Lewes BPW
electric, water and sewer utility

Annual Drinking Water Quality Report for 2011
Board of Public Works of the City of Lewes
107 Franklin St., Lewes, Delaware 19958
PWS ID# DE0000602
May 31, 2012

Omissions' to 2010 CCR have been added to this year's report in bold italics.

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of 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. **Our water source is groundwater. We have five wells that draw from the Columbia Aquifer.**

The Division of Public Health in conjunction with the Department of Natural Resources and Environmental Control has conducted a source water assessment. If you are interested in reviewing the assessment, please contact Board of Public Works @ 302-645-6228 regarding how to obtain a copy. Or go on-line at http://www.wr.udel.edu/swaphome/index.html

I'm pleased to report that our drinking water meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact **302-645-6228.** 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 meetings. They are usually held on ***the fourth Wednesday of each month at 7:00 p.m. at the City Hall, 114 East Third Street. Please check our website to confirm at www.ci.lewes.de.us***

Public Health, Office of Drinking Water and the Lewes BPW Water Department routinely monitor for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, **2011.**

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

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 - 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.

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

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (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 "Goal"(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.

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.

TEST RESULTS

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG/ MRDLG	MCL/MRDL	Likely Source of Contamination
Microbiological Contaminants						
1. Total Coliform Bacteria (No E.Coli or Fecal Coliform samples were present)	N	**1 positive monthly sample in May**		0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Radioactive Contaminants						
4. Beta/photon emitters	N	***2.4 *(2009)***	mrem/yr	0	4	Decay of natural and man-made deposits
5. Alpha emitters	N	***0.09 *(2010)***	pCi/1	0	15	Erosion of natural deposits
6. Combined radium	N	***0.7 *(2010)***	pCi/1	0	5	Erosion of natural deposits
Inorganic Contaminants						
11. Barium	N	0.0825	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
12. Beryllium	N	0.8	ppb	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
14. Chromium	N	0.6	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
17. Fluoride	N	***0.32-1.49***	ppm	0.8 -1.2	2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
20. Nitrate (as Nitrogen)	N	***4.6-6.2***	***ppm***	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel	N	3.6	ppb	n/a	100	Naturally occuring
Volatile Organic Contaminants						
75. TTHM [Total trihalomethanes]	N	***13.53 *(2010)***	ppb	0	80	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	N	***2.9 *(2010)***	ppb	60	60	

Unregulated Inorganic Contaminants

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
79. Iron (Fe)	N	0.14 *(2010)	ppm	0	0.3	
80. Sodium (Na)	N	12.6-14.8 ***(average 13.7)***	ppm	0		
81. Alkalinity (Alk)	N	10-11 ***(average 10.5)***	ppm			
82. pH	N	6.7-7.73 ***(average 7.2)***	ppm		6.5 – 8.5	
83. Chloride (Cl)	N	18.4-21.6 ***(average 20)***	ppm		250	
84. Hardness	N	17	ppm			
85. Total Dissolved Solids (TDS)	N	126-136 *(2010) ***(average 131)***	ppm		500	
Manganese	N	11.8	ppb			
Sulfate	N	10.7-18 ***(average 15)***				

*The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

All other contaminants were Non-Detects in compliance with the Safe Drinking Water Act.

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 care provider.

Lead-If present, elevated lead levels 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 Board of Public Works for the City of Lewes 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 www.epa.gov/safewater/lead.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water is drinkable at these levels.

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. In order to insure 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 established limits for contaminants in bottled water, which must provide the same protection for public health.
Contaminants that may be present in source water include:
1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operation, and wildlife.
2) Inorganic contaminants, such as salts and metals can be naturally[occurring or result from urban storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming.
3) Pesticides and herbicides, which may come from a variety of sources, such as agricultural, urban storm water runoff, and residential uses.
4) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
5) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

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).

Please call our office if you have questions.