

City of Bradenton

~~-2010-~~

Drinking Water Quality Report

Water Treatment Plant
5600 Natalie Way
Bradenton, FL 34203

The City of Bradenton Water Treatment Plant 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, 2010 through December 31, 2010. The City's Water Plant is a surface/groundwater facility. The source of our water is the Bill Evers Reservoir. Groundwater is used in emergency situations. 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 2010 reporting period. Analyses were performed by our lab and 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 941-727-6363. If you have any questions about the content of this report, please call 941-727-6363. This report was prepared by Cynthia W. Martin, Laboratory Supervisor.
 - 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 2010, the maximum amount detected, as well as the maximum amount allowed are given in the enclosed table.
 - In order to ensure that tap water is safe, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 EPA'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. 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.

In 2009 The Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells or surface water intakes. There were three 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 or they can be obtained from the City's Water Treatment Plant at 941-727-6363. 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 wastewater 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.

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 941-727-6363.

MICROBIOLOGICAL

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)	01/10 – 12/10	NO	0.12	100%	N/A	TT	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)	01/10 – 12/10	NO	0.036	N/A	2	2	Discharge of drilling wastes and metal re-Fineries and erosion of natural deposits
Fluoride (ppm)	01/10 – 12/10	NO	0.70	N/A	4	4	Water Additive
Nitrate (ppm) (as Nitrogen)	01/10 – 12/10	NO	.108	.06 – .108	10	10	Runoff from fertilizer use; Leaching from septic tanks; erosion of natural deposits
Nitrite (ppm) (as Nitrogen)	01/10 – 12/10	NO	.041	ND – .041	1	1	
Sodium (ppm)	01/10 – 12/10	NO	70	N/A	N/A	160	Saltwater intrusion, Leaching from soil

RADIOLOGICAL 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
Radium 226 (pCi/L)	01/09 – 12/09 ^G	NO	1.4	N/A	0	5 ^A	Erosion of natural deposits
Gross Alpha (pCi/L)	01/09 – 12/09 ^G	NO	1.9	N/A	0	5	Erosion of natural deposits

STAGE 1 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	3.83 ^B	0.60 – 3.40 ^C	MRDLG=4	MRDL =4 ^D	Water additive to control microbes
Haloacetic Acids (ppb)	01/10 – 12/10	NO	22.43 ^B	0.0 – 28.7 ^C	N/A	MCL=60	By-Product of drinking water disinfection
Total Trihalomethanes (ppb)	01/10 – 12/10	NO	15.19 ^B	10.6-28.5 ^C	N/A	MCL=80	By-Product of drinking water disinfection
Total Organic Carbon (Ratio)% ^E	01/10 – 12/10	NO	1.87 ^F	1.80-2.0	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)	Major Source
Lead (ppb)	2010	NO	ND	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits.
Copper (ppm)	2010	NO	.10	0	1.3	1.3	

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.

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 cloudiness of water. Operational permit requires continuous monitoring.

TT: Treatment Technique

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

^B = the value is the highest running annual average, computed quarterly

^C = These values represent values at individual sample sites.

^D = A public water system is in compliance with the MRDL when the running annual average of monthly averages of samples taken in the distribution system computed quarterly.

^E = 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.

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

^G = The state allows us to monitor for some contaminants less than once per year because of the concentrations of these contaminants do not change frequently some of our data, though representative, are more than one year old.

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>.

UNREGULATED CONTAMINANTS:

The City began monitoring for UC's as part of a study to help the USEPA 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 level) 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 detected. During 2008 no contaminants were detected. If you would like more information on EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at 800-426-4791.