

2011 Water Quality Report



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Lower Bucks County Joint Municipal Authority (LBCJMA) is pleased to present to you its 2011 Water Quality Report. This report is a snapshot of last year's water quality report. Included are details about where your water comes from, what it contains, and how it compares to EPA & State standards. We are committed to providing you with information because informed customers are our best allies. If you need more information or have questions about the information in this report please contact us at 215-547-9581.

SOURCE(S) OF WATER:

LBCJMA draws surface water from the Delaware River and groundwater from five (5) wells. The Delaware River is the primary source of our water. LBCJMA is allocated 15.0 million gallons of water per day by the Delaware River Basin Commission and the Department of Environmental Protection. The wells have a capacity to provide approximately three (3) million gallons of water per day. The average depth of the wells is approximately 45 feet. Raw surface water withdrawn from the river and groundwater withdrawn from the wells are mixed prior to treatment at our Water Treatment Plant. We produce an approximate average of 9.0 million gallons of high-quality drinking water to our customers on a daily basis.

SOURCE WATER ASSESSMENT:

The Pennsylvania Department of Environmental Protection (Pa. DEP) has conducted a source water assessment of the Delaware River. The assessment found that overall, the sources were found to have a moderate risk of significant contamination. A summary report of the assessment is available on the *Source Water Assessment & Protection Web* page at (<http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SrceProt/SourceAssessment/default.htm>). Copies of the complete report is available for review at the Pa. DEP Southeast Regional Office, Records Management Unit at 484-250-5910.

LBCJMA WATER SYSTEM:

LBCJMA owns, operates and maintains a system whose area is approximately 9.86 square miles serving the Levittown portions of Bristol Township, Falls Township, Middletown Township, and the Borough of Tullytown. The total customer base served in the area is approximately 23,000. Our drinking water supply consists of a raw water intake pump station, well field, Water Treatment Plant, drinking water distribution and water storage throughout the system.

We use a multi-step treatment process at our Water Treatment Plant. The treatment process consists of disinfection, coagulation, flocculation, activated carbon adsorption, sedimentation and filtration. Under final treatment, fluoride is added to help prevent tooth decay and sodium zinc polyphosphate is added to minimize corrosion activity between the water and piping material.

Finished drinking water is pumped under high pressure into the distribution system. The distribution system consists of approximately 175 miles of cast iron and ductile iron pipe ranging from 6" to 24" in diameter and approximately 1,200 fire hydrants for the purpose of fire protection. Storage throughout the system includes two aboveground water storage tanks, one with a capacity of 4.0 million gallons and one 3.0 million gallon storage tank and pumping station.

HEALTH INFORMATION:

To ensure that tap water is safe to drink, EPA and DEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 at 1-800-426-4791. The sources of drinking water (both tap 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 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 virus 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 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, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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 be the result of oil and gas production and mining activities.

DEFINITIONS AND ABBREVIATIONS:

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

Alkalinity: A measure of the water's ability to resist changes in pH level and a good indicator of overall water quality. Although there is no health risk from alkalinity, we monitor it to check our treatment process.

Detected Compounds: Listed are compounds detected in LBCJMA's drinking water calendar year 2010. All amounts detected are below allowed levels. Not listed are the many other compounds for which LBCJMA tested that were not detected.

Hardness: Hardness defines the quantity of minerals such as calcium and magnesium in a gallon of water. These minerals react with soap to form insoluble precipitates and can affect common household chores such as cooking and washing. Hardness also affects other water qualities such as corrosiveness, with soft water being more corrosive.

Inorganic Compounds: The mineral-type compounds, such as metals and salts, found in drinking water.

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.

Maximum Contaminant Level Goal (MCLG): The level of 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 risks to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A: Not applicable

ND: Not detected

NR: Not regulated

Nephelometric Turbidity Unit (NTU): A measure of very small particulate matter in drinking water.

ppb: A unit of concentration equal to one part per billion

ppm: A unit of concentration equal to one part per million

Sources: The major sources of the compounds detected in the finished water.

Turbidity: A measure of the clarity of water related to its particles content.

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

Trihalomethanes (THM): Compounds formed during the chlorination (disinfection) of drinking water.

