

# 2010 CONSUMER CONFIDENCE REPORT

## Prudence Island Water District

Prudence Island, RI

PWS ID#1592023

We are very pleased to provide you with this year's Consumer Confidence Report. This report provides you with information on the water and services that we delivered to you in 2010. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

We want our valued customers to be informed about their water utility. The District holds meetings at the Prudence Island Fire Station every third Saturday at 1:00 PM. A full calendar is available on our webpage <http://www.pih2o.org/annual.htm>. If after reviewing this report you have any questions, or would like to know more about the Prudence Island Water District, please contact Patricia Richard at 401-682-2981.

### The Quality of Your Drinking Water

Our goal is to provide you with a safe and dependable supply of drinking water. However, August and September 2010, we found Total Coliform Bacteria and E.coli at a level higher than the EPA allows and therefore our water temporarily exceeded drinking water standards. We also received a monitoring violation in November for not taking all of our follow-up samples on the same calendar day. Please see the *Water Quality Test Results* and *Violations* sections at the end of this report for additional information. We are committed to ensuring the quality of your water.

### The Source of Your Drinking Water

Our water source is four wells located throughout the island.

The RI Department of Health, in cooperation with other state and federal agencies, has assessed the threats to the Prudence Island Water District's water supply sources. The assessment considered the intensity of development, the presence of businesses and facilities that use, store or generate potential contaminants, how easily contaminants may move through the soils in the Source Water Protection Area (SWPA), and the sampling history of the water.

Our monitoring program continues to assure that the water delivered to your home is safe to drink. However, the assessment found that the water source is at LOW RISK of contamination. This does NOT mean that the water cannot become contaminated. Protection efforts are necessary to assure continued water quality. The complete Source Water Assessment Report is available from the Prudence Island Water District or the Department of Health at (401) 222-6867.

### Why Are There Contaminants in My Drinking Water?

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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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:

- **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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **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.
- **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

## Water Quality Test Results

The table below lists all of the drinking water contaminants that were detected through our water quality monitoring and testing. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from the January – December 2010 monitoring period. For those contaminants that are monitored less frequently the most recent test results are listed.

Maximum Contaminant Levels (MCL's) are set at very stringent levels. The Maximum Contaminant Level Goal (MCLG) is set at a level where no health effects would be expected, and the MCL is set as close to that as possible, considering available technology and cost of treatment. A person would have to drink 2 liters of water every day, as recommended by health professionals, at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

2010 TEST RESULTS									
Radioactive Contaminants	Violation Y/N	Level Detected				Unit Measurement	MCLG	MCL	Likely Source of Contamination
		Army Well	Bristol Colony Well	Indian Spring Well #1	Indian Spring Well #4				
Combined Radium (2009)	N	1.50	1.80	4.39	*	pCi/L	0	5	Erosion of natural deposits
Inorganic Contaminants	Violation Y/N	Level Detected				Unit Measurement	MCLG	MCL	Likely Source of Contamination
		Army Well	Bristol Colony Well	Indian Spring Well #1	Indian Spring Well #4				
Arsenic (2009)	N	*	1	*	*	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Chromium (2009)	N	2	4	2	*	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (as Nitrogen)	N	*	0.39	*	*	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (2009)	N	1	*	*	*	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

\*Laboratory analysis indicated that the contaminant was not present.

DISTRIBUTION SYSTEM TEST RESULTS						
Microbial Contaminants	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	N	1 positive-May	Highest monthly # of positive samples	0	1 positive	Naturally present in the environment
	Y	6 positives-August				
	Y	5 positives-Sept				
	N	1 positive-Nov				
Fecal Coliform & <i>E. coli</i>	Y	1 positive-Sept	Highest Monthly # of Positive Samples	0	Routine sample & repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive.	Human and animal fecal waste
Inorganic Contaminants	Violation Y/N	Level Detected 90 <sup>th</sup> Percentile	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Copper* (2008)	N	0.53	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching form wood preservatives
Lead** (2008)	N	14	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

\*There was one (1) site that exceeded the Copper Action Level. **Copper:** 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 personal doctor.

\*\*There was one (1) site that exceeded the Lead Action Level. **Lead:** Infants and young children are typically more vulnerable to Lead in drinking water than the general population. It is possible that Lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated Lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Volatile Organic Contaminants	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Carbon Tetrachloride (2008)	N	0.70	ppb	5	5	Discharge from chemical plants and other industrial activities
Total Trihalomethanes (TTHM) (2008)	N	20.5	ppb	0	80	By-product of drinking water chlorination

**Action Level (AL)** - The concentration of a contaminant which if exceeded, triggers treatment or other requirements which a water system must follow.  
**Maximum Contaminant Level (MCL)** -The MCL is 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 (MCLG)** - The MCLG is 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.  
**Parts per million (ppm) or Milligrams per liter (mg/L)** - One part per million corresponds to one minute in two years or a single penny in \$10,000.  
**Parts per billion (ppb) or Micrograms per liter (ug/L)** - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.  
**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.

For most people, the health benefits of drinking plenty of water outweigh any possible health risk from these contaminants. However, 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

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 Prudence Island Water District 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>.

#### **Violations:**

**Total Coliform Bacteria & Fecal Coliform & *E.coli* MCL Violations:** In late August we had several samples test positive for total coliform and in early September, in addition to positive total coliform samples, one sample also tested positive for *E.coli*. We were put on a boil water order because of the *E.coli* detect. We immediately alerted all of our customers to this issue. We then disinfected the well, the water storage facility "Big Blue" and the distribution system with chlorine. Follow-up samples were absent for coliform and we were able to go off of the boil water order. The source of the problem was a breach of hygienic conditions at IS#1 well.

**Total Coliform Bacteria Monitoring Violation:** In November we had a routine water sample test positive for total coliform. To comply with regulations we should have taken four (4) samples within 24 hours. We took a total of four samples within 24 hours but they were not within the same calendar day and we were issued a monitoring violation.

**Total Coliform:** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. Coliforms were found in more samples than allowed and this was a warning of potential problems.

**Fecal Coliform & *E.coli*:** Fecal coliform and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely- compromised immune systems.

We at the Prudence Island Water District work to provide top quality water to every tap. We encourage all of our customers to conserve and use water efficiently and remind you to help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please do not hesitate to call our office with any questions.