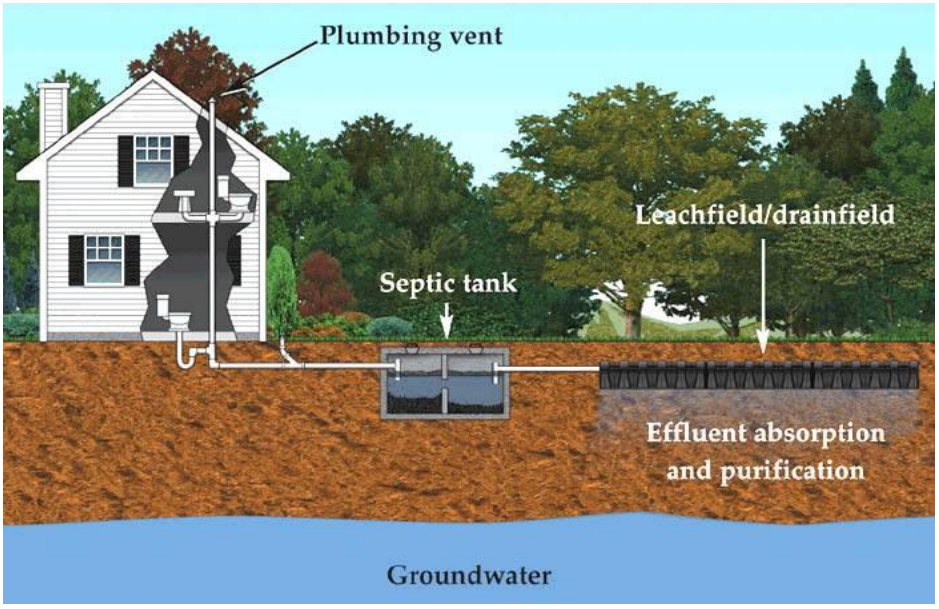
The Trouble with Toilets

You just made sand and gravel filters and you might wonder how these materials provide filtration in our everyday lives? Read along to see how septic systems filter waste and keep our lakes and streams clean.

Do you know where your waste goes when you flush the toilet? While it may seem like a funny question, the fate of human waste can have a large impact on the health of Flathead Lake. For those of us living in cities, our waste goes to a wastewater treatment plant where the water it is cleaned and released back into the environment. For others, their waste enters into a **septic system**.

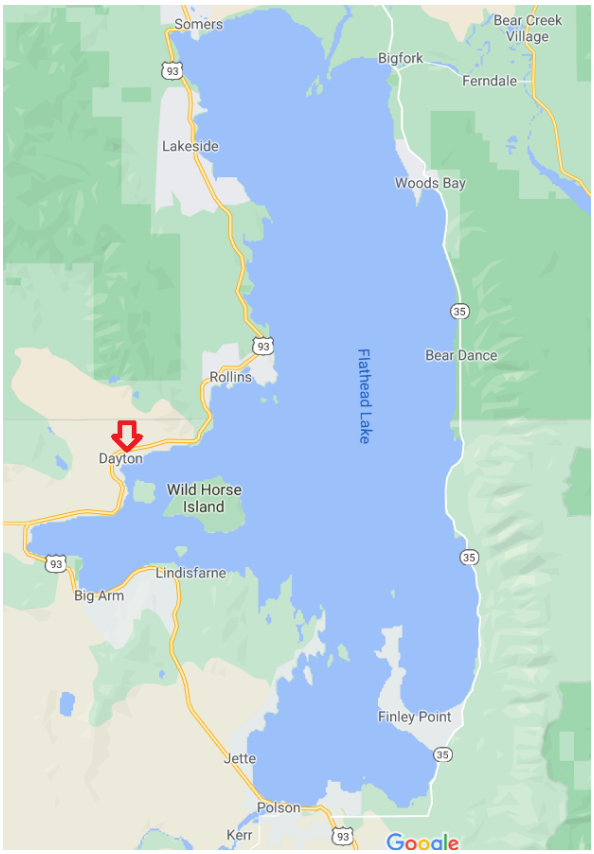
A septic system treats wastewater on site at a person's home. It consists of a tank and a drainfield. Waste first enters the tank where solids sink to the bottom and bacteria work to break it down. Liquid wastewater enters the drainfield. The water is filtered through gravel and sand before it enters the surrounding soil. Bacteria in the soil help remove any **pathogens** from the water. A fully functional septic system is a safe way to treat waste. But many septic systems are failing across the United States and in Montana due to lack of maintenance. In fact, many of the septic systems around Flathead Lake are over 30 years old and need to be repaired.



An example of a septic system. PC: Adam (CC BY-NC 2.0)

*The definitions of the bold words can be found in the Virtual Research Cruise Vocabulary document.

Back in 2014, researchers at the Flathead Lake Biological Station did a study on the westside of Flathead Lake around Dayton. They found high levels of phosphorus and human gut bacteria in some streams and ditches entering Flathead Lake. These results indicate that septic systems around the lake may be failing. Failing septic systems might increase the amount of phosphorus entering the lake which in turn could cause algal blooms. An organization called the Western Montana Conservation Commission is working to address discharge from failing **septic systems** around the lake.



Dayton, Montana sits on the western shores of Flathead Lake

Do you know where your wastewater goes? Ask your parents if your house is hooked up to a septic system. Remember that we all play a role in keeping Flathead Lake blue. We can all help achieve this goal by properly maintaining our septic systems.

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