

THE WATER USE CYCLE

DRINKING WATER



One of the most important natural resources in America is safe, quality drinking water. Water resources consist of both surface water and groundwater systems. Surface waters are the waters typically associated with precipitation run off and include rivers, streams, lakes and ponds. Groundwater systems are the water resources located in formations underground called aquifers. These two systems are often highly interconnected and factors affecting water quality in one system can easily influence the

other. Many rivers and streams receive a significant amount of their total volume from groundwater sources via springs and seeps. Conversely, surface waters will percolate down into groundwater systems *recharging* the volume of water located in these underground aquifers. Pollution in one system can often migrate and contaminate the other.

Sources of drinking water are often tied to a state's geology. The waters of the Mississippi River basin serve as a primary source of municipal drinking water for most the communities along the river's banks. Such surface waters usually require greater levels of treatment than groundwater sources. Water treatment facilities treat water and monitor its quality prior to distribution. Municipally treated water in many ways represents a carefully manufactured product. The basic steps in drinking water treatment are outlined on the attached information sheets.

Water from private drinking wells often may not receive any treatment prior to consumption and water quality testing are often the responsibility of the owner. Studies done on private drinking wells in the mid-west have

indicated that as many as half of the private wells tested were positive for fecal coliform bacteria, indicating some level of contamination of the water source. Tips for how to minimize contamination of drinking water sources can be found in the appendix.

Safe drinking water is critical for the health of all human beings. Currently, the United States has one of the safest water supplies in the world. Many other countries do not have proper water treatment standards or facilities. A World Health Organization report indicates that more than 1 billion people do not currently have access to clean water. A study by the World Bank ranks waterborne diseases as the leading cause of infant mortality worldwide. Obviously safe drinking water should not be taken for granted. No new water is being produced on earth and competition for the fresh water available is increasing with our ever-growing population.



We all live “downstream” of other water users and the quality of our water is directly affected by the actions of upstream users. Preventing water contamination and conserving water should be a priority for everyone. Contamination of both ground and surface water sources is becoming an increasing issue in the United States and water quality can no longer be taken for granted. Clean water is not free.