

City of Bradenton

~~-2014-~~

Drinking Water Quality Report

The City of Bradenton Water Treatment Plant (PWS#6410182) is located at 5600 Natalie Way in Bradenton, FL 34203. The staff 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, 2014 through December 31, 2014. The City's Water Plant is a surface/groundwater facility. The source of our water is the Evers Reservoir. The reservoir is located in eastern Manatee County, just south of SR 70 and west of I-75. The reservoir holds approximately 1.5 billion gallons. The reservoir covers almost 350 acres and is fed by the Braden River Watershed.

Treatment of the City of Bradenton's water is a 24 hour/day operation. There are state certified operators that perform hourly analyses and monitor various parameters on a continuous basis to assure optimal operations which are reported monthly to regulatory agencies. Since being built in 1990 there have been improvements to enable the plant to be run more efficiently and effectively. The procedures we use for treating "raw" water to make it suitable for human consumption consist of many processes to ensure that your water is safe and aesthetically pleasing and are as follows:

1. Raw water (from the reservoir) is drawn into the plant by one of three raw water pumps. A rotating bar screen removes large debris from the water. Here, the water is treated with Powder Activated Carbon (PAC) to remove taste and odor causing elements.
 2. The pH of the water is then lowered to a level which promotes coagulation, the process by which fine particles in the water are made to clump together so that they may be removed from the water through settling.
 3. A coagulant aid is then added. This process bonds with the particles in the raw water to coagulate, making "floc", creating clumps of heavier material. The floc then settles out in the four settling tanks.
 4. From these tanks the water is sent to a stabilization basin for pH adjustment.
 5. The water is then filtered through a set of twelve filters which remove very fine particles not removed through the settling process.
 6. The water is then sent to the disinfection clearwells where it is treated with chloramines (a chlorine and ammonia combination), a safer alternative to chlorine alone, then the water is fluoridated as mandated by voter referendum.
 7. Next, the water is sent to the pumping clearwell and then pumped to ground storage tanks located in town. It is also treated with a corrosion inhibitor. High service pumps send the water to six towers located throughout the City. The final destination for the finished water is the consumer.
- The Safe Drinking Water Act (SDWA) of 1974 set monitoring requirements for drinking water treatment plants. The amendments of 1986 were implemented to further improve the quality of our drinking water. The Safe Drinking Water Act requires water treatment facilities to provide consumers with annual water quality reports. Each contaminant is monitored on a different schedule which is determined by several factors; the population served; violation status, health risks, etc.
 - Enclosed is information about your source water and analysis results. The report is compiled using compliance data from the 2013 reporting period. Analyses were performed by subcontracted labs, all of which are state-certified. Each water treatment facility is required to perform daily, monthly, quarterly, bi-annual and/or annual analyses according to a schedule set forth by the state. Violations are reported to the state and appropriate notice given via local news stations and news publications.
 - Apartments, condominiums, mobile home parks and living facilities which provide water for their tenants through a master meter should place this report in a visible area accessible to all residents. Information on how to obtain additional copies of this brochure, if available, may be obtained by contacting the City of Bradenton Water Treatment Plant at 941-727-6352. If you have any questions about the content of this report, please call 941-708-6353. This report was prepared by Cynthia W. Martin, Compliance Coordinator.
 - 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 human activity.
 - Each contaminant has a certain amount (or range) which is allowed to be present in drinking water. These standards are set by the Environmental Protection Agency. Very few of the contaminants are detected in your water. For those contaminants that were detected during 2014, the maximum amount detected, as well as the maximum amount allowed are given in the enclosed tables.
 - Bradenton has been monitoring for unregulated contaminants (UC's) as part of a study to help the US EPA determine the occurrence in drinking water of UC's 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 analytical results of our UC monitoring in our annual water quality report. 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.
 - Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone 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 microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

During 2014 The Department of Environmental Protection updated a Source Water Assessment on our system. The assessment results were conducted to provide information about any potential sources of contamination in the vicinity of our wells or surface water intakes. There were two high potential sources and the assessment results are available on the FDEP source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp. The Utility Operations Department staff has utilized these potential contaminant sources in the design and operation of water quality monitoring programs throughout the watershed and reservoir.

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 storm water runoff, industrial or domestic Waste water discharges, oil and gas production, mining and 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. Contaminants 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.

Attention Property Owners: If you are a property owner or manager, please provide this water quality report to your tenants. This report may be photocopied or posted in a prominent location at your facility. More copies are available by calling 941-708-6353.

We tested our sources of drinking water, as well as our treated tap water, for the presence of *Cryptosporidium*. Our monitoring of source water indicated the presence of this organism. *Cryptosporidium* was detected in 1 of 4 samples tested. Although small amounts were found in the source water, we did not find any in the treated water that goes to your tap. It is important for you to know that *Cryptosporidium* may cause serious illness in immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders. These people should seek advice from their health care providers.

| Microbiological | | | | | | | |
|-------------------------------------|-------------------|-------------------|-----------------------------------|---|------------------|--------------------------------------|-----------------------------------|
| Contaminant and Unit of Measurement | Dates of Sampling | MCL Violation Y/N | Highest Monthly Percentage Number | MCLG | MCL | Likely Source of Contamination | |
| Total Coliform Bacteria | 01/14 – 12/14 | N | 5% | 0 | <5% ^A | Naturally Present in the Environment | |
| Contaminant and Unit of Measurement | Dates of Sampling | MCL Violation Y/N | Highest Single Measurement | Lowest Monthly % of Samples Meeting Regulatory Limits | MCLG | MCL | Likely Source of Contamination |
| Filter Turbidity (NTU) | 01/14 – 12/14 | N | 0.12 | 100% | N/A | TT ^B | Soil Runoff and Treatment Process |