Total Haloacetic Acids (HAA): A group of chemicals called disinfection by-products, which form during chlorination, Similar, but unregulated by-products include: haloaceto-nitrils, haloketones, chloropicrin, chloral hydrate and total organic halides.

MONITORING YOUR WATER:

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following table shows the results of our monitoring for the period of January 1 to December 31, 2010.

CONTAMINANT	MCL	MCLG	DETECTION	MAJOR SOURCES	VIOLATION
Inorganic Compounds					
Barium (ppm)	2	2	0.021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	NO
Chromium (ppb)	100	100	2.1	Discharge from steel and pulp mills; Erosion of natural deposits	NO
Fluoride (ppm)	2	2	0.92* 0.11-1.63	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	NO
Microbiological Contaminants					
Turbidity, NTU	TT	N/A	0.11* 0.08-0.16	Erosion of natural deposit; soil runoff	NO
Volatile Organic Contaminants					
Total Trihalomethanes (ppb)	80	N/A	43.9* 18.7-97.9	Byproduct of drinking water chlorination	YES
Haloacetic Acids Five (HAA5) (ppb)	60	N/A	28.7* 2.9-55.6	Byproduct of drinking water chlorination	NO
Other Chemicals					
Total Organic Carbon (ppm)	TT	N/A	1.9* 1.2-2.6	Leaching from vegetation	NO
Total Dissolved Carbon (ppm)	NR	NR	1.9* 1.2-2.6	Leaching from vegetation	NO
Alkalinity, ppm (as calcium carbonate)	NR	NR	47* 36-56	Erosion of natural deposits	NO
Disinfectants	MCL	MRDL	Detection	Major Sources	Violation
Total Residual Chlorine (ppm)	4.0	4.0	1.8* 1.4-3.3	Drinking water chlorination	NO

*Annual Average

¹Lead & Copper: Ninety percent (90%) of samples taken for lead and copper analysis were less than the detected level shown.

Note: The lowest monthly percentage of samples meeting the Turbidity limit was 100%.

As the water quality table shows, our water system exceeded the Maximum Contaminant Level (MCL), for total trihalomethanes (TTHM). The standard for TTHM is 80 parts per billion. The average level of TTHM over the last year was 88 parts per billion. This is not an immediate risk. If it had been, you would have been notified. However, some people who drink water containing TTHM in excess of the MCL over years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Samples taken in January 2011 show normal reduced levels. We believe that the extra ordinarily hot summer contributed to this situation. We are investigating several innovative methods such as adding powdered activated carbon at different locations at the water treatment plant as part of a treatment process, which may help to avoid this problem.

WATER CONSERVATION IDEAS - Saving water means saving \$\$\$\$.

Use a broom instead of a hose to clean your driveway and sidewalk. Save water and exercise at the same time!

Collect water from your roof to water your garden or direct rain gutters towards your landscape.

Use a water-efficient showerhead.....it could save up to 750 gallons per month.

Monitor your water bill.....your bill and meter are tools that can help you discover leaks.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons undergoing chemotherapy, persons who have undergone 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 (800-426-4791).

ADVISORY ON LEAD IN DRINKING WATER:

Although water in our distribution system does not contain lead, you need to be aware of the possibility that lead materials in your home plumbing could leach into your drinking water. Infants and young children are typically more vulnerable to lead in drinking water than the general population. Infants who drink water containing lead in excess of the action level could experience delays in their physical or mental development. It is possible that lead levels in your home may be higher than levels in other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated levels in your home's water, you may wish to have your water tested. In the meantime, as a precaution, flush your tap for 30 seconds to 2 minutes before using tap water for drinking purposes. Additional information is available from the Environmental Protection Agency's Safe Drinking Water Hotline, at 1-800-426-4791.

FOR MORE INFORMATION:

Meetings of Lower Bucks County Joint Municipal Authority (LBCJMA) Board of Directors are held on the fourth Thursday of each month and are open to the public. Meetings are held at the Administration office located at 7811 New Falls Road in Levittown and begin at 7:00 PM. Public participation is provided on the agenda at each meeting.

If you need more information regarding the quality or reliability of your drinking water, call us at 215-547-9581. Technical and regulatory information can be obtained from the Bucks County Health Department (215-345-3318).

Learn more about LBCJMA at www.lbcjma.com.

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