



Food Storage

PLANNER

Information on
Water Storage
By Revelar, Inc.

Revised February 7, 2003

Introduction & Disclaimer

This information, gathered from our own experience and various sources, is not intended to be the comprehensive work on water storage. Rather, this is designed to introduce the novice to water storage. For further information on home canning and storage, consult your local library or the American Red Cross.

DISCLAIMER: Safe and effective food storage requires attention to detail and proper equipment and ingredients. Revelar, Inc. makes no warranties and assumes no responsibility for errors or omissions in the text, or damages resulting from the use or misuse of information contained herein.

Water Storage

Various sources recommend home storage of a two week supply of water. The amount often recommended is seven gallons per person for drinking and food preparation, and another seven gallons per person for other limited uses such as hand washing, teeth brushing and dish washing (total fourteen gallons per person for two weeks). It should be noted that this amount is enough for subsistence purpose only, two quarts for drinking and two quarts for cleaning and bathing etc. per day. When you consider that a household normally uses in excess of 50 gallons of water per day for drinking, bathing, laundry, dishes, flushing the toilet etc., this isn't a lot of water. If you have the room to store more you will probably want to do so. Both glass and plastic containers are commonly used for water storage at home. Containers should be clean and sanitary. Glass containers are breakable and somewhat heavy compared to plastic, but they are not permeable to vapors and gases, the amount of leaching (dissolving) of chemicals from glass into water is insignificant. Plastic containers are lightweight and substantially more resistant to breakage than glass.

If plastic containers are used, care should be taken to assure that they are made of plastic approved for food contact by the Federal Food and Drug Administration. Polyethylene plastic is approved for food contact and is commonly used for containers of various sizes, including large 55 gallon polyethylene (plastic) water drums. Before filling a drum with water, make sure the NPT plug (fine thread; non-white cap) is not positioned next to a wall etc. It should be on the top front side of the drum for easy access, because this is the bung hole that the drum pumps thread into. Certain types of plastic containers are not intended for food contact (such as vinyl plastic waterbeds, or trash containers) and may leach undesirable chemicals into stored water. Leaching of chemicals from approved plastics is negligible.

Water Storage Recommendations

- Store at least a three-day supply of drinking water for each family member (at least one gallon per person, per day).
- Store at least two gallons of water in your vehicle.
- Store additional water for hygiene & cooking.
- Store a three-day supply of water for your pets.
- Replace your stored water every six months, if possible, but may last up to 3 years.
- Store your water in a cool, dark, and dry place, separated from your other emergency supplies.
- Store your water on lower shelves, rather than on higher shelves from which containers could fall and burst.

- Do not store water in plastic milk bottles. Heavy, opaque bottles with screw on lids are preferable for storing water.
- Water stored in plastic containers should not be stored near gasoline, kerosene, pesticides or similar substances. Vapors from these substances could permeate the plastic and affect the water.

What About Bottled Water?

If you plan to use commercially prepared “spring” or “drinking” water, keep the water in its original sealed container. Change and replace the water at least once a year. Once opened, use it and do not store it further.

Alternate Water Sources

- Water heater, if secured.
- Toilet tanks (not the bowl) if the water hasn’t been treated with chemicals to enhance color, smell, etc.
- Canned vegetables and fruits stored in water or juice.
- Beverages
- Ice
- Swimming pools (for hygiene purposes only). It is not recommended that swimming pool water be used for drinking because acids build up in the water which could be harmful to health.
- Do not use water stored in vinyl plastic containers, such as water beds, for drinking.

Hidden Water Sources in Your Home

If a disaster catches you without a stored supply of clean water, you can use the water in your hot-water tank, pipes and ice cubes. As a last resort, you can use water in the reservoir tank of your toilet (not the bowl).

Do you know the location of your incoming water valve? You’ll need to shut it off to stop contaminated water from entering your home if you hear reports of broken water or sewage lines.

To use the water in your pipes, let air into the plumbing by turning on the faucet in your house at the highest level. A small amount of water will trickle out. Then obtain water from the lowest faucet in the house.

To use the water in your hot-water tank, be sure the electricity or gas is off, and open the drain at the bottom of the tank. Start the water flowing by turning off the water intake valve and turning on a hot-water faucet. Do not turn on the gas or electricity when the tank is empty.

Should Water Be Treated Before Storing It?

If your local water is treated commercially by a water treatment utility, you do not have to treat the water before storing it. Treating commercially-treated water with bleach is superfluous and not necessary. Doing so does not increase storage life. It is important to change and replace stored water every six months or more frequently.

If your local water is not treated commercially by a water treatment facility, that is, if your water comes from a public well or other public, non-treated system, follow instructions about water storage provided by your public health agency or water provider. They may recommend treating it with a small amount of liquid household bleach. Still, it is important to change and replace stored water every six

months or more frequently.

If your local water comes from a private well or other private source, consult with your local public health agency about recommendations regarding storage of water. Some water sources have contaminants (minerals or parasites) that can not be neutralized by treatment with liquid household chlorine bleach. Only your local public health agency should make recommendations about whether your local water can be safely stored, for how long, and how to treat it.

Three Ways to Treat Water (Water Disinfection Tips)

In addition to having a bad odor and taste, contaminated water can contain microorganisms that cause diseases such as dysentery, typhoid and hepatitis. You should treat all water of uncertain purity before using it for drinking, food preparation or hygiene.

There are many ways to treat water. None is perfect. Often the best solution is a combination of methods.

Two easy treatment methods are outlined below. These measures will kill most microbes but will not remove other contaminants such as heavy metals, salts and most other chemicals. Before treating, let any suspended particles settle to the bottom, or strain them through layers of paper towel or clean cloth.

Boiling

Boiling is the safest method of treating water. Bring water to a rolling boil for 3-5 minutes, keeping in mind that some water will evaporate. Let the water cool before drinking.

Boiled water will taste better if you put oxygen back into it by pouring the water back and forth between two clean containers. This will also improve the taste of stored water.

Disinfection

You can use household liquid bleach to kill microorganisms. Use only regular household liquid bleach that contains 5.25 percent sodium hypochlorite. Do not use scented bleaches, colorsafe bleaches or bleaches with added cleaners.

Add 16 drops of bleach per gallon of water, stir and let stand for 30 minutes. If the water does not have a slight bleach odor, repeat the dosage and let stand another 15 minutes.

The only agent used to treat water should be household liquid bleach. Other chemicals, such as iodine or water treatment products sold in camping or surplus stores that do not contain 5.25 percent sodium hypochlorite as the only active ingredient, are not recommended and should not be used.

While the two methods described above will kill most microbes in water, distillation will remove microbes that resist these methods, and heavy metals, salts and most other chemicals.

Distillation

Distillation involves boiling water and then collecting the vapor that condenses back to water. The condensed vapor will not include salt and other impurities. To distill, fill a pot halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down

(make sure the cup is not dangling into the water) and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled.

American Red Cross

For more information, contact your local Red Cross chapter or 2700 Wilshire Blvd. Los Angeles, CA 90057, (213)739-5200 and ask for the brochure titled, "Food and Water in an Emergency" (A5055); "Your Family Disaster Plan" (A4466) and "Your Family Disaster Supplies Kit" (A4463)
American Red Cross