

SURVIVAL SKILLS - WATER

Basic water finding skills

Finding water can be an essential skill to have. A human can't live more than a few days without water. You must drink plenty of water even if you do not feel thirsty. An adult should drink at least a couple of liters per day (more in hot climates). Water can be found or readily produced even in desert conditions. For starters, aside from Saudi Arabia, I have never lived in desert areas, and would not be likely to be found hiking in a desert. The only way that I know of to obtain water in the desert is using a solar still in conjunction with whatever scrappy plant life you can locate (see instructions below). That said, my advice if you are caught in the desert is to get the hell out of the desert (hunker down in daylight, move at night).

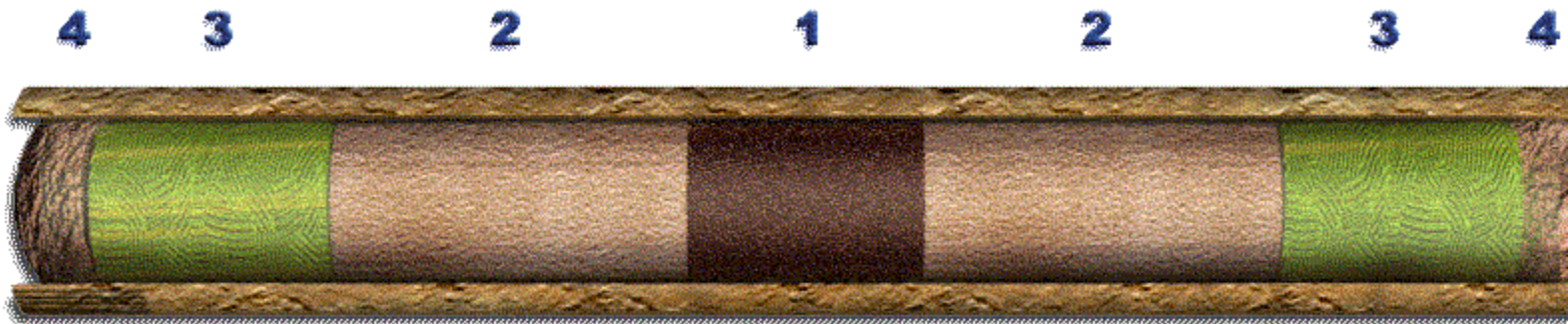
In much of North America however, water is plentiful. In mountainous areas, just **continue to walk downhill and you will eventually find water**. Water obeys the laws of gravity quite well! Watch animals or follow their tracks. They will usually lead to water as well. Birds also tend to congregate near water. If you are getting water from streams or ponds, boil before drinking, or use water purification tablets. If you cannot boil it or have no purification tablets, a couple methods of finding or procuring fresh water are discussed below.

Using the Earth Itself to Filter Ground Water

The ground itself makes for a great water filter. If you are near a water source that is less than clean, use the ground to filter it. Go about 50 feet from the standing water, and dig. If your "pit" looks less than clean after you hit water, give it a few minutes, or continue scooping out water and discarding until it clears up. This same method works even for sea water. For seawater, I would move a little further inland... maybe 50 yards or more before digging. You should strike fresh water there. The further you can go without a significant increase in elevation, the better your chances of getting a good fresh water supply.

Water Filter from All Natural Materials

I kept wondering when the dumbasses on "Survivor" were going to think of this one (especially since their map of the area specifically listed a "charred log"), but apparently they immediately disqualify anyone who has more than two or three brain cells. Anyhow, this filter doesn't filter down to viral levels* or anything, but is surprisingly effective nonetheless. I plan on experimenting with clay in the future to see what I can come up with.



Constructing the Filter

This unit is housed in a hollowed out log, (see cutaway view above) rolled up bark, or whatever else you can make a tube out of (a pant leg for instance). **Item 1** is the crucial part. It is crushed black charcoal (not ash). This is wood that has been charred to black, and then crushed up to sand or powder consistency. Sand is packed on either side of the charcoal (**Item 2**). Grass, moss, leaves or other material is packed in to help retain the sand (**Item 3**). Finally, a rock pushed into either end to hold it all in place (**Item 4**). The rocks are not tight enough to seal anything, they simply keep everything in place. You can skip both the grass and rocks if you have extra fabric to tie around the ends to hold in the sand.

Once the filter is completed, water is slowly poured in from the top and allowed to filter down through. The first few gallons of water that go through will be a bit murky. Toss these, and keep pouring... it will clear right up.

Footnote: Viruses are typically not an issue in water sources unless you are traveling into tropical regions. Most viruses found in the waters of N. America are bacteriophages. They are dangerous to bacteria such as Cryptosporidium, Giardia and other single cell protozoa.... which are the critters you're trying to get rid of anyways. My point is that, if the charcoal layer is properly packed, this filter should trap the stuff you're primarily concerned about. In other areas, you will filter and then BOIL the water. The filter will take care of the murkiness, taste, etc and then the boiling will get the rest.

