



How to Collect, Clean, and Store the Key to Life: Water (Pt 2)

By Paul C. Scheib

The most important resource anyone can have in a crisis is water. It is valuable because you can only survive for a few days without it. And, if you have a way to collect and purify water from a natural source, you have something to trade.

If you missed [part one](#) of this article, go back and discover the how, in what, and where to store water safely. The article has tips on preparations you need to make before a disaster strikes.

Now, let's turn to what happens when your stored water runs out.

Purifying Water

If the crisis lasts longer than your stored supply, you will need to find clean water sources and that means locating a well or purifying water. Many people dug private wells on their property during the last drought, to be used for landscaping. You may have a neighbor that has a well head in their back yard and a sign in their front yard that says "Well Water in Use." Be observant now, because those signs will disappear in a crisis!

If well water is not an option, you will need to be prepared to collect water from other sources. Your options for large-scale collection are river and lake water or rain run off. You want the clearest water you can find, preferably from flowing sources. Stagnant water grows all kinds of things that can make you sick.

If you are going to use rain run off, the easiest way to collect it is to put a kiddie pool or rain barrel at the bottom of your down spouts. You may need to cut the pipe and put a diverter on it to get the barrels filled. You can also dig holes that are in areas that have a lot of run-off. Line the holes with plastic to prevent the water from seeping into the ground. Give some thought to being covert. If people believe you have large amounts of fresh water, you may have unwanted visitors demanding that you share.

Once you have collected the water, you will have to purify it. Even rain water needs to be cleaned because it will have passed over who-knows-what on the way to your collection barrel. To purify water, there are three basic methods: *boil*, *bleach*, or *filter*.

Boiling the water is the best way to ensure that it is free of illness-causing organisms. You will need to bring the water to a rolling boil for a minimum of one minute. When it cools, refrigerate the water in clean containers. A pinch of salt per quart may improve the rather flat taste of boiled water. The main draw back of this method is that it requires significant amounts of energy that could be used for cooking or heating bathing water.

If you do not want to boil your water, you can disinfect it by adding 1/8 teaspoon of **bleach** per gallon of water. Then, shake the water and let it sit for 30 minutes. Use common household bleach containing 5.25 percent sodium hypochlorite. Do not use bleach containing perfume, dyes, or other additives.

If the water is cloudy, double the amount to ¼ teaspoon of bleach. You should first try to let the sediment settle and pump the clean water into a different container, then add bleach. Double the amount for every six months you have had the bleach. Double the amount for every 3 months the bleach was stored in a vehicle. Double the amount and retreat the water, if it does not smell like bleach after 30 minutes.

The final option is to get an emergency water **filtration system**, such as the **Katadyn Combi**. It is the number-one selling emergency purifier world wide. It has a two-stage system that combines a silver impregnated ceramic element and a refillable, activated carbon cartridge. It is effective against bacteria and protozoa and also reduces chemicals and bad taste. This will allow you to purify large amounts of water quickly. I would recommend that you add a small amount of bleach to the filter water that you will be storing to help prevent bacteria from growing.

Don't forget to buy extra carbon cartridges. The carbon is what improves the taste and removes chemicals. Each cartridge will filter 50 to 70 gallons. The double-packs are available for about 10 dollars. You can get a back up ceramic element; however, the filter life on the unit is 13,000 gallons if maintained properly.

You may also want to purchase an antibacterial agent such as **CitriDrops Dietary Supplement** available at <http://www.microbalancehealthproducts.com/> in case you experience dysentery from any of your water sources. The agent will kill bacteria and parasites that get into your system, stopping the dysentery. This is important because dysentery can kill you if left untreated.

Conserving Water

Now that you know how you are going to get and store water, you need to think about how to conserve it.

Most of the water Americans use every day goes into flushing toilets, washing clothing, dishes, and bathing. If you can become efficient in these areas and then eliminate non-essential water use, you can get your use down to two gallons per person, per day. This is the ideal amount, given that you will want to consume between ½ to 1 whole gallon of

water to stay hydrated. Besides getting sleep, this is the best thing you can do to stay sharp in a crisis situation. The rest of the water will be used for cooking and cleaning.

The biggest water-saver is to re-purpose it. For example, if you boil food, save the water by straining it into a bucket – it can be used to water your vegetable garden. Use repurposed bath water to flush toilets. British World War I soldiers were trained to heat their food, bathe, and wash their under garments with one quart of water.

In a crisis, baths and showers are out. Wash cloth bathing is the best way to limit water use. Heat a quart of water in the smallest pot that will fit the water. This saves on the energy needed to heat the water. Divide the water into two containers and use one for soapy water the other for clean water to “rinse” with. Start from your face and work down soaping then use your rinse water. Finish with your hair because you will have to use the last of the clean water to rinse it out. You do not need to bathe everyday, but you do need to wash your hands and face everyday for disease control. Having hand sanitizer is a great way to limit water for washing. Remember to save any left over water for re-purposing.

Washing dishes is a very similar process to bathing. The only real difference is that you should carefully scrape off any food left over on the plates, bowls, and utensils with a rubber spatula. This reduces the water needed to get them clean. Also, never leave the dishes to be done later. Food will harden and stick to them and that will require soaking – which wastes water. When re-purposing wash water, you can strain the water through a coffee filter to remove particulates that will start to smell when you store the water.

Washing clothing is also similar to bathing and doing dishes, but you need to prioritize the things to be washed. Undergarments and socks get priority because they are the items you need to change more often to control chaffing and getting cold because of sweat. You can wear your outer garments for a week, if necessary. Just rotate your clothing items and let them air out every day or two.

Sanitary waste disposal can be tricky when it comes to conserving water. Although urine can smell bad, it has little danger of spreading disease. To flush it, pour water directly into the bowl because it requires far less water than a regular flush to clear the bowl. You could also try urinating in toilets multiple times before flushing.

On the other hand, human feces is far more likely to transmit diseases. You will want to dispose of it right away. A tank flush is required to remove it and the toilet paper. Instead of using your regular toilet, you may want to have an emergency toilet set with a sealable lid, liners and sanitation liquid to control bacteria. This can be filled and then disposed of away from your living area and requires no water. The third option is to dig a straddle trench, but again it should be located away from the house.

Water conservation is really a matter of common sense. It will require discipline to not be wasteful, because we are so used to unlimited running water. You will really have to watch yourself in the early days of a shortage. You will not know how long the water will be turned off.

The Next Steps

Now that you have the knowledge of how to purify and conserve water, you can take steps to prepare. To take full advantage of this course, you must do the exercise outlined at the end of each of the articles.

Exercise 5:

Step 1: Decide how you will get additional clean water if your stored water runs out or if you are unable to fill your storage containers. Think about what makes the most sense given the type of home you live in and your access to natural water sources.

Step 2: Add the items you want to store that are water purification and conservation–related to the check list in you survival binder. Use your list to continue acquiring items.

Step 3: Write down this portion of your water plan and put it into your survival plan binder. Print out this article and put it into your binder. Make sure everyone in the family knows where to find the reference material in case they need it.

Remember you do not need everything today. You just need to get started. Now, go execute.

Please visit us at <http://www.thegeorgia9-12project.org> for more installments of our **Survival Series** and for other useful information. Consider joining a chapter near you. It's free.

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