

# **LIVING ON SHAKY GROUND**

## **PREPARE SURVIVE RECOVER**

A Community Outreach Program

Sponsored by West Lane Emergency Operations Group

# **WATER SANITATION AND TOILETS HYGIENE KITS MEDICAL GRAB'N'GO BAGS**

Booklet and Class Design by Jean Busby

## **WATER, SANITATION, TOILETS, HYGIENE, AND MEDICAL KITS**

### **Disaster Instructions**

You will be responsible for your own food, water, shelter, hygiene and medical supplies for 30 days. Thirty days, or so, after the disaster there will be a ship to pick up the survivors from Florence. If you evacuate it could be a year or longer until you can return. You need to make sure you have all your financial records with you so when you need to access your funds you will be able to give the banks your account numbers.

### **BE PREPARED TO SURVIVE FOR 30 DAYS ON YOUR OWN!**

This class will concentrate on the following:

#### **WATER**

How much and how to store water to be able to shelter in place, getting more water, carrying water, Purifiers, amounts of CLOROX to use for drinking water and sanitation, etc. I only recommend two water PURIFIERS. FIRST NEED XL and the replacement canister, together they will process 300 gallons of water and the SAWYER. The Sawyer needs nothing else and will process over 1 million gallons. Do not waste your money and buy inferior products. Do not buy a Filter!

#### **SANITATION AND TOILETS**

How to safely dispose of sanitary waste on your own property or where you might be camping. Control of Bacteria, Viruses, Pathogens.

#### **HYGIENE KITS**

Make your own kits for each of the family.

#### **MEDICAL GRAB 'N' GO BAGS**

Medications, Medical History, and copies of your prescriptions from the pharmacy. Contact information for your family, Keys, some money, \$50.00 in ones is recommended.

#### **WATER (H<sub>2</sub>O)**

How much do you need? The minimum is 1 gallon per day per person for 30 days. Two (2) gallons per day is more realistic. One (1) Quart per day per pet for thirty (30) days.

#### **CONTAINERS**

A 16 oz. or larger, drinking bottles. It will take a lot of these to have enough water stored. One gallon clear plastic containers are also portable. Water is heavy at 8+ pounds to the gallon. A 5 gallon water container weighs 32+ pounds and a 7 gallon container weighs 56+ pounds. Florence City tap water is fine to fill your bottles and containers with. The tap water can be stored for 6 months without adding CLOROX.

For longer storage time follow instructions on WATER TO CLOROX RATIO for the size of your containers.

Note: A 15 gallon water barrel weighs 120 pounds, with help, can be loaded in a pickup truck.

A 55 gallon water barrel weighs 440+ pounds and cannot be lifted or transported easily.

'I recommend one 55 gallon water barrel for each member of the household. That would give you 1 1/2 gallons per day for 30 days. Put 1/2 cup of CLOROX into the container, fill it using a white safe drinking water hose. The barrel(s) must be covered to keep them dark if outside. A UV protective tarp works well. These are found at hardware stores like Harbor Freight, Jerry's, etc. Place the barrels on 2 x 4's to keep them off the ground. On cement it is still best to use wood underneath so air can pass under them. Water can go flat. To add air to the water pour it back and forth between two glasses a few times. I rotate my water every 3 years. When potable water is properly stored, it should have an indefinite shelf life. When you open the barrel it should have a very slight odor of CLOROX. If it does not, then add 1/2 cup of CLOROX and wait for 30 min. If it still does not have the slight odor of CLOROX then do not drink it without using a PURIFIER. When you open your smaller containers of stored water and do not smell any CLOROX, add 16 drops to 1 gallon of drinking water. Let it stand for 30 min. the same as for the barrel. If no smell after 30 min. it can only be used for bath water unless you run it through your PURIFIER. It is recommended that you buy only food-grade water storage containers for your water storage. Before filling with water, thoroughly clean the containers with dishwashing soap and water and rinse completely so there is no residual soap. The tools needed if you have barrels are; a bung wrench to open them, a white safe drinking water hose to fill with, a siphon hose, and of course the food grade safe water barrel.'

Water barrels and supplies are found at [www.BePrepared.com](http://www.BePrepared.com) or 1-800-999-1863 at Emergency Essentials, for competitive prices and very reasonable shipping.

Store smaller containers of water on shelves that have a layer of plastic sheeting on them. If containers sit on wood the water will taste like the wood smells. Do not put your water containers on any treated wood, or any surface with shellac or toxic finishes or directly on the concrete..

#### **DO NOT USE ANY CONTAINER THAT HAS HAD MILK OR JUICE IN IT.**

Milk protein and fruit sugars cannot be adequately removed from these containers and provide an environment for bacterial growth when water is stored in them. If storing water in plastic soda bottles, it is best to use diet soda bottles that have had no sugar in it. Sugar causes bacteria to grow. Use the following steps to prepare the soda bottles for water storage:

- 1.) Thoroughly clean the bottles with dishwashing soap and water, rinse completely (no residual soap).
- 2.) Sanitize the bottles by adding a solution of one (1) teaspoon of unscented CLOROX to a quart of water.

'Swish the sanitizing solution in the bottle so that it touches all the surfaces. After sanitizing the bottle, thoroughly rinse out the sanitizing solution with clean water. Be sure you sanitize the cap of the bottle as well.'

