



# City of Bordentown Water Department

## 2007 Annual Drinking Water Quality Report

(PWS ID# 0303001)

City of Bordentown Water Department  
 324 Farnsworth Avenue  
 Bordentown, NJ 08505

**Mission Statement**

We at the City of Bordentown Water Department work hard each day to provide high-quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

**For more information...**

Water quality - call the U.S. Environmental Protection Agency's Safe Drinking Water Hotline, 1-800-426-4791

State of New Jersey Department of Environmental Protection, Bureau of Safe Drinking Water:  
[www.state.nj.us/dep/watersupply/safedrnk.htm](http://www.state.nj.us/dep/watersupply/safedrnk.htm)  
 (609) 292-5550

Local drinking water quality - call the City of Bordentown Water Department at 609-298-2121 Extension 5

### We're pleased to present to you this year's Annual Drinking Water Quality Report.

This report is designed to inform you about the quality water and services that the City of Bordentown Water Department delivers to you every day. Our constant goal is to provide you with a dependable supply of high-quality drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

#### Where does my water come from?

The raw water we treat comes from groundwater supplied from the Magothy-Raritan aquifer. For 2007 we produced approximately 2.35 million gallons of high-quality drinking water for our customers on a daily basis.

#### How is my water treated?

The City of Bordentown water treatment plant uses a treatment process consisting of greensand-filtration pressure filters, a packed tower aerator and disinfection along with pH adjustment and corrosion control treatment.

#### How is the drinking water quality?

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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. The City of Bordentown Water Department routinely monitors for constituents in your drinking water according to Federal and State laws. The table on the other side of this report shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2007. 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.

#### Waived Requirements

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals.

#### How do drinking water sources become polluted?

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:

- **Microbial 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 or 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.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants**, including synthetic or volatile organic chemicals which may include pesticides and herbicides which

may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses or by-products of industrial processes and petroleum production, gas stations, or septic systems.

#### What if I have questions?

If you have any questions about this Water Quality Report or concerning your water utility, please contact the City of Bordentown at (609) 298-2121 extension 5. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled public meetings. They are held at 8:00 p.m. on the second and fourth Monday of each month at the Bordentown City Hall, 324 Farnsworth Avenue. If you have questions regarding the source water assessment report or summary, please contact the NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

#### People with Special Health Concerns

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).

# City of Bordentown Water Department's 2007 Drinking Water Quality Results

Contaminant (Unit of measurement)	Violation Y/N	Level Detected	Range & Sample Date	MCLG	MCL	Likely Source of Contamination	Potential Health Effects
<b>Disinfection Byproducts</b>							
Total Trihalo-Methanes (ppb)	No	3.76 (a) (average)	1.96 – 4.94	n/a	80	By-product of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Haloacetic Acids (ppb)	No	0.556 (a) (average)	ND-0.831	n/a	60	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
<b>Radioactive Contaminants</b>							
Alpha emitters (pCi/L)	No	12	9 – 14	0	15	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/L)	No	3.89 (b) (average)	2.75-4.55	0	5	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
<b>Inorganic Contaminants</b>							
Barium (ppm)	No	0.0275	7/22/05 (d)	2	2	Discharge of drilling wastes; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Copper (ppm)	No	0.0672 (90 <sup>th</sup> percentile)	0.002-0.241 (c)	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits. Leaching from wood preservatives.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their doctor.
Lead (ppb)	No	0.002 (90 <sup>th</sup> percentile)	0-0.026 (c)	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits	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. Bordentown Water Department is responsible for providing high quality drinking water, but can not 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 second to 2 minutes before using water for drinking and 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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a> .
Nitrate (as Nitrogen) (ppm)	No	0.69	9/10/07	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
<b>Chlorine Residual</b>							
Chlorine (ppm)	No	0.42 (average)	0.44-0.53	4.0	4.0	Water additive used to control microbes	Some people who drink water containing chlorine well in excess of the MRDL could experience irritating effects in their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
<b>Total Coliforms</b>							
Total Coliforms (# of positive samples)	Yes	2 (e)	out of 220 samples	0	1	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. If the MCL is exceeded, the water supplier must provide public notice.

The table shows that testing uncovered a problem this year with total coliforms. The violation occurred in July, and lasted less than 24 hours. See footnote (e) below. Public notice of this violation was provided to all water users in accordance with State law. The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria.

Footnotes: (a) The reported value is a "rolling average" of the quarterly samples taken: it includes the results of the previous three calendar quarters. It is the highest average for any quarter in 2007. (b) The reported value is an average of samples taken quarterly. (c) Copper and lead MCL's have not yet been established for community water systems. Currently, only Action Levels (AL) of 1.3 ppm for copper and 15 ppb for lead apply. (d) The State allows us to monitor for some contaminants once every three years, since the concentrations do not change frequently. Sample dates are included for contaminants that were sampled prior to 2007. (e) Subsequent sampling within twenty-four hours returned a negative result, indicating that this was probably a laboratory error.

## GLOSSARY

- **Parts per million (ppm)**

One part per million is equivalent to a single penny in ten thousand dollars.

- **Parts per billion (ppb)**

One part per billion is equivalent to a single penny in ten million dollars.

- **Non-Detects (ND)**

Laboratory analysis indicates that the contaminant is not present at a detectable level.

- **Action Level (AL)**

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

- **Picocuries per liter (pCi/L)**

Picocuries per liter is a measure of the radioactivity in water.

- **Not-Applicable (n/a)**

- **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 allows 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.

## Source Water Assessments

The New Jersey Department of Environmental Protection (NJDEP) completed and issued the Source Water Assessment Report and Summary for this public water system in 2005. It is available at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting the NJDEP, Bureau of Safe Drinking Water at (609) 292-5550. The source water assessment was performed for our four water supply wells. The list below provides the number of wells that had a high (H), medium (M), or low (L) susceptibility rating for each of seven contaminant categories. The definition of each contaminant category is provided after the susceptibility ratings for the four wells, in parenthesis.

**If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water.** The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at

frequencies and concentrations above allowable levels. As a result of the assessments, the DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

- **Pathogens (4 Wells-M):** Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.
- **Nutrients (4 Wells-H):** Compounds, minerals and elements (both naturally occurring and man-made) that aid plant growth. Examples include nitrogen and phosphorus.
- **Pesticides (4 Wells-L):** Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlorodane.
- **Radionuclides (2 Wells-H, 2 Wells-M):** Radioactive substances that are both naturally occurring and man made. Examples include radium and uranium.

- **Volatile Organic Compounds (4 Wells-H):**

Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

- **Inorganics (1 Well-H, 3 Wells-M):**

Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

- **Radon (4 Wells-M):**

Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

- **Disinfection Byproduct Precursors (3 Wells-H, 1 Well-M):**

A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

## Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

**Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.**