



Making the Necessary Improvements to Secure Future Water for Bloomington

The Monroe Water Treatment Plant turns 37 years old this year. Despite an aggressive preventative maintenance program, the plant is nearing the end of its useful life. In February 2004, the City of Bloomington Utilities began a \$13 million renovation of the plant's treatment and distribution equipment. The project will take two and a half years to complete and will provide a highly reliable water source for the next 20-30 years.

The next step for CBU will be to review alternatives for expanding production volume. Over the next year or so, the Utilities Service Board will study expansion options and their projected costs to consider which option is best suited for Bloomington. We invite the public to become actively involved in the selection of alternatives for the water system's future.

How you can help secure Bloomington's future water

The future of Bloomington's water not only depends on a reliable plant, but it also depends on you! Everyday activities can have a significant impact on the quality of your drinking water. There are several ways that the community can guarantee that Bloomington will have excellent water for future needs. For example, understanding your water source will help you understand how to keep it clean. For more information on water quality, please contact the City of Bloomington Utilities Department at 349-3930, or visit our web site at www.bloomington.in.gov/utilities.

Your Water Source

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. The source of the City of Bloomington Utilities drinking water is surface water that is obtained from Monroe Reservoir. 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, 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 chemicals including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems
- radioactive materials which can be naturally-occurring or be the result of oil and gas production and mining activities

In order to ensure that tap water is safe to drink, EPA prescribes regulations that 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.

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 (800) 426-4791.

Faucet Facts

Water Heaters

Did you know that the quality of your drinking water can be affected by your water heater? If you do not properly maintain your water heater, small, white particles (calcium carbonate) may begin to appear in your water and clog your fixtures. These particles appear when the thermostat in your heater is set too high which causes the particles to loosen and end up in your water. To prevent this from happening, it is recommended that you periodically flush your water heater. Be sure to follow the manufacturer's service manual for instructions on how to properly flush your water heater.

Hardness of Bloomington Water

Hardness in water is caused by calcium and magnesium, two non toxic minerals. Water is considered hard when there is calcium or magnesium present because these minerals make it hard to form a lather or suds, which makes it "hard" to wash. Water with no calcium or magnesium is considered soft (and easier to wash with). The average hardness of Bloomington water in 2003 was 62 ppm (mg/L). This is equivalent to 3.6 grains per gallon. To convert mg/L to grains per gallon, divide hardness levels expressed in mg/L by 17.1 to get grains per gallon.

Congratulations Bloomington!

The City of Bloomington Utilities Department is proud to report to you that Bloomington's drinking water once again met and/or exceeded all federal drinking water standards! Federal standards are set to establish limits on contaminants in drinking water. Regular testing has shown that Bloomington consistently meets and exceeds these standards.

Special Concerns

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 and 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 at (800) 426-4791, or visit www.epa.gov/safewater.

We welcome your interest

If you are interested in learning more about the water department and water quality, contact your Water Quality Coordinator at 349-3655. If you would like to participate in the decision-making process regarding policy decisions contact the Administration Office at 339-1444. The City of Bloomington Utilities Board meets at 5:00 p.m. every other Monday at 501 N. Morton, Room 100 B. Board meetings are open to the public. Our web site address is: www.bloomington.in.gov/utilities.

Water Quality Table

Substance	Highest Level Allowed (EPA's MCL *)	Highest Level Detected	Ideal Goals (EPA's MCLG 's*)	Sources of Contamination
Microbiological Contaminants				
Turbidity	Treatment Technique *	.30 turbidity units ^{1}	None	Soil runoff
Radioactive Contaminants				
Alpha emitters ^{2}	15 pCi/l *	0.4 1.3 pCi/l	0	Erosion of natural deposits
Inorganic Contaminants				
Barium	2 ppm *	0.017 ppm	2 ppm	Erosion of natural deposits
Chromium	100 ppb *	1.2 ppb	100 ppb	Erosion of natural deposits
Copper ^{7}	1.3 ppm (Action Level)*	0.021 ppm (90th)	1.3 ppm	Corrosion of household plumbing

		Percentile)*		systems
Fluoride	4 ppm	1.21 ppm ^{3}	4 ppm	Water additive which promotes strong teeth
Nitrate	10 ppm	0.44 ppm	10 ppm	Erosion of natural deposits
Lead ^{7}	15 ppb (Action Level)*	4.4 ppb (90th Percentile)*	0	Corrosion of household plumbing systems
Volatile Organic Contaminants				
Total Trihalomethanes	100 ppb	41.1 ppb average ^{4}	0	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	60 ppb	33.6 ppb average ^{6}	0	By-product of drinking water chlorination
Synthetic Organic Contaminants				
Atrazine	3 ppb	0.32 ppb	0	Runoff from herbicide used on row crops
Unregulated Contaminants				
Beta emitters ^{2,5}	50 pCi/l *	1.3 2.1 pCi/l	0	Decay of natural and man-made deposits
Chlorine, Free Residual	Not Regulated	1.6 ppm	Not Regulated	Disinfection process
Chlorine, Total Residual	5.0 ppm	2.6 ppm	None	Disinfection process
Haloacetic Acids (HAA5)	60 ppb (proposed)	52.2 ppb average ^{6}	Not Regulated	By-product of drinking water chlorination
Heterotrophic Plate Count	500 CFU/ml *	> 200 CFU/ml	None	Natural lake bacteria, wildlife, septic systems
Sodium	Not Regulated	4.8 ppm	Not Regulated	Erosion of natural deposits

LISTED ABOVE are 16 contaminants detected in Bloomington's drinking water during 2003. All are below allowed levels. Not listed are the almost 90 contaminants for which we tested that were not detected.

***DEFINITIONS:**

MAXIMUM CONTAMINANT LEVEL (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to to the MCLGs as feasible using the best available treatment technology.

MAXIMUM CONTAMINANT LEVEL GOAL (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.

ppm - parts per million. Equivalent to milligrams per liter (mg/l).

ppb - parts per billion. Equivalent to micrograms per liter (ug/l).

pCi/l - Picocuries per liter is a measure of radioactivity in water. A picocurie is 10^{-12} curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirement, which a water system must follow. Action Levels are reported at the 90th percentile for homes at the greatest risk.

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

CFU/ml - Colony forming units per milliliter.

Colony Forming Unit - An area of visually distinct bacterial growth which may result from a single bacterium or pairs, clusters or chains of bacteria.

ADDITIONAL INFORMATION:

1 - Turbidity levels ranged from 0.08 to 0.30 with an average of 0.13 turbidity units. The lowest level of compliance on a monthly basis was 100%.

2 - Data listed are from 1998 and are the most recent testing done in accordance with regulations.

3 - Fluoride levels ranged from 0.64 to 1.02 with an average of 1.02 ppm.

4 - Total trihalomethane levels ranged from 19.5 to 75.7 ppb.

5 - Based on community size, CBU is not regulated for Beta emitters.

6 - Haloacetic acids (HAA5) levels ranged from 24.7 to 56.0 ppb.

7 - Data listed are from 2001 and are the most recent testing done in accordance with regulations.