CITY OF BLOOMINGTON

WATER DEPARTMENT

2004 Annual Consumer Report on the Quality of Tap Water

The City of Bloomington Water Department is committed to providing residents with a safe and reliable supply of high-quality drinking water. We test our water using sophisticated equipment and advanced procedures. The City of Bloomington Water Department's water meets state and federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, and other things you should know about drinking water.

Bloomington's drinking water meets or surpasses all federal and state drinking-water standards.

More information is available from the Safe Drinking Water Hotline 1-800-426-4791 or visit the EPA website at http://www.epa.gov/safewater

Overview

We at the Bloomington Water Department are grateful for the opportunity to provide safe drinking water to our customers. In order to ensure that your water is the best quality possible, the City is continually making improvements to our treatment facilities and is actively engaged in lake and watershed management and research. A new transmission main for delivering treated water from the plant at Lake Bloomington to the pumping stations in town is currently in the 2nd phase of construction. It's completion is scheduled for late 2005.

The City performs monitoring for the Illinois Environmental Protection Agency Clean Lakes Program Studies for Lake Bloomington and Evergreen Lake. Information on the conditions of the lakes, sources of possible contamination, and plans for improving our lakes will be part of the study reports. We are also actively engaged in research projects with Illinois State University, the University of Illinois, the Nature Conservancy, McLean County Soil and Water Conservation District, and many other agencies. The goal of these projects is to lessen the impact that farming, construction, and other activities on the land that drains into our lakes have upon water quality.

Water Source

The City of Bloomington obtains water from two man-made reservoirs, Lake Bloomington and Evergreen Lake. Lake Bloomington is fed by runoff from 70 square miles of land, while the drainage area for Evergreen Lake is 41 square miles.

An Explanation of the Water Quality Data Table

Key to Table	
AL	= Action Level
NTU	= Nephelometric Turbidity Units
%<0.3 NTU	= Percent samples less than or equal to 0.3 NTU
pCi/l	= Picocuries per liter, used to measure radioactivity
MCL	= Maximum Contaminant Level
MCLG	= Maximum Contaminant Level Goal
ppm	= parts per million, or milligrams per liter (mg/l)
ppb	= parts per billion, or micrograms per liter (µg/l)
TT	= Treatment Technique
MRDL	= Maximum Residual Disinfectant Level

The table shows the results of our water quality analyses. Every regulated contaminant that we detected in the water, even in the most minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Definitions of MCL and MCLG are important. The data presented in this report are from the most recent testing done in accordance with regulations.

Maximum Contaminant Level or 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 or MCLG: 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.

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

Maximum Residual Disinfectant Level or MRDL: The highest level of disinfectant allowed in drinking water.

Maximum Residual Disinfectant Level Goal or MRDLG: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.

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

About the Data

Turbidity

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants. As a treatment requirement, turbidity levels of water leaving the plant cannot be greater than 0.3 Nephelometric Turbidity Units (NTU) in more than 5% of our routine measurements, and is never to exceed 1.0 NTU.

Beta/Photon Emitters

The MCL for beta particles is 4 mrem/year (a measure of radiation absorbed by the body). **The EPA considers 50 pCi/l to be a level of concern for beta particles.

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 methemoglobinemia (blue baby syndrome). Nitrate levels may rise quickly for short periods of time because of runoff from agricultural lands. If you are caring for an infant you should ask advice from your health care provider.