Using Household Bleach to Purify Water

Almost all laundry bleaches, whether Clorox or any other brand, have 5.5% Sodium Hypochlorite, which is a suitable purification chemical for water. Bleach in a suitable container with an eyedropper dispenser makes a nice addition to any camping/survival kit. Make sure you do not use powdered, scented or other non-pure bleaches.

Add bleach to clear water for purification purposes in the following quantities, and let stand for a minimum of 30 minutes before drinking:

- 2 drops bleach per quart or liter of water*
- 4 drops per 2 quart canteen or 2 liter bottle*
- 8 drops per gallon or 4 liter bottle*
- 1/2 Tablespoon per 5 gallon bucket.*
- 1/4 cup of bleach to a 30 gallon barrel*
- 1/2 cup of bleach to a 55 gallon barrel*

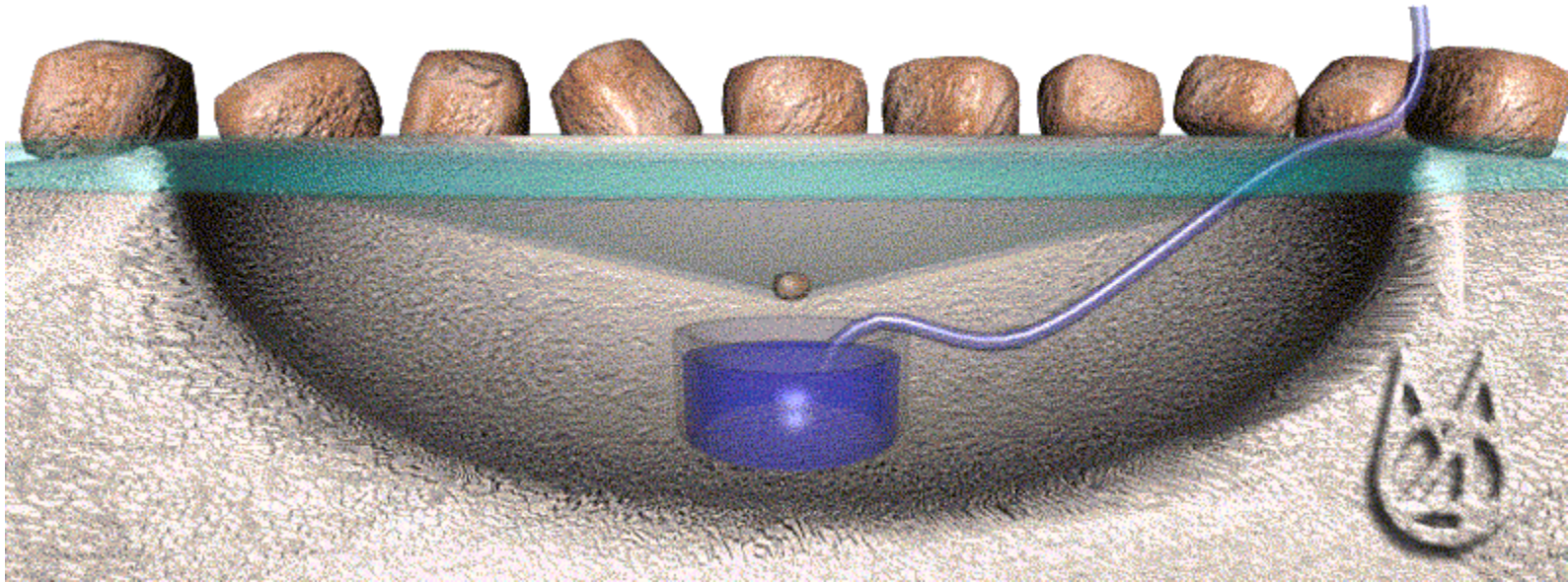


***NOTE:** The listed quantities are for relatively clear and clean water. These can be **doubled** for increased contamination levels. If you are drawing water from puddles or swamps, you should try filtering first, but the bleach quantities should be increased as well. A longer time should also be allowed before drinking in order to give the bleach time to achieve a complete kill of bacteria and viruses. A good indicator is the scent. Chlorine breaks down as it kills organisms. If you cannot detect any chlorine smell to the water, then the

