

WORST-CASE SCENARIO®

HOW TO PURIFY WATER

There are four ways to obtain safe drinking water in the wilderness: filtration, chemical treatment, boiling, and distillation.

FILTRATION

Filter water from all sources in the wild—mountain stream, spring, river, lake, or pond.

1 Find or make your filter.

Coffee filters, paper towels, ordinary typing paper, or even your clothing can serve as filters (the more tightly woven, the better). You can also make an effective filter by filling a sock with alternating layers of crushed charcoal, small crushed rocks, and sand.

2 Pour the water through a filter.

Do this several times to clean out impurities.

Be Aware

- Filtration will only remove some of the water's impurities. It will not kill bacteria or other micro-organisms. The best procedure is to filter water first, then treat it with chemicals or boil it.

CHEMICAL TREATMENT

- 1 Add two drops of household bleach for each quart of water.**
Use three drops if the water is extremely cold or cloudy.

Or

Use one iodine tablet or five drops of drugstore iodine (2 percent) per quart of water.
- 2 Mix the water and bleach or iodine, and let it sit for at least one hour.**
The chemicals will kill microorganisms; the longer the water sits, the purer it will be. Leaving the water overnight is the safest course of action.

DISTILLATION

A solar still uses the heat of the sun to evaporate water trapped in the ground and funnels it into a container for drinking. To build a solar still:

- 1 Dig a hole about a foot deep, and wide enough to hold your container.**
- 2 Place a clean container at the center of the hole.**
- 3 Cover the hole with a piece of plastic.**
A tarp or a section of a garbage bag works well as a cover.

- 4 Place sticks or stones around the edges of the plastic so that it is flush with the ground and air cannot escape.**
- 5 Poke a 1/4-inch to 1/2-inch hole in the center of the tarp and place a small stone next to the hole, so the tarp looks like a funnel.**
Make sure the hole is above, but not touching, the top of the container.
- 6 Wait.**
The heat from the sun will cause water in the ground to evaporate, condense on the plastic, and drip into the container. While your solar still will not produce much liquid (less than one cup), the water is safe to drink immediately. The process can take anywhere from several hours to a full day to produce water, depending on the water in the ground and the strength of the sun.

BOILING

- ★ Boil water for at least one minute, plus one minute of boiling time for each 1,000 feet above sea level.**
If fuel is abundant, boil water for 10 minutes before drinking it. The longer the water boils, the more microorganisms that are killed. Beyond 10 minutes, however, no further purification occurs. Be sure to let the water cool before drinking it.