

Water Storage and Purification

SURVIVAL WATER

If you had to leave your home with nothing but what you could carry, push, or pull, what would you take? The first item (besides your family) should be your Emergency Prep Pack. The purpose of your Emergency Prep Pack is to help you survive until either help arrives or you can secure more supplies. The key word here is SURVIVE. What do you need in your pack to help you SURVIVE? Water will be one of your most, if not THE most, important item in your pack. So, how much water do you need to survive? Let me make a side note right here. In the past, we called our Emergency Prep Pack a 72-hour kit. The standard was that we needed a three-day pack of supplies, hence the name 72-hour kit. From past experience, we have learned that help may not, or most likely will not, be available in three days. The new standard is FIVE days. Instead of calling it a 72-hour kit, we simply call it our Emergency Prep Pack. It should contain everything you need to SURVIVE for FIVE days. Back to our topic at hand, how much water do you need to survive for FIVE days? Believe it or not, the daily standards were set by the U.S. Coast Guard. Their studies indicate that in order to SURVIVE, humans need to drink at the minimum 8 oz. of water per day. That is the standard we go by when packing water in our Emergency Prep Packs. Pack at least 40 oz. (8 oz. x 5 days) of water in your pack. Remember that this is SURVIVAL water and is only meant to be lived on short term NOT long term. If your Emergency Prep Pack doesn't have at least 40 oz. of water in it, go right now and add more.

PORTABLE WATER

If you need to evacuate your home, and can evacuate by car, what would you take with you? The list is probably much longer than if you had to evacuate by foot. My first piece of advice is to think about what you would take, prioritize that list, and WRITE IT DOWN. If you only have enough time to grab the first three items on the list, they are the most important. One of the most important items on your Grab & Go List will be WATER. It is great to have big barrels full of water, but obviously, they are not going anywhere. You need to plan to have water that is portable, that you can easily load into your car in the event you are required to leave immediately. Plan to take 5-gallons per person (1 gallon per person per day for FIVE days). A five-gallon container full of water weighs about 40 lbs. If you cannot lift 40 lbs. by yourself into your car, store your water in smaller containers. You can purchase commercial 5-gallon water containers that are pre-filled with purified drinking water or you can fill your own container. Add 1/2 teaspoon of regular bleach (non-scented) for every 5 gallons of water and rotate every year. Portable water is critical.

WATER STORAGE

Every household needs water storage. The industry standard calls for **1 gallon per person per day for 14 days** for your water storage needs. If you live in a desert area, store 1 1/2 gallons per person per day. These recommended amounts cover drinking, cooking, and basic (limited) washing and sanitation needs. There are a variety of ways to store water that accommodate large families, small families, individuals, people with plenty of storage space as well as those with limited storage space. Find what method works for you and get started. It is possibly one of the most life saving items you will store!

Water Barrels

- The most economical way to store water is in a 55-gallon barrel. They are mass produced and store the most water at the least cost per gallon. However, there are many other sizes of barrels on the market. Find one that fits your needs, space, and wallet. You may need to purchase a bung wrench to remove and replace the plugs on top that are used to fill and empty the barrels. And if your water barrel is not equipped with a spigot, you will also need to purchase a siphon hose or siphon pump. Plan to store these items next to your water barrel.
- Before filling your barrels, decide where you want to store them. You will not be able to move larger barrels once they are filled with water. A 55-gallon water barrel weighs 440 lbs.! Water barrels should *not* be stored directly on cement. Place them on a wooden pallet or two 2x4 pieces of wood. It is also recommended that you NOT store your barrels outside in direct sunlight. If you must store them outdoors, cover your barrels with a tarp and secure well.
- You can fill your water barrel with tap water. However, storing water for long periods of time does require an additive. Use 1 teaspoon of non-scented bleach for every 10 gallons of water (5-1/2 teaspoons for a 55-gallon barrel) and plan to rotate your barrels every year. Or you can purchase other water preserver products on the market that will preserve water for five years. Always label your barrels with the date you fill it and the date it should be rotated.

Helpful Hint: Store a couple of 5-gallon containers that have a spigot. When you need to use the water in your larger barrels, siphon or drain the water into the 5-gallon container which is easily transported to the kitchen and/or bathroom. You now have "running" water where you need it.

Other Sources of Water in Your Home

Remember that hot water tanks, and the plumbing system within the walls of your home are sources of water that can be used. Do not count this water as part of your water storage. It is still vitally important that you have water storage sufficient for every member of your household. However, not knowing how long it will be before water service is restored, you should be aware of other places to find water in your own home.

- Hot Water Tanks

Hot water tanks contain many gallons of drinkable water. To access this water: 1) TURN OFF the gas or electricity powering your hot water tank, 2) turn off the main water valve or the water intake valve at the tank, 3) open the drain at the bottom of the tank, and 4) turn on a hot water faucet to introduce air into the system and start the water flow. DO NOT turn the gas or electricity back on until the tank is once again filled with water.

- Plumbing System

Pipes within the walls of your home contain water. To access this water: 1) turn off the main water valve, 2) turn on a faucet at the highest level in your home reserving the water that comes out (this allows air to enter into the pipes forcing the water to drain to the lower faucets), 3) turn on a faucet in the lowest part of your home to obtain the water from the pipes.

Unsafe Sources of Water

Water beds, pools, spas, and toilet bowl water are not acceptable for drinking or food preparation. However, this water could be used to flush toilets. Swimming pool and spa water can also be used for cleaning and personal hygiene uses.

Water Containers

Water can also be stored in two-liter plastic soda containers. Rinse well and sanitize with a bleach solution of one teaspoon bleach to one quart water. Fill with water and add 2 drops of non-scented liquid chlorine bleach. Store in a cool, dark place and replace the water every six months. **DO NOT store drinking water in milk jugs, fruit juice containers, cardboard or glass containers, or emptied bleach containers.**

WATER PURIFICATION

If you are unsure of the safety of the water, treat it before drinking. Strain the water through a paper towel or coffee filter to remove any particles. Then treat it in one of following ways:

- 1- **Boil vigorously for 10-12 minutes**

- 2- **Add liquid chlorine bleach** (never use color safe or scented bleach). Use bleach that lists sodium hypochlorite as the only active ingredient. Use:

<u>AMOUNT OF WATER</u>	<u>CLEAR WATER</u>	<u>CLOUDY WATER</u>
1 quart	2 drops bleach	4 drops bleach
1 gallon	8 drops bleach	16 drops bleach
5 gallons	½ teaspoon bleach	1 teaspoon bleach

ALWAYS allow the treated water to stand for 30 minutes before drinking. Properly treated water should have a slight chlorine odor and taste. If not, repeat the dosage and let stand an additional 15 minutes. Chlorine dissipates somewhat as it sits. You can also agitate the water or pour it back and forth between two containers to help the chlorine dissipate. For further information on disinfecting water using Clorox Liquid Bleach, call 1-800-292-2200.

- 3- **Use Purification Tablets**

Water purification tablets are available at most sporting good stores. Follow directions on package. Usually one tablet will purify one quart of water.

Water Filtration Systems

Once your stored water is depleted, you may need to collect water from outside sources. This water will need to be purified as stated above or filtered through a water filtration system. There are many excellent filters on the market. Camping or backpacking filters are effective. They are small and compact and can easily fit in your Emergency Prep Pack. These filters make a great short-term option and are easy to take in the event we are forced to leave our homes. Large gravity driven filtration systems that do not require electricity are capable of filtering large quantities of water and are better suited for long-term water needs. Once you have your water storage in place, consider adding a water filtration system to your supplies.