2004 Water Quality Data

Contaminant	Date Tested	Unit	MCLG	MCL	Detected Level	Range	Major Sources	Violation
Inorganic Contaminants								
Barium	2004	ppm	2	2	0.01	0.01 - 0.01	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	No
Nitrate	2004	ppm	10	10	4.1	1.8 - 8.0	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	No
Lead	2002	ppb	0	AL=15	1	n/a	Corrosion of household plumbing systems; Erosion of natural deposits.	No
Copper	2002	ppm	1.3	AL-1.3	0.09	n/a	Corrosion of household plumbing systems; Erosion of natural deposits.	No
Microbiological Contaminants								
Total Coliform Bacteria	2004	% pos /mo	5	5	1.4	0 - 1.4	Naturally present in the environment	No
Fecal Coliform and E. coli	2004	# / mo	0	*	2	0 - 2	Human and animal fecal waste	No
Turbidity Compliance	2004	% ≤ 0.3 NTU	n/a	TT	100	100 - 100	Soil runoff	No
Turbidity	2004	NTU	n/a	TT = 1 NTU max	0.12	0.07 - 0.22	Soil runoff	No
Radioactive Contaminants								
Beta/Photon Emitters	2002	mRem/ yr	0	4**	2	2 - 2	Decay of natural and man-made deposits	No
Synthetic Organic Contaminants Including Pesticides and Herbicides								
Atrazine	2004	ppb	3	3	0.23	nd - 0.6	Runoff from herbicide used on row crops	No
Disinfection / Disinfectant By-Products								
Chloramines	2004	ppm	MRDLG = 4	MRDL = 4	2.95	0.58 - 3.67	Water additive used to control microbes	No
TTHMs (Total Trihalomethanes)	2004	ppb	n/a	80	26.8	23 - 30	By-product of drinking water chlorination	No
Total Haloacetic Acids (HAA5)	2004	ppb	n/a	60	17.2	14 - 25	By-product of drinking water chlorination	No
State Unregulated Contaminants								
Sulfate	2004	ppm	n/a	n/a	70	70 - 70	Erosion of naturally occurring deposits	No
State Regulated Contaminants								
Fluoride	2004	ppm	n/a	n/a	1	0.9 - 1.2	Water additive which promotes strong teeth.	No
Iron	2004	ppb	n/a	1000	22	n/a	Erosion of naturally occurring deposits.	No
Manganese	2004	ppb	n/a	150	1.2	n/a	Erosion of naturally occurring deposits.	No
Sodium	2004	ppm	n/a	n/a	11	n/a	Erosion of naturally occurring deposits; Used in water softening	No

nd = Not Detected

n/a = Not Applicable

*Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. Coli positive

Water Quality Table Footnotes - Although we conducted thousands of tests in 2004, only the substances listed above were detected. They are all below the MCL required. For more information, please contact Rick Twait or Jill Mayes at (309) 747-2455.

National Primary Drinking Water Regulation Compliance - No violations occurred in 2004.

State Regulated Contaminants

Fluoride - Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9 to 1.2 mg/l.

Sodium - There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the concentration level ever becomes greater than 20 mg/l, and you are on a sodium-restricted diet, you should consult a physician. Our maximum level for 2004 was 11 mg/l.

Required Additional Health Information

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes limits on the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled 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 Safe Drinking Water Hotline (800) 426-4791.

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 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:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) 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.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

(D) 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 storm water runoff and septic systems.

(E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, or those who have undergone organ transplants, or 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. Environmental Protection Agency/Communicable Disease Control (EPA/CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800) 426-4791.

Taste and Odor

Unusual amounts of rain and snow in the late fall 2004 and early winter 2005 created conditions that caused record high levels of taste and odor (T&O) compounds to occur in our water supply. The compounds that caused the water to smell and taste bad are geosmin and methyl iso-borneol (MIB). These are naturally occurring compounds, produced by algae and soil bacteria. Although the water had an off taste, the water was safe to drink and met all water quality guidelines for health standards. Off taste and odors in the water have occurred before, but the water treatment plant has been able to remove most of the taste and odor causing compounds from the water. Unfortunately, the amount of geosmin and MIB in the water had never been this high in the Bloomington water supply before.

Normally, our granular activated carbon filters remove taste and odor compounds to acceptable levels. During the event, the high levels of the T&O compounds overwhelmed the capacity of the filters, allowing unacceptable high levels to leave the plant, even with the addition of powdered activated carbon. Studies on the efficiency of powdered activated carbon and possible filter modifications began in early 2005 in order to find ways to increase the removal rates of taste and odor causing compounds in the future.

Other Monitoring

In addition to the required testing of our water system for regulated contaminants, Bloomington Water Department performs voluntary tests for additional substances and microscopic organisms to make certain our water is safe and of high quality. If you are interested in more detailed information, contact Rick Twait, Superintendent of Water Purification, or Jill Mayes, Laboratory Manager, at (309) 747-2455.

Source Water Assessment Summary

Community water suppliers are required to report a summary of their source water susceptibility determination. The Illinois EPA has compiled source water assessments for all community water supplies including the City of Bloomington. This assessment is available on request by calling Rick Twait at (309) 747-2455.

Security

The City of Bloomington Water Department is working to continually improve the security of our water system. A thorough security assessment was completed in 2003 and we are working to implement the recommendations of that assessment. Since our water supply and distribution system is large, we ask all of our customers to be aware of any suspicious activities involving the water system. If anything suspicious is noted, please call the Water Department at (309) 434-2426.

For more information about the
City of Bloomington visit our website at:
http://www.cityblm.org