

DW10-091

State toughens rule on chemical in water

ASSOCIATED PRESS

Massachusetts has become the most aggressive state in regulating the amount of a potentially dangerous chemical already found in drinking water in at least 25 states.

New regulations, unveiled yesterday, will require most public water systems to be tested regularly for the chemical perchlorate, which is produced naturally, but is also the byproduct of manufacturing and military operations, particularly those involving rockets and explosives.

The chemical is of concern because it interferes with the thyroid functions of fetuses and infants and can impair development and metabolism.

"Our goal from the beginning of this effort was to protect the health of our citizens, especially pregnant women and children," said Robert W. Golledge Jr., the commissioner of the Massachusetts Department of Environmental Protection.

The new regulation sets the

perchlorate drinking water standard at 2 parts per billion, which is significantly lower than the EPA's "recommended reference dose" of about 24 parts per billion, according to Ed Coletta, spokesman for the DEP. But, he said, the EPA estimates 100 percent of perchlorate exposure comes from water, whereas the DEP puts the estimate at about 20 percent because the chemical is also found in vegetables, milk, and even wine.

Concern about perchlorate in Massachusetts escalated in 2002 when it was detected in an underground aquifer in Bourne on Cape Cod. The chemical had probably come from Otis Air Force Base, Coletta said.

Since then, 10 of about 800 public drinking water supplies in Massachusetts have tested positive for perchlorate levels higher than 2 parts per billion.

"This is the most protective number in the country. California last year put out a health advisory of 6 ppb," Coletta said. California has widespread contamination.

7-29-06



ADDENDUM TO LETTER DATED 9/16/2010

DOCKET No.: DW10 091

Enclosed above is a copy of a newsclip from The Boston Globe dated 7/29/06. If the EPA added testing of public water supplies for the chemical Perchlorate, why can't I find this test in the current 2010 Consumer Confidence Report from the Pennichuck Water Works Company?

Sincerely,

Roger Berube

157 Tolles Street
Nashua, NH 03064
September 16, 2010

COPY

NH PUC c/o Debra Howland
21 S.Fruit St., Suite 10
Concord, NH 03301

Docket Number: DW10 091

Att: PUC Commissioners

Pennichuck Water Works(PWW)continues to request funding from the PUC for its operation, even though it is not doing a good job of running things as a business should. They are doing a poor job of budgeting; repairs, maintenance, EPA regs.,and legal to name a few. Its original request included a rate hike to recoup ongoing legal fees for the takeover bid from the City of Nashua. The case is not resolved yet and the PUC should not grant any increases for such. Besides PWW is responsible for the eminent domain issue, when they created the Southwood Realty to sell off the land surrounding the ponds, so they could make a buck in having upper class housing built there. They are not maintaining the ponds. Silt, dead wood is accumulating at the bottom of the ponds, reducing the depth of the water and raising the mean water temperature. As a result brown algae is now growing inside our water pipes fouling check valves, screens and other plumbing equipment. This has been going on for some years. Of course this means they have to add chemicals to try and prevent the build-up, but it is still present. We also on occasion have a chemical taste when drinking the water. They also state a reduction in water usage to the economy. That is not entirely true. A lot of people are no longer watering their lawns or gardens because they are sick and tired of all these rate increases. And this will only get worse if the PUC grants these rate increases. Why doesn't PWW have sales staff to go after new water customers. The management staff is not doing a diligent job of running PWW as a for-profit business, because historically the PUC grants their wishes. How many other businesses can do that? How about those water meters.We continue to pay for those meters every time we get a bill. What are they doing with those profits? In the yearly Consumer Confidence Report that we receive, I see no test for Cryptosporidium or the protozoa Giardia lamblia nor for Escherrichia Coli. All of the above can cause gastrointestinal illnesses among many other internal sickness and are chlorine resistant. PWW needs to reorganize itself(get rid of some management dead wood) and become more efficient at running its business. At best if PUC grants some of these rate increases they should be at a much lower percentage rate until PWW demonstrates more competent operation.

Sincerely,

Roger Berube

2010 Consumer Confidence Report

*What you
should know
about your
drinking water...*

A Message to Our Customers...

This Water Quality Report has been developed in compliance with the United States Environmental Protection Agency (USEPA) to keep you informed about the quality of your drinking water. Inside you'll find a chart that shows the results of the water analysis and how these results compare to government standards.

The Big Question...

Is your water safe to drink? Absolutely. Pennichuck is pleased to inform you that the quality of your water far exceeds the quality standards set by state and federal regulations. Since 1852, Pennichuck has provided customers with an abundant supply of safe drinking water. The test results highlighted in this report confirm that Pennichuck's strong tradition of excellence still continues today.

Contaminants Aren't All Bad

Drinking water, including bottle 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 USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Special Precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as people with cancer undergoing chemotherapy, people 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. The Center for Disease Control and USEPA has guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. These are available from the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

The Downside of Disinfection

Total trihalomethanes (TTHM) and halo acetic acids (HAA) are by-products of the disinfection process. They are created when chlorine and naturally occurring organic compounds come together. Some of these compounds are known or suspected carcinogens. NOTE: Not all systems contain this contaminant. Please reference the water analysis chart.

Exactly How Small Are We Talking?

Our monitoring equipment can measure elements in water that were previously undetectable. Most of the standards in this report are given in milligrams per liter (mg/L), which is equivalent to one part per million.

