

**PWSID ME0090330**  
**CASTINE WATER DEPARTMENT**  
**2010 Consumer Confidence Report**

**General Information**

**Water System Contact Name:** Dale Abernethy

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**Report Covering Calendar Year:** Jan 1 - Dec 31, 2010

**Upcoming Regularly Scheduled Meeting(s):** Upon request

**Source Water Information**

**Description of Water Source:** Wells: 6 Surface Water Intakes: 1 (Battle Avenue Ponds)

**Water Treatment & Filtration Information:** chlorination, filtration, corrosion control (polyphosphates)

**Source Water Assessment:**

The sources of drinking water include rivers, lakes, ponds, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from human or animal activity. The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program (SWAP). The assessments included geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinance to see how likely our drinking water source is to being contaminated by human activities in the future. Assessment results are available at town offices, public water suppliers, and the DWP. For more information about the SWAP, please contact the DWP at telephone 287-2070.

**Water Test Results**

<i>Contaminant</i>	<i>Date</i>	<i>Results</i>	<i>MCL</i>	<i>MCLG</i>	<i>Source</i>
<b>Microbiological</b>					
COLIFORM (TCR)	2010	0 pos	1 pos/mo or 5%	0 pos	Naturally present in the environment.
<b>Inorganics</b>					
ARSENIC	11/9/2010	4.5 ppb	10 ppb	0 ppb	Erosion of natural deposits. Runoff from orchards, glass and electronics production wastes.
BARIUM	3/4/2010	0.0028 ppm	2 ppm	2 ppm	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
COPPER 90TH% VALUE (4)	1/1/2010 - 6/30/2010	0.86 ppm	AL = 1.3 ppm	1.3 ppm	Corrosion of household plumbing systems.
LEAD 90TH% VALUE (4)	1/1/2010 - 6/30/2010	22 ppb	AL = 15 ppb	0 ppb	Corrosion of household plumbing systems.
NITRATE	8/9/2010	0.46 ppm	10 ppm	10 ppm	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.

**Radionuclides**

RADIUM-228	12/30/2010	0.687 pCi/l	5 pCi/l	0 pCi/l	Erosion of natural deposits.
RADON	1/29/2007	689 pCi/l	4,000 pCi/l	4,000 pCi/l	Erosion of natural deposits.

**Chlorine Residual (Add chlorine residual information)**

CHLORINE RESIDUAL	RAA	0.5 ppm	MRDL=4 ppm	MRDLG=4 ppm	By-product of drinking water chlorination.
		Range (0.5 – 0.5 ppm)			

**Definitions:**

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health.

Running Annual Average (RAA): The Average of all monthly or quarterly samples for the last year at all sample locations.

Action Level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Residual Disinfectant Level (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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

**Units:**

ppm = parts per million or milligrams per liter (mg/L).

pCi/L = picocuries per liter (a measure of radioactivity).

ppb = parts per billion or micrograms per liter (µg/L).

pos = positive samples.

**Notes:**

1) Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take < 40 samples per month.

2) Arsenic: The U.S. EPA adopted the new MCL standard in October 2001. Water systems must meet this new standard by January 2006.

3) Fluoride: Fluoride levels must be maintained between 1-2 ppm, for those water systems that fluoridate the water.

4) Lead/Copper: Action levels (AL) are measured at consumer's tap. 90% of the tests must be equal to or below the action level.

5) Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health provider.

6) Gross Alpha: Action level over 5 pCi/L requires testing for Radium. Action level over 15 pCi/L requires testing for Radon and Uranium.

7) Uranium: The U.S. EPA adopted the new MCL standard of 30 µg/L(ppb), in December 2000. Water systems must meet this new standard after December 2003.

8) Radon: The State of Maine adopted a Maximum Exposure Guideline (MEG) for Radon in drinking water at 4000 pCi/L, effective 1/1/07. If Radon exceeds the MEG in water, treatment is recommended. It is also advisable to test indoor air for Radon. The U.S. EPA is proposing setting federal standards for Radon in public drinking water.

9) TTHM/HAA5: Total Trihalomethanes and Haloacetic Acids (TTHM and HAA5) are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water.

**All other regulated drinking water contaminants were below detection levels.**

**Secondary Contaminants (You are not required to list detects for secondary contaminants, but this information, particularly sodium levels, might be useful to your customers. The decision to supply this information in your CCR is up to you.)**

CHLORIDE	6 ppm	3/4/2010
IRON	0.22 ppm	3/4/2010
MAGNESIUM	1.6 ppm	3/4/2010
MANGANESE	0.13 ppm	3/4/2010
NICKEL	0.0008 ppm	3/4/2009
SODIUM	4.2 ppm	3/4/2010
SULFATE	6 ppm	3/4/2010
ZINC	0.0051 ppm	3/4/2010

## Health Information

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.

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 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 runoff, and septic systems.

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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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.

Castine Water Department 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

Violation Period	Violation Type
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1/1/2010 - 6/30/2010	SE Violation - STATE EXCEEDANCE LEAD SUMMARY
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Lead & Copper Action Level Exceedance: In 2010, routine sampling detected (Lead/Copper) in excess of the maximum level allowed. 4 out of 20 sites sampled, exceeded the action level for (Lead/Copper). Drinking water regulations require that samples are taken from homes with a high risk potential for Lead/Copper in the plumbing. Public education material was distributed to all residents, shortly thereafter. A corrosion control plan was submitted to the State Drinking Water Program. We have added a corrosion inhibitor to reduce the corrosivity of the water, thereby reducing the (Lead/Copper) levels in household plumbing. Lead/Copper sampling will continue to be done every 6 months as required. Results of subsequent future Lead/Copper testing will be made available to all residents. Lead Health Effects: Infants and children who drink water containing Lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Copper Health Effects: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short time could experience gastrointestinal distress, or suffer liver or kidney damage. People with Wilson's Disease should consult their doctor.