Because you cannot feasibly store all of the water you may need in a long-term emergency, it might be necessary to treat water that can be found locally from a pond or stream. Generally, it is better to collect untreated water from a flowing source. Your local public water systems will notify you if you water is safe to drink in an emergency. All water not from a public water supply, such as individual wells and springs, should be treated as contaminated in an emergency until it has been tested by a laboratory to make certain it is still safe.

Once you have collected the untreated water, it is always best to filter it to remove as many particles as possible. It is best to start filtration with a large pore pre-filter such as a t-shirt or coffee filter. This will remove the largest particles such as dirt and debris. For smaller particles, there are many commercially available backpack filters that will do a great job of removing particles. Ceramic filters are some of the best options for infrequent use. Remember to look at the pore size when selecting a filter. Most backpack filters available today are 1 µm (microns). But just as little as 5 years ago, the pore sizes varied greatly. Check your filter for its pore size. Pore size is important because very small microorganisms such as virus and bacteria can be smaller than 1 µm. However, these organisms are easily disinfected with chemical treatments such as non-scented chlorine bleach.

Important Filter Sizes

Filter Size (micron)	Contaminant	Easy to Disinfect
100	Large debris	No
50	Algae (not a health hazard)	Yes
5	Protozoa - Cryptosporidium & Giardia	No
1	Virus	Yes
0.5	Bacteria	Yes

Remember the cleaner the water, the more effective the disinfection is going to be, so any filtration is better than no filtration.

Filter