Bay Water, 2575 Enterprise Road, Clearwater, FL 33763, phone **(727) 796-2355**.

Turbidity is a measure of the cloudiness of the water. It is monitored for because it is a good indicator of the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

Your Participation Is Welcome!

The Pinellas County Board of County Commissioners meets twice a month, usually, but not always, on the first and third Tuesdays. The earlier meeting in the month begins at 9:30 a.m. Meetings in the latter part of the month are actually held in two parts. Agenda items are discussed with the Board at 2:00 p.m., after which there is a break and the Board reconvenes at 6:00 p.m. The public

is invited to attend these meetings held in the 5th floor Assembly Room of the Pinellas County Courthouse located at 315 Court Street, Clearwater, FL 33756. Meetings are televised live (and closed captioned) on PCC-TV, the Pinellas County Connection Television cable channel, and repeated during the week. The meeting agendas are published on the County's website at www.pinellascounty.org. For more information, call **(727) 464-3485**.

Tampa Bay Water's Board of Directors meetings occur on the third Monday of every other (even) month at 9:30 a.m. at 2575 Enterprise Road, Clearwater, FL 33763. To view their agenda, visit their website at www.tampabaywater.org or call **(727) 796-2355**.

Contact Pinellas County

Pinellas County Utilities works hard to ensure our customers' satisfaction. If you have questions or comments about this report or other issues, please call us:

Customer Service . (727) 464-4000
Laboratory (727) 582-2302
Emergencies (727) 464-4000

You may also visit us on our website at www.pinellascounty.org/utilities.

For Your Reference

(as of December 2016)

Analyte and Unit of Measure	Average Result	Range of Results
Iron (ppm)	0.030	0.011 - 0.109
Chloride (ppm)	21.4	19 - 34
Sulfate (ppm)	56	31 - 92
Total Dissolved Solids (ppm)	316	170 - 444
Calcium (ppm)	76.3	66.8 - 86.1
Magnesium (ppm)	5.96	4.86 - 7.12
pH (SU)	7.98	7.75 - 8.26
Alkalinity as CaCO ₃ (ppm) conc.	184	160 - 210
Total Hardness (ppm)	215	198 - 244
Water softener setting for hardness: Equivalent to 11.6 -14.3 grains per gallon		

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Results in the Level Detected column for radioactive contaminants, inorganic contaminants, 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

Pinellas County							
Microbiological Contaminants							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Highest Monthly Percentage/ Number (until Mar 31, 2016) Results		Likely Source of Contamination
Total Coliform Bacteria (positive samples until March 31, 2016)	0	*	1/16 - 3/16	No	1.1%		Naturally present in the environment
Contaminant and Unit of Measurement	MCLG	TT	Dates of Sampling (mo./yr.)	TT Violation (Y/N)	Highest Monthly Percentage/ Number (until April 1, 2016) Results		Likely Source of Contamination
Total Coliform Bacteria (beginning April 1, 2016)	N/A	TT	4/16 - 12/16	No	5.0%*		Naturally present in the environment

*For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% or more of monthly samples; Pinellas County Utilities collects at least 180 water samples a month for Total Coliform Bacteria Analysis. **NOTE:** Revised Total Coliform Rule went into effect on April 1, 2016.

Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Total Number of Positive Samples for the Year		Likely Source of Contamination
Fecal coliform and E.coli in the distribution system (positive samples) until March 31, 2016	0	0	1/16 - 3/16	No	0		Human and animal fecal waste
E. coli (beginning April 1, 2016)	0	+	4/16 - 12/16	No	0		Human and animal fecal waste

+Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*

Radioactive Contaminants							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Alpha emitters (pCi/L)	0	15	3/11	No	0.806	ND - 0.806	Erosion of natural deposits

Inorganic Contaminants							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Barium (ppm)	2	2	2/16	No	0.0151	NA	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	100	100	2/16	No	2.3	NA	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	4	4.0	2/16	No	0.43	NA	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)	NA	100	2/16	No	1.2	NA	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate (as Nitrogen) (ppm)	10	10	2/16	No	0.1	NA	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	NA	160	2/16	No	19.6	NA	Salt water intrusion, leaching from soil

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Stage 1 Disinfectants and Disinfection By-Products

For chloramines, or chlorine, 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 highest and lowest result of all the individual samples collected during the past year.

