



## **Watershed of Monroe Reservoir Part of State Source Water Assessment**

The City of Bloomington Utilities working in partnership with Indiana Department of Environmental Management will establish and implement a Source Water Assessment Plan (SWAP) for the watershed of Monroe Reservoir. As part of the 1996 amendments to the Safe Drinking Water Act, the United States Congress requested the States to assess the sources of water used by public water systems within each State.

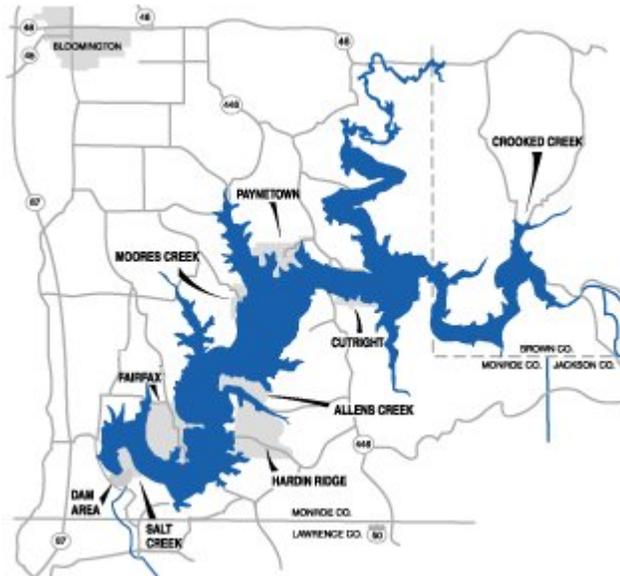
The benefits of SWAP include providing information on the susceptibility of public water supplies to contamination. By identifying potential sources of contamination and using voluntary management of source water areas, communities and water systems may prevent contamination of source water and may avoid the additional water treatment costs associated with treatment of a contaminated water supply. The data collected for the SWAP will be organized into a single computerized format and made available to local communities and the public. Funds to support SWAP activities have been provided by the Drinking Water State Revolving Loan Fund.

The League of Women Voters held a workshop at Indiana University to inform the public about the Source Water Assessment Program. Everyone is encouraged to help protect our drinking water source.

## **CBU water again surpasses all requirements**

Bloomington had excellent drinking water again in 1999. No violations of federal, state or local regulations were detected.

## 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.

## **No MTBE in Bloomington drinking water!**

Due to nationwide concern regarding possible MTBE contamination of drinking water, CBU technicians analyzed Bloomington's drinking water for MTBE and found no trace of the contaminant. MTBE is a gasoline additive that makes fuel burn more completely, thereby reducing air pollution. Though testing will not be formally required by the Federal Government until 2001, CBU will continue sampling the water for this potentially harmful compound.



**Bloomington Water in 1924**

March 1924 was a pivotal point in Bloomington's history. For nearly a quarter century, some of the highest temperatures on record and lowest monthly rainfalls had contributed to an extremely scarce water supply. From the earliest days of settlement in Bloomington, citizens looked to local government for help in securing an adequate supply of water. The mass meeting (pictured here) on the Bloomington square was the most dramatic show of citizens expressing themselves on the water problem.

## Water Quality Table

Substance	Highest Level Allowed (EPA's MCL*)	Highest Level Detected	Ideal Goals (EPA's MCLGs*)	Sources of Contamination
<b>MICROBIOLOGICAL CONTAMINANTS</b>				
Turbidity	Treatment Technique*	1.1 turbidity units <sup>1</sup>	None	Soil runoff
<b>RADIOACTIVE CONTAMINANTS</b>				
Alpha emitters <sup>2</sup>	15 pCi/l*	0.4 1.3 pCi/l	0	Erosion of natural deposits
<b>INORGANIC CONTAMINANTS</b>				
Barium	2 ppm*	0.014 ppm	2 ppm	Erosion of natural deposits
Copper <sup>2</sup>	1.3 ppm (Action Level)*	0.20 ppm (90th Percentile)*	1.3 ppm	Corrosion of household plumbing systems
Fluoride	4 ppm	1.13 ppm <sup>3</sup>	4 ppm	Water additive which promotes strong teeth
Nitrate	10 ppm	0.49 ppm	10 ppm	Erosion of natural deposits
<b>VOLATILE ORGANIC CONTAMINANTS</b>				
Total Trihalomethanes	100 ppb	46 ppb average <sup>4</sup>	0	By-product of drinking water chlorination
<b>UNREGULATED CONTAMINANTS</b>				
Chlorine, Free Residual	Not Regulated	.5 ppm	Not Regulated	Disinfection process
Chlorine, Total Residual	5.0 ppm	2.3 ppm	None	Disinfection process
Haloacetic Acids (HAA5)	60 ppb (proposed)	33.1 ppb average <sup>5</sup>	Not Regulated	By-product of drinking water chlorination
Heterotrophic Plate Count	500 CFU/ml*	66 colony forming units*	None	Natural lake bacteria, wildlife, septic systems
Sodium	Not Regulated	3.5 ppm	Not Regulated	Erosion of natural deposits

LISTED ABOVE are 12 contaminants detected in Bloomington's drinking water during 2000. All are below allowed levels. Not listed are the 67 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 0.06 to 1.10 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 0.6 to 1.2 with an average of 1.13 ppm.

**4** - Total trihalomethane levels ranged from 35 to 57 ppb.

**5** - Haloacetic acids (HAA5) levels ranged from 18.4 to 45.0 ppm.