

Everyone generates wastewater. Typical residential water usage is from 75 to 100 gallons per person per day. Seventy-three percent of the population is connected to a centralized (municipal) wastewater collection and treatment system, while the remaining 27 percent uses on-site septic systems.

Water is not used up. When people are through with water it becomes wastewater—better known as sewage—that must be cleaned up before it is returned to the environment for reuse. In one way or another, all water is recycled. In the past, people had the idea that wastewater was something that could be disposed of—it would just disappear. This idea has caused many people to assume that when they dispose of the wastewater they also dispose of any problems or hazards related to it. Today we recognize that we must recycle water to maintain sustainable supplies of safe drinking water for future generations.

In order to clean up or treat wastewater for recycling, it is important to understand what wastewater contains, what problems it may cause, and what it takes to clean it up. (See Chapter 3 for more on these topics.)

Everyone must make sure that all wastewater is delivered to a good treatment facility and continue to see that the facility is properly managed.

Why We Need to Treat Wastewater

In addition to water that we want to recycle, wastewater contains pathogens (disease organisms), nutrients such as nitrogen and phosphorus, solids, chemicals from cleaners and disinfectants and even hazardous substances.¹ Given all of the components of wastewater, it seems fairly obvious that we need to treat wastewater not only to recycle the water and nutrients but also to protect human and environmental health.

Many people, however, are not very concerned about wastewater treatment until it hits home. They can ignore it until bacteria or nitrates show up in their drinking water, the lake gets green in the summer and the beach is closed, or the area begins to smell like sewage on warm days. Sometimes residents discover they can't get a building permit or sell their home without a septic inspection or upgrade, or they find out there is no room on their property for a new or replacement septic system. Often when one homeowner has a sewage treatment problem, others in the neighborhood have the same problem. People don't always talk to their neighbors about sewage problems for a variety of reasons, including risk of enforcement actions.

What Does It Take to Clean Up Wastewater?

Ultimately, people using water are responsible for treating and recycling their own wastewater. As individuals and members of a larger community, everyone must take responsibility for wastewater generated in their community. To protect the health of all, they must make sure that all wastewater is delivered to a good treatment facility and continue to see that the