One part in one million is equal to:

- One ounce in 62,500 pounds*
- One minute in two years*
- One penny in \$10,000*

Complete Monitoring

From source to faucet, Pennichuck Water Works' laboratory is certified by the State of New Hampshire to perform a variety of water quality analyses. Our highly trained laboratory personnel collect and analyze over 3,000 samples every year. Comprehensive testing of wells, reservoirs, and the water treatment plant and distribution systems ensures that all customers receive the highest quality water possible.

Any Questions?

Although Pennichuck does not offer specific dates for public participation, you are welcome to contact us. If you have any questions about this report or about your water quality, please call our laboratory at 603-882-5191 or send e-mail to laboratory@pennichuck.com. You may also call the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.



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WATER

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Your Water Analysis Chart

The results for detected contaminants listed below are from the most recent monitoring done in compliance with regulations ending with the year 2009. Results prior to 2009 will include the date sample was taken. The State of New Hampshire allows water systems to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Thus some of the data presented, though representative, may be more than one year old.

Pennichuck Water Works

EPA # 1621010

Microbiological Contaminants	Highest % Positive in a month	MCL	MCLG	Violation Yes/No	Typical Source of Contaminant			
Total Coliform Bacteria	3.9 % in September	>5%	0	No	Naturally present in the environment			
Turbidity	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation Yes/No	Typical Source of Contaminant			
Daily Compliance (NTU)	5	-----	0.55 on 2/11	No	Soil Runoff			
Monthly Compliance*	At least 95%	99.46 - February	-----	No				
Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.								
*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.								
Inorganic Contaminants	Date Collected	Highest Detect	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation Yes/No	Typical Source of Contaminant	
Barium (ppm)	2009	0.016	<0.01-0.016	2	2	No	Erosion of natural deposits	
Nitrate as Nitrogen (ppm)	2009	0.77	<0.2-0.77	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, natural deposits.	
Total Organic Carbon (ppm)	2009	1.2	<0.5-1.2	TT	n/a	NO	Naturally present in the environment	
Sodium (ppm)	2009	46.5	30.1 - 46.5	Not Regulated			Runoff from use as salt on roadways	
Volatile Organic Contaminants								
Chlorine (ppm)	2009	0.75 Avg	0.01 - 1.75	4	4	NO	Added to control microbes	
Total Trihalomethanes (ppb)	2009	37	<1-37	80	n/a	NO	By-product of drinking water chlorination	
Haloacetic Acids (ppb)	2009	16	<1-16	60	n/a	NO	By-product of drinking water chlorination	
Radiological Contaminants								
Compliance Gross Alpha (pCi/L)	2005	5.9	nd-5.9	15	0	NO	Erosion of natural deposits	
Uranium (ppb)	2005	0.6	0.1-0.6	30	0	NO	Erosion of natural deposits	
Radium 226 & 228 (pCi/L)	2005	0.6	nd-0.6	5	0	NO	Erosion of natural deposits	
Radon (pCi/L)	4/17/2008	654	n/a	Not Regulated			Erosion of natural deposits	
Date Collected	90th Percentile	Action Level	MCLG	# of Sites Sampled	# sites above Action Level	Violation Yes/No	Typical Source of Contaminant	
Lead (ppb)	9/2008	< 5	15	0	32	0	No	Corrosion of household plumbing system
Copper (ppm)	9/2008	0.064	1.3	1.3	32	0	No	Corrosion of household plumbing system

What is the source of my drinking water?

Our watershed is a 27.5 square mile area from which rainfall drains, becoming a source for the Pennichuck Brook, and ultimately, the Pond System. This is Pennichuck's primary source of water, accounting for about 75% of our total annual supply. Other supplementary sources of water are the Bon Terrain Well, in Amherst, NH, the Amherst Village District well in Amherst, NH (this well was not used during 2009), and the Merrimack River, which is used primarily during the summer months.

Source Water Assessment Summary

Source Name	Date	Summary of Susceptibility Factors		
		Low	Med	High
Harris Pond Reservoir	7/5/01	6	3	2
Supply Pond / Springs	7/5/01	6	3	2
Merrimack River	10/25/01	2	4	5
Bon Terrain Well	10/30/00	8	1	3
Amherst Village District Well	10/30/00	7	3	2

The complete Assessment Report is available for review. For more information call Gary Tetley at 800-553-5191 ext. 2378 or visit NH Department of Environmental Services Drinking Water and Groundwater Bureau web site at <http://des.nh.gov/index.htm>.

Water Analysis Chart

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, 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 runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides may come from a variety of sources such as agriculture, urban storm water 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 storm water runoff, and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining.

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 (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Health Effects

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. This water system is responsible for high quality drinking water, but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water through your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot 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 USEPA Safe Drinking Water Hotline at 1-800-426-4791.

Radon: A radioactive gas that you cannot see, taste or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer. Presently, the USEPA is reviewing a standard for radon in water.

Sodium: Sodium sensitive individuals such as those experiencing hypertension, kidney failure, or congestive heart failure, who drink water containing sodium should be aware of levels where exposures are being carefully controlled.

Definitions

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. They are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): 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.)

MRDLG (Maximum Residual Disinfection Level Goal): The level of 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.)

MRDL (Maximum Residual Disinfection Level): 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.

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

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

Abbreviations

<	Less Than
NA	Not Applicable
ND	Not Detectable
TT	Treatment Technique
NR	Not Regulated
MFL	Million Fibers per Liter
ppm	parts per million
ppt	parts per trillion
ppq	parts per quadrillion
SMCL	Secondary Maximum Contaminant Level
pCi/L	pico Curies per Liter (A measurement of radioactivity.)
NTU	Nephelometric Turbidity Unit
AL	Action Level