

City of Bradenton

~~2008~~

Drinking Water Quality Report

Water Treatment Plant
5600 Natalie Way
Bradenton, FL 34203

The Public health is the primary concern of the City of Bradenton Water Treatment Plant. 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 which occupies roughly 70 square miles.

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 five 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 2007 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 2006, 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 2004 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 are two potential sources of contamination identified for this system with moderate to high susceptibility levels. One of these is on-site diesel storage tanks used to power back up emergency supply wells, which were assigned a moderate susceptibility level. The other is the surface water intakes at Evers Reservoir which were assigned a high susceptibility ranking because of the open nature of surface waters and the presence of potential sources of contamination within the assessment area for this system. 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.

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	Weekly	NO	1.12%	0	<5% ^A		Naturally present in environment
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Highest Single Measurement	Lowest Monthly % of Samples Meeting Regulatory Limits	MCL G	MC L	Likely Souce of Contamination
Filter Turbidity (NTU)	Continuous	NO	.02	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
Fluoride (ppm)	Daily	NO	0.929	0.515 - 0.929	4	4	Water Additive
Nitrate (ppm) (as Nitrogen)	Quarterly	NO	0.125	ND - 0.125	10	10	Runoff from fertilizer use; Leaching from septic tanks; erosion of natural deposits.
Nitrite (ppm) (as Nitrogen)	Quarterly	NO	.005	ND - .005	1	1	
Barium (ppm)	Quarterly	NO	.037	.032 - .037	2	2	Discharge of drilling wastes and metal re-Fineries and erosion of natural deposits
Sodium (ppm)	Quarterly	NO	76.7	60.3 - 76.7	N/A	160	Saltwater intrusion, Leaching from soil
Cyanide (ppm)	Quarterly	NO	.009	.003 - .009	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Nickel (ppm)	Quarterly	NO	.008	.002 - .008	100	100	Pollution from mining and refining operation Natural occurrence in soil
Antimony (ppb)	Quarterly	NO	3	ND - .003	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	Quarterly	NO	1	ND - .003	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Chromium (ppb)	Quarterly	NO	2	ND - .002	100	100	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Cadmium (ppb)	Quarterly	NO	1	ND - .001	5	5	Corrosion of galvanized pipes; erosion of natural discharge from metal refineries; runoff from waste batteries and paints
Lead (ppb)	Quarterly	NO	1	ND - 1.0	N/A	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder

VOLATILE ORGANICS

Contaminant and Unit of measurement	Dates of Sampling	MCL Violation Y/N	Max. level detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Dichloromethane (ppb)	Quarterly	NO	0.34	ND – 0.34	5	5	Discharge from pharmaceutical and chemical factories

RADIOLOGICAL CONTAMINANTS

Radium 226 (pCi/L)	Quarterly	NO	2.7	1.4 – 2.7	0	5 ^B	Erosion of natural deposits
Radium 228 (pCi/L)	Quarterly	NO	1.8	ND – 1.8	0	5 ^B	Erosion of natural deposits
Gross Alpha (pCi/L)	Quarterly	NO	3.6	ND – 3.6	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	2.80 ^C	1.0 – 5.7 ^D	MRDLG=4	MRDL =4 ^E	Water additive to control microbes
Haloacetic Acids (ppb)	Quarterly	NO	19.4 ^C	8.80 – 22.0 ^D	N/A	MCL=60	By-Product of drinking water disinfection
Total Trihalomethanes (ppb)	Quarterly	NO	28.0 ^C	8.17 – 37.0 ^D	N/A	MCL=80	
Total Organic Carbon (Ratio)% ^F	Monthly	NO	1.70 ^G	1.70 – 2.1	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)	2007 ^H	NO	ND	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits.
Copper (ppm)	2007 ^H	NO	.083	0	1.3	1.3	

SECONDARY CONTAMINANT TABLE

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Highest Result	Range of Results	MCL	Likely source of Contamination
Total Dissolved Solids (ppm)	Quarterly	*	572	516 - 572	500	Natural occurrence from soil leaching

TABLE KEY & DEFINITIONS

AL: Action Level

MCL: Maximum Contaminant Level

MCLG: Maximum Contaminant Level Goal

N/A: Not Applicable

pCi/L: picolcuries 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.

*: A variance of the TDS MCL was issued by the Department of Health during 2008 due to drought conditions. Drought TDS MCL=1200ppm

TT: Treatment Technique

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

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

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

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

^E = 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, is less than or equal to the MRDL.

^F = 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.

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

^H = 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.

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.
- (E) Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

CRYPTOSPORIDIUM & GIARDIA:

Cryptosporidium and Giardia are microbial parasites that are found in surface water throughout the United States. From November 2006 through December 2008 the City conducted monthly monitoring of our source of drinking water, as well as our treated tap water, for the presence of these parasites. We did not detect any Cryptosporidium or Giardia in the source water or in the treated water that goes into your tap.

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.

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>.

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.