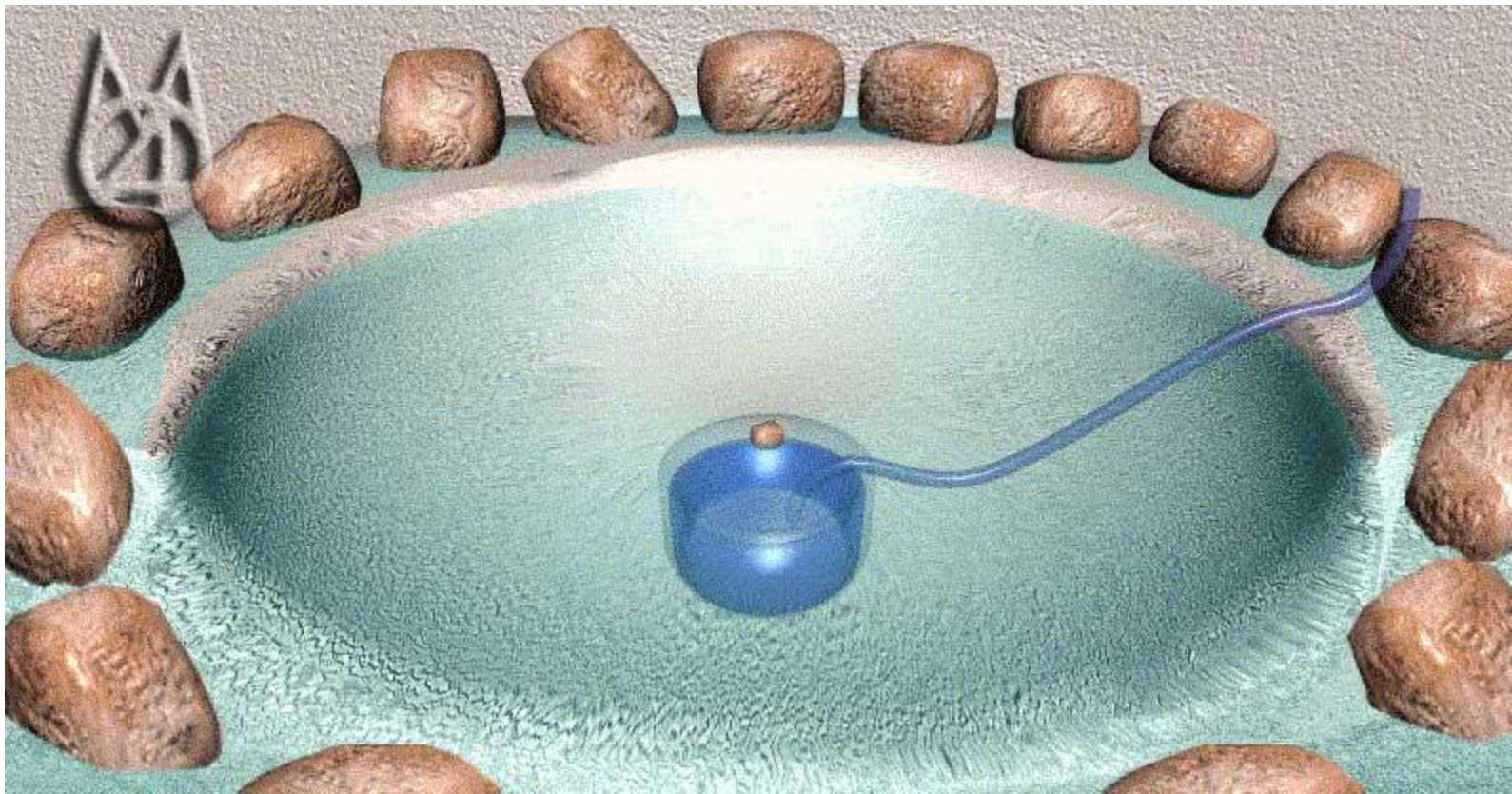
bleach has likely been used up, and the water could still be contaminated. Add a little more and wait another 30 or more minutes. If you can detect the odor of chlorine, then there is nothing left to kill, and the bleach has likely done its job.

Solar Still

A solar still is a fairly efficient way to collect moisture from the soil. As you can see in the two views below, a tarp is draped over a hole in the ground. This is sealed in place with rocks, logs, sand or whatever is available. Make sure it is well sealed. The sun on the tarp heats the air underneath, which causes moisture in the soil to evaporate. This moisture has no place to go and condenses on the tarp itself. Because of the pebble in the middle, there is a sufficient slope for the condensate to run down the inside, and drip into the collection vessel.



A view from the top. From this angle, you can see the pebble in the middle, centered over the collection vessel.



Notes

- The collection vessel can be anything... cup, bowl, tin can, another section of tarp, even a large leaf.
- The drinking tube shown in the pictures is a nice addition, but not absolutely necessary. You can always lift the corner, reach in and remove the collection vessel every so often. It's more work, but if all you have is a tarp, then it may be necessary.
- If the ground itself is not yielding enough water, try tossing in vegetation. It doesn't even matter if the vegetation is edible or not, as you are effectively distilling the water. The water that is collected from a solar still is 100% pure, drinkable H₂O, and does not require boiling.

Final Word

In closing, I would like to mention that there is quite a lot of misleading information out there. I saw one site that told people how to make a "divining rod". These supposedly show you where to dig to find water. Their claims indicated that this was done with mystical psychic energy or some such crap. This is all part of the "new-age" line of Birkenstock bullshit that many out there seem eager to shovel on the unwitting. **Do NOT listen to granola-headed shrub cuddlers when it comes to survival info. They will get you killed.** The day I see the headline "Psychic Wins Lottery" will be the day I rethink my opinion of these charlatans. Wilderness Survival is all about using common sense, not a "sixth sense". I recently had someone write to me, telling me that I am wrong on the "divining rod" subject.