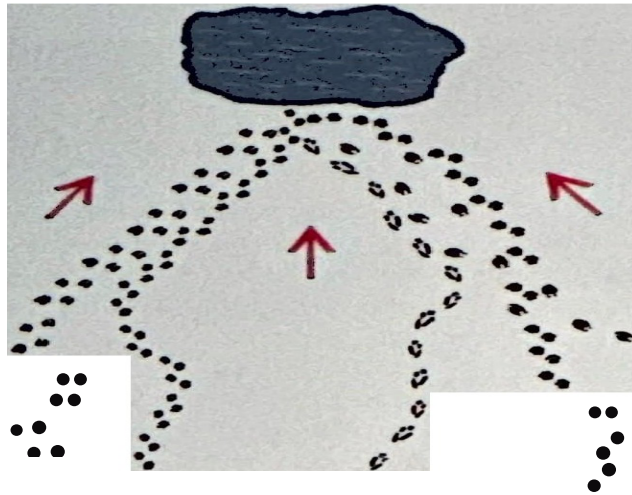


► FINDING WATER

- **Collect rainfall.** If you happen to be in a location that does get some rain, your best bet for collecting pure, drinkable water is from the sky. Craft containers out of anything you can find. There is a lot of garbage in the world, so if you can find old water bottles or cans, cut the top off and use large leaves to funnel the water into these vessels. Get creative. Bamboo cut in half can work as gutters on your shelter and can direct water into bamboo containers. Bark works just as well. Natural divots in rocks will catch water in pools, and some plants catch water at the base of their leaves. A rainstorm can be a great asset if you are prepared for it.
- **Observe vegetation** Vegetation cannot grow without a water source; however, some desert plants have adapted to survive with very little. If you can get to a high point, try to locate an area where the vegetation grows larger, lusher, and greener than its surroundings. This is a good indicator that water may be in that area.
- **Dig for water.** Look for damp mud or soil patches and dig there. Soon your hole should start to fill with muddy water. Allow the sediment to settle before drinking. You can also drain the water through your clothing if you are in desperate need. If there are no moist patches, try digging on the outside of the bends in a dry riverbed. When the river did have surface water, these areas were where it was slowest moving so water is more likely to have seeped into the underlying ground. You may need to dig for over a foot before water appears. If it hasn't appeared by then, try a hole in another location.
- **Look at the landscape.** Water always flows downhill, so lower-lying areas and valleys are a good place to look if there are not obvious areas of vegetation.
- **Observe animal tracks.** Most animals need water to survive as much as we do and, over the course of days, will make their way to the closest water source to



slake their thirst. Well-worn animal paths are a good indication that water is nearby. Animals may be scattered to feed, but their paths will merge on the way to water, creating an arrow-like pattern to guide you. It's a good idea to note if the tracks are fresh, because animal paths may stay obvious for a long time in dry areas after the water source has dried up. It might also take a moment to figure out which direction to travel, but following the arrow pattern will give you a good indication as soon as a fork in the road is discovered. One major exception to this rule is reptiles. They don't require a water source, as they are able to access enough water to survive from dew and their food. So following snakes and lizards, especially in a desert setting, probably won't help you at all.

Bird behavior. A lot of seed-eating birds require a drink every day, so observing bird flight patterns can also be a good indicator of water. If the birds are flying in a tight formation or line, they are generally heading toward water. If they are flying in a wide, more relaxed formation, they are generally flying away from water. It's also good to note that smaller birds need to be closer to a water source, so finding smaller birds such as wrens and bee-eaters is a good sign.

Insect activity Bees are a great indication of water nearby, although they will travel up to two and a half miles to get it if they need to. Many types of wasps also require a water source nearby, as they build nests predominantly out of mud. Keeping an eye out for the direction bees and wasps are traveling may give you some idea of a direction to travel if your water situation is dire.

