City of Bloomington Utilities

Water Quality Report 2002

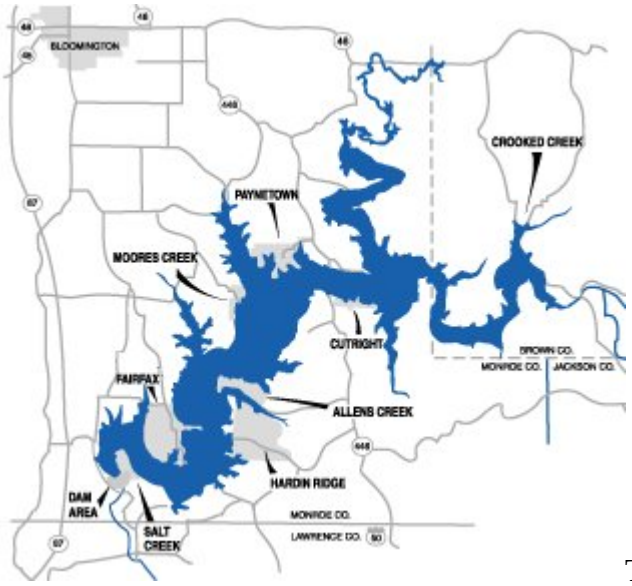
We are working hard to protect your drinking water

The employees of City of Bloomington Utilities were shocked and saddened by the events of September 11th of last year. We want to assure you that we are working hard to make sure your drinking water is safe. We began taking a much greater interest in security long before last September. Obviously, we do not discuss publicly the particulars of our precautions. We can tell you this, we are not working alone. There has been an outstanding effort among many organizations to network and assist one another in this matter at both the state and local level. John Hooker, Monroe County Emergency Management Director, has worked tirelessly bringing people of Monroe County together to train and network in assisting one another to improve our level of security readiness.

Faucet Facts

Customers sometimes call the water utility and ask why their water has a white or "milky" appearance. This occurs mostly in the winter months. It is a harmless phenomenon that happens when the water from the reservoir becomes highly saturated with dissolved air. When you observe this white appearance, draw a glass of water and place it on the table or countertop. The dissolved air will begin to rise and the clarity will return to the water beginning at the bottom and proceeding to the top.

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.

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.

What happens to the material we remove from your water?

This report is provided annually to our customers. It is a summary of the quality of water provided during the past year. Included in this report are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are happy once again to report no violations of a contaminant level or any other water quality standard.

Our finished drinking water is produced at the Monroe Water Treatment Plant. Monroe Plant construction was completed in 1967 and the plant has provided water to our customers since it went on line in September of that year. The source of supply is Monroe Reservoir. The Department of Natural Resources and the Army Corp of Engineers manage the reservoir.

During the process of cleaning your water the treatment process removes sediments and organic materials. In the water treatment field these materials are known as "residuals".

All surface water treatment plants generate these residuals. What happens to these materials we remove from your water?

The residuals are eventually transported to the Monroe County Landfill. However, before that takes place the material must be processed at the plant. The process has two primary objectives, removal of water, and compacting of the residual materials into a solid manageable form. This spring a new and improved residuals handling construction project will be completed and put on line. A new filter press will mechanically replace the old process of sending the materials to outside drying beds for water removal and compacting. The new process will not be limited by the weather conditions. It will allow year round processing and it will produce a much improved residual material.

Water Quality Table

Substance	**Highest Level Allowed** (EPA's MCL*)	**Highest Level Detected**	**Ideal Goals** (EPA's MCLG*)	**Sources of Contamination**
MICROBIOLOGICAL CONTAMINANTS				
Turbidity	Treatment Technique*	1.0 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*	0.018 ppm	2 ppm	Erosion of natural deposits
Copper [2]	1.3 ppm (Action Level)*	0.21 ppm (90th Percentile)*	1.3 ppm	Corrosion of household plumbing systems
Fluoride	4 ppm	1.18 ppm [3]	4 ppm	Water additive which promotes strong teeth
Nitrate	10 ppm	0.29 ppm	10 ppm	Erosion of natural deposits
Lead [2]	15 ppb (Action Level)*	4.4 ppb (90th Percentile)*	0	Corrosion of household plumbing systems
VOLATILE ORGANIC CONTAMINANTS				
Total Trihalomethanes	100 ppb*	47 ppb average [4]	0	By-product of drinking water chlorination
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	.9 ppm	Not Regulated	Disinfection process
Chlorine, Total Residual	5.0 ppm	3.5 ppm	None	Disinfection process
Haloacetic Acids (HAA5)	60 ppb (proposed)	29.6 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	5.4 ppm	Not Regulated	Erosion of natural deposits

LISTED ABOVE are 14 contaminants detected in Bloomington's drinking water during 2001. All are below allowed levels. Not listed are the over 80 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 1.0 with an average of 0.15 turbidity units. The lowest level of compliance on a monthly basis was 99%.
2 - Data listed are from 1998 and are the most recent testing done in accordance with regulations.
3 - Fluoride levels ranged from 0.1 to 1.18 with an average of .97 ppm.
4 - Total trihalomethane levels ranged from 34 to 70 ppb.
5 - Based on community size, CBU is not regulated for Beta emitters.
6 - Haloacetic acids (HAA5) levels ranged from 17.7 to 45.0 ppb.