Disinfectant or Contaminant and Unit of Measurement	MRDLG	MRDL	Dates of Sampling (mo./yr.)	MCL or MRDL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Chlorine and Chloramines (ppm)	4	4.0	1/16 - 12/16	No	3.8	0.6 - 6.0	Water additive used to control microbes

Stage 2 Disinfectants and Disinfection By-Products

Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	NA	60	2/16,5/16,8/16,11/16	No	27.70	18.00 – 40.90	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	NA	80	2/16,5/16,8/16,11/16	No	42.17	24.30 – 46.60	By-product of drinking water disinfection

Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	MCLG	AL (Action Level)	Dates of Sampling (mo./yr.)	AL Exceeded (Y/N)	90 th Percentile Result	No. of Sampling Sites Exceeding the AL	Likely Source of Contamination
Copper (tap water) (ppm)	1.3	1.3	6/14 - 7/14	No	0.41	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	0	15	6/14 - 7/14	No	0.8	0	Corrosion of household plumbing systems; erosion of natural deposits

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Tampa Bay Water

Contaminants							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Highest Single Measurement	Lowest Monthly % of Samples Meeting Regulatory Limits	Likely Source of Contamination
Turbidity (NTU)	NA	TT	1/16 – 12/16	No	1.0	100	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.

Radioactive Contaminants							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Alpha emitters (pCi/L)	0	15	4/16	No	4.4	0.7-4.4	Erosion of natural deposits
Radium 226 + 228 (pCi/L)	0	5	4/16	No	4.1	1.0 - 4.1	Erosion of natural deposits
Uranium (ug/L)	0	30	4/16	No	0.7	NA	Erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Dalapon (ppb)	200	200	1/16 – 4/16	No	0.74	ND – 0.74	Runoff from herbicide used on rights of way

Stage 1 Disinfectants and Disinfection By-Products							
Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Level Detected	Range of Results	Likely Source of Contamination
Bromate (ppb)	0	10	1/16 - 12/16	No	2.20	0.80-6.49	By-product of drinking water disinfection

For bromate, the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected.

Bromate (ppb)	0	10	1/16 - 12/16	No	2.20	0.80-6.49	By-product of drinking water disinfection
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Contaminants							
Disinfectant and Unit of Measurement	MRDLG	MRDL	Dates of Sampling (mo./yr.)	Acute Violations (Y/N)	Non-Acute Violations (Y/N)	Level Detected	Likely Source of Contamination
Chlorine Dioxide (ppb)	800	800	4/16	No	No	0.70	Water additive used to control microbes

For chlorine dioxide, the level detected is the highest single daily sample collected at the entrance to the distribution system.

Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	MCL Violation (Y/N)	Highest Monthly Average*	Highest Average**	Likely Source of Contamination
Chlorite (ppm)	0.8	1.0	1/16 – 12/16	No	0.0082	NA	By-product of drinking water disinfection

*For Highest Monthly Average: three sample sets collected in the distribution system. **For Highest Average: three sample sets collected in the distribution system following a daily MCL exceedance at the entrance to the distribution system.

Contaminant and Unit of Measurement	MCLG	MCL	Dates of Sampling (mo./yr.)	TT Violation (Y/N)	Lowest Running Annual Average*	Range of Monthly Removal Ratios	Likely Source of Contamination
Total Organic Carbon (ppm)	NA	TT	1/16 – 12/16	No	3.6	1.72 – 3.8	Naturally present in the environment

*Lowest Running Annual Average Computed Quarterly, of Monthly Removal Ratios

Prepared by Pinellas County Utilities with reference to CCR data provided by Tampa Bay Water, February 2017