COLLECTING WATER

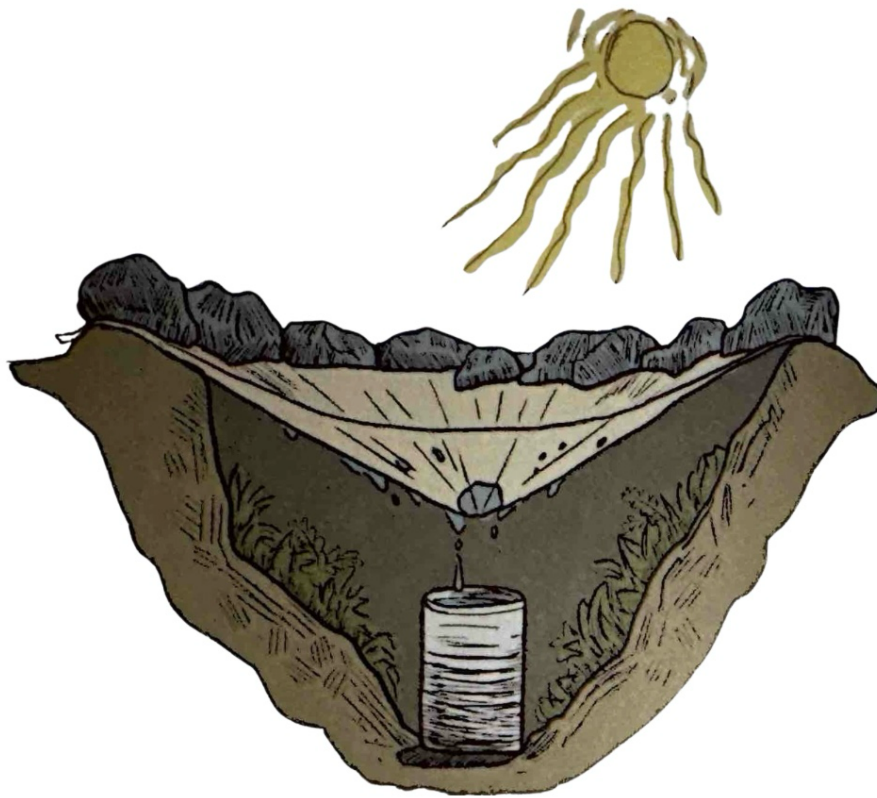
Most of these methods involve having some kind of plastic bag or plastic sheet with you in order to collect water. They also require you to be in an area where there is an abundance of green leafy trees. The first method works well in desert conditions, where you have hot days but clear, cooler nights, and requires no plastic.

- **DEW COLLECTING** Dew forms as temperatures drop and objects cool down. This forces water vapor in the air around cooling objects to condense. This then collects on the objects. Leaving clothing outside at night may result in being able to wring out some moisture in the morning. Tying clothing around your legs and walking through the grass and bushes will also transfer this moisture to your clothes, and you should be able to wring out enough to keep you sated.
- **LEAF CONDENSATION** If you have a clear plastic bag of any sort, then this method is a good way to collect drinking water. It is a passive collection method, meaning that you don't have to do much work to gain the water. This is important, keeping in mind that some methods of procuring water can burn more water than they obtain.

In the early morning, place a small stone in the bottom of the plastic bag and wrap your bag around a bunch of leaves on a tree branch. You need to choose a branch that extends beyond the main canopy; you're looking for one that will be in full sun during the day. Tie the top of the bag tight around the branch and leave it over the course of the day. If the area is heavily wooded, you may need to change the branch halfway through the day if it becomes covered in shade.

Water naturally travels from the trunk of the tree to the leaves, where it transpires into the air. Covering the leaves with the bag means this water condenses in the plastic and will collect in the bottom of the bag. You may want to swap branches and leaf bundles as the day progresses to ensure a constant supply.





- **SOLAR STILL** This method of water collection will require a clear plastic sheet and a container to collect water in. Dig a hole about three feet long and a foot deep in a place that gets the most sun throughout the day. Place the container in the center of the hole, and surround it with green leafy material. The fleshier the vegetation, the more moisture it is likely to contain. Place the plastic sheet over the hole, making sure that you seal the sides. Place a stone in the center of the sheet, so that it forms a low point in the plastic over the container. The sun will cause the moisture to evaporate from the vegetation and condensate on the plastic, where it will form drops of pure, drinkable water that will slide into the waiting container.

This method can be used to distill the salt out of seawater and the impurities out of urine. It can also be used where the ground is moist but not puddling, to draw the moisture out of wet soil.

- **SALTWATER STILL** There are many different and complex ways to desalinate salt water. The basic idea is that you need to heat the salt water so that the pure water rises from it as steam. This steam then needs to be collected and cooled in such a way that it reverts to liquid form, this time without the salt in it. If you have a complex array of pipes and collection pots and perhaps some duct tape, you could rig up an efficient system to keep many people satisfied with drinking water indefinitely. However, this is a lot of equipment to rely on having and you can achieve a smaller version of this with a clear water bottle

and a can. You won't be able to process as much water at a time but it will help to keep you alive.

- Cut the bottom off the water bottle and top off the can. Fold the bottom sides of the water bottle up into itself and create a gutter to catch desalinated water. Fill the can with salt water and place it inside of the water bottle. Make sure the lid is on the water bottle and place your still in the full sun. The water will evaporate from the can in the heat and re-form inside of the water bottle, sliding down the sides to be caught in the gutter. This method takes time and sunny weather, so make sure you set this up way before hydration sets in. If possible make multiple setups.