INORGANIC CONTAMINANTS

| Contaminant and Unit of Measurement | Dates of Sampling | MCL Violation Y/N | Max. Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination |
|-------------------------------------|-------------------|-------------------|---------------------|------------------|------|-----|--|
| Barium (ppm) | 01/14 – 12/14 | NO | 0.021 | N/A | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride (ppm) | 01/14 – 12/14 | NO | 0.74 | N/A | 4 | 4 | Water additive |
| Nickel (ppb) | 01/14 – 12/14 | NO | 5.0 | N/A | N/A | 100 | Pollution from mining and refining operations; natural occurrence in soil |
| Sodium (ppm) | 01/14 – 12/14 | NO | 74.3 | N/A | N/A | 160 | Saltwater intrusion, leaching from soil |

RADIOLOGICAL CONTAMINANTS

| | | | | | | | |
|--------------------|---------------|----|------------|-----|---|----------------|-----------------------------|
| Gross Alpha pCi/L | 01/13 – 12/13 | NO | 1.9 +/-1.3 | N/A | 0 | 15 | Erosion of natural deposits |
| Radium 226 (pCi/L) | 01/13 – 12/13 | NO | 0.6 +/-0.2 | N/A | 0 | 5 ^C | Erosion of natural deposits |

STAGE 2 DISINFECTANT AND DISINFECTION BY-PRODUCTS (D/DBP) PARAMETERS

| Disinfectant or Contaminant and Unit of Measurement | Dates of Sampling | MCL Violation Y/N | Level Detected | Range of Results | MCLG OR MRDLG | MCL or MRDL | Likely Source of Contamination |
|---|-------------------|-------------------|-------------------|--------------------------|---------------|----------------------|---|
| Chloramines (mg/L) | Daily | NO | 3.80 ^D | 0.60 – 6.30 ^E | MRDLG =4 | MRDL =4 ^F | Water additive to control microbes |
| Haloacetic Acids (ppb) | 01/14 – 12/14 | NO | 33.5 ^D | 4.75 – 38.8 ^E | N/A | MCL=60 | By-Product of drinking water disinfection |
| Total Trihalomethanes (ppb) | 01/14 – 12/14 | NO | 10.9 ^D | 1.78 – 12.1 ^E | N/A | MCL=80 | By-Product of drinking water disinfection |
| Total Organic Carbon (Ratio)% ^G | 01/14 – 12/14 | NO | 1.90 ^H | 1.80 – 2.10 | N/A | TT | Naturally present in the environment |

LEAD AND COPPER (TAP WATER)

| Contaminant and Unit of Measurement | Dates of Sampling | AL Violation Y/N | 90 th Percentile Results | No. of samples Exceeding the AL | MCLG | AL (Action Level) | Likely Source of Contamination |
|-------------------------------------|-------------------|------------------|-------------------------------------|---------------------------------|------|-------------------|---|
| Lead (ppb) | 2013 | NO | 1.0 | 0 | 0 | 15 | Corrosion of household plumbing systems; erosion of natural deposits |
| Copper (ppm) | 2013 | NO | .078 | 0 | 1.3 | 1.3 | Corrosion of household plumbing Systems; erosion of natural deposits; leaching from wood preservatives. |

UNREGULATED CONTAMINANTS (UCMR3 TAP WATER)

| Contaminant and Unit of Measurement | Dates of Sampling | Range of Results |
|-------------------------------------|-------------------|------------------|
| Chromium (ppb) | 01/14 – 12/14 | 0.12 - 0.20 |
| Cobalt (ppb) | 01/14 – 12/14 | 0.66 - 2.7 |
| Strontium (ppb) | 01/14 – 12/14 | 2380 - 2760 |
| Vanadium (ppb) | 01/14 – 12/14 | 0.09 - 0.22 |
| Chromium, Hexavalent (ppb) | 01/14 – 12/14 | 0.011 - 0.02 |
| Chlorate (ppb) | 01/14 – 12/14 | 200 - 650 |

TABLE KEY & DEFINITIONS

- AL:** Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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
- 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.
- 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.
- MRDLG:** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- N/A:** Not Applicable.
- pCi/L** picocuries per liter (a measure of radioactivity).
- ppm:** parts per million (mg/L).
- ppb:** parts per billion (ug/L).
- ND:** Not detected and indicates the substance was not found by laboratory analysis.
- NTU:** Turbidity is a measure of the clarity of water. Operational permit requires continuous monitoring.
- TT:** Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.
- I:** The reported qualifier I value is between the laboratory minimum detection limit and the practical quantitative limit.

^A = Total Coliform detections must not exceed 5% of all monthly samples.

^B = Filter turbidity may never exceed 1 NTU and must not exceed 0.3 in 95% of daily samples in any month.

^C = MCL limit of Radium-226 and Radium-228 combined.

^D = The value is the highest running annual average, computed quarterly.

^E = These values represent values at individual sites.

^F = A public water system (PWS) is in compliance with the MRDL when the running annual average of monthly averages of samples taken in the distribution system, computed quarterly is less than or equal to the MRDL.

^G = These values represent the % total organic carbon removal achieved at the treatment plant divided by the % removal required; this value must be above 1.0 for compliance.

^H = This value is the lowest running annual average, computed quarterly, of the monthly removal ratio.

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. The City's Water Plant 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 it 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.