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Preparing water for long-term storage

1. Gather your materials. You will need:

- Containers: I recommend using new food-grade plastic BPA-free containers. Use whatever size(s) fit your needs and storage area.
  Re-using food containers is a bad idea. Many plastics are porous and it is impossible to remove all the food from it. You won't see the residue, but bacteria will find it and feast on it. Other plastics break down in a couple of years, causing damaging leaks in your storage area. Glass can be cleaned effectively, but it breaks easily when tossed around in an earthquake. Metal can corrode.
- Bleach: Be sure to use fresh new bleach (after 6 months, it starts to lose potency). The bleach must contain 5-6% sodium hypochlorite, and must *not* contain any additives like softeners or scents. Read the label, as some "bargain" bleaches simply contain less active ingredient.
- Measuring cups or spoon(s): to measure the bleach.
- Labels: Always label your containers so you'll know when to rotate them, and so that there will be no question about what is in them.

2. Sanitize the containers. Even though they're new, your water may sit inside them for a long time before you drink it, so it's worth some extra effort to get rid of any germs.

- Wash the container with dishwashing soap and water, to remove any dirt or oil that it may have accumulated during shipping or storage. Rinse thoroughly to remove the soap. I suggest working on a raised outdoor deck or in a bathtub.
- Fill the container about half-way with tap water, then add bleach (3 fluid ounces per 5 gallons, or 1 quart per 55 gallons).
- Fill the container the rest of the way, leaving as little air space at the top as possible.
- *Do not drink this water* – this is a cleaning solution and is absolutely not drinkable.
- Screw the cap on tight, and let it soak for at least 10 minutes. It's perfectly OK to leave it overnight if that's easier, but if you do this be sure to label the container so nobody drinks it by mistake.
- Tip the container upside-down so the top of the container (and the inside of the cap) are now submerged in the bleach solution. (For a large container, you can partially empty it first.) Let soak at least 10 minutes.
- Dump the water down the drain (not on your plants or lawn) and rinse the inside of the container with tap water.

3. Fill with drinking water:

- Fill the container about half-way with tap water.
- *Do not use a garden hose* to fill it, because most hoses are treated with chemicals that you most definitely do not want to drink. Either fill directly from a tap, or use a hose specifically rated for potable water.
- Add bleach, but this time at a much lower concentration (½ tsp per 5 gallons, or 1 fluid ounce per 55 gallons).
- Fill the container the rest of the way, leaving a small air space at the top. (If your storage area is subject to hard freezes, leave enough extra space for the water to freeze solid without bursting the container.) The water should now smell like a swimming pool, but the chlorine odor should not be overwhelming.
- If the cap has a reversible spigot, *make sure it is closed* and on the inside position.
- Screw the cap on tight. If the cap has a reversible spigot, cover the opening with a piece of tape to keep it clean.
- If there is a vent cap or plug, close it tightly.
- Attach a label that indicates what is in the container and when you filled it. You don't need anything fancy; a hand-written piece of paper is fine. Attaching the label with clear packing tape will protect it from damage.
- Store in a cool place out of direct sunlight. If you store the containers on the floor, put some scraps of wood underneath to allow air to flow under them.
- Place a moisture alarm at the bottom of the storage area to detect any leaks.

4. Rotate your water:

- Water does not keep forever (unless it is sterile, and the procedure described here disinfects but does not sterilize.) You have to periodically rotate it by dumping out the old water and re-filling the containers with fresh water.
- If you store water in your own containers, FEMA, the American Red Cross, and CDC all say to rotate it every 6 months, e.g. when you change your clocks. This is to prevent bad stuff from growing in your water.
- It is not necessary to repeat the sanitizing process when rotating (unless of course you notice something nasty in the container).

5. In an emergency when you need to use your stored water:

- Do not ration your water. Drink what you need each day (at least 1-2 quarts, or more if it's hot or if you are injured or sick), and look for more before you run out.
- Check your water for any “off” odors or cloudiness before drinking it. If you notice anything unusual, or if you didn't remember to rotate every 6 months, run the water through a good filter before drinking it. A normal kitchen filter is not sufficient, instead use a camping or emergency filter rated to remove bacteria.
- If the water tastes flat, pour it from one glass to another a few times to aerate it.