- 3.) Fill the bottle to the top with regular tap water. If the water you are using comes from a water utility with chlorine, you need not to add anything else to the water to keep it clean.
- 4.) If your water is coming from a well or water source that is not treated with chlorine, add two drops of unscented CLOROX to the water.

'Tightly close the container using the original cap. Be careful NOT to contaminate the cap by touching the inside of it with your finger. Place a date on the outside of the container so that you know when you filled it. Store in a cool, dark place. Replace the water every 6 months. Commercial bottled water has a date on it and is usually good for a year or more. The smaller drinking bottles can be refilled and put in the freezer in your extra spaces. This will keep your freezer colder longer and as it melts you have good water to drink.'

#### **WATER CARRIERS**

If you have to go to get water from a water truck you will need a container with a wide mouth, 2" or more. This makes it easier for the water truck to fill your container quickly. Containers MUST be clean and sterile.

'To sanitize the container mix one (1) Tablespoon CLOROX with one gallon of water. Always wash and rinse items first, then let each item soak in the sanitizing solution for two (2) minutes. Drain and air dry. The best size containers for filling and transporting are five (5 ) and/or seven (7) gallon containers. A wheelbarrow, cart, or other rolling carrier will move the water to your camp or home fairly easily.

#### OPEN WATER

Even in developed countries, such as The United States and Canada, over 90% of all open water is not safe for drinking without treatment of some kind. In a disaster or emergency, without stored water, the water from puddles or streams, lakes, etc., will have to be used.

#### **STEPS TO HAVE POTABLE (DRINKABLE) WATER FROM AN OPEN WATER SOURCE**

- 1.) Take a small bucket and a five (5) to seven (7) gallon large-mouth water jug to the water source using your wheeled carrier. Place a coffee filter, or piece of clean fabric, over the mouth of the water jug and secure it with a string or rubber band.
- 2.) Dip the bucket into the water just under the surface. Do not go to the bottom of the water! The heavy metals will be on the bottom. You do not want these in your water. Fill the 5-7 gallon container and take it back to camp or home.
- 3.) Remove dirty coffee filter. Use your PURIFIER to process water into safe drinking water.
- 4.) If the water you collect is suspected of being highly bacteria laden, water mixed with sewage, add one-eighth (1/8) teaspoon or 16 drops of CLOROX per gallon of water and let it stand for 30 minutes.

Then

proceed with the PURIFIER.

- 5.) Water processed through the PURIFIER can be stored in a sanitized container until it is needed. Store some tang or Kool-Aid to flavor the water if you desire.

If you do not have a dropper, let the CLOROX drip off your finger. Because the strength of the CLOROX diminishes with time, rotate your new bottle into your disaster supply and take the bottle that was in your supply and use it in the house. Always keep your CLOROX fresh.

OPEN WATER SOURCES that are not PURIFIED may contain four (4) things that pose a health risk to you:

- 1.) Protozoan Parasites such as Giardia and Cryptosporidium. Crypto is becoming resistant to CLOROX.
- 2.) Bacteria includes: Campylobacter, E. Coli, V.Cholera and Salmonella.

Note: Protozoa and bacteria are trapped by filters, while Pathogens and viruses must be removed or killed by PURIFIERS, chemicals, or boiling the water for five (5) to ten (10) minutes.

'Do not assume a filter will be safe for all water. Most filters are designed to be used on microbiologically contaminated water such as: carbon filter, reverse-osmosis, deionization filter, pitcher filter, and faucet mount filter. A ceramic filter will work only if it is rated for bacteriological protection.'

A PURIFIER AND FRESH CLOROX are the best choices to put into your emergency supplies.

- 3.) Pathogens and Viruses include: Rotavirus, Hepatitis, Norwalk and Polio.

All of these respond well to CLOROX treatment before going through a filter or a purifier. Most pathogens are introduced by animals, but human beings are also carriers. Feces wash into drainages carrying with them the disease-causing pathogens. Waterborne viruses are unique in that they are species specific. Human fecal matter must be present for there to be a viral threat to humans. Infection by waterborne pathogens often leaves you looking like a dog's dinner and feeling like you have been hit by a truck. Fever, cramps, fatigue, diarrhea, nausea, dehydration and general malaise can sneak up on you slowly or slam you all at once.

#### 4.) Poisonous Chemicals

Water from toxic sources cannot be helped with your purifier. DO NOT DRINK any water from a toxic chemical source such as; water from waterbeds, swimming pools, hot tubs, toilet bowls, and tanks. This graywater is only good for washing, NOT drinking. Swimming Pool water is risky if you do not know what is in it.

Again, a PURIFIER can be used to take out chlorine and E. Coli but not all poisonous chemicals!

5.) Salt water needs distillation, and can kill you. If the salt is not removed DON'T DRINK IT!

6.) DO NOT DRINK FLOOD WATER..

#### PURIFIERS

A First Need Water Purifier and Replacement Canister can be located on the web at [www.campmore.com](http://www.campmore.com) , , [www.rei.com](http://www.rei.com) , and [www.waltonfeed.com](http://www.waltonfeed.com) , etc..Look for the best prices. The SAWYER, weblocator is [www.sawyer.com](http://www.sawyer.com) , make sure you scroll down until you find the PURIFIERS. NOT THE FILTERS.

#### CLOROX

Use unscented and not 'splashless' CLOROX types, as these have additives that are not safe for you to drink. CLOROX is now coming in three (3) quart bottles, instead of an imperial gallon size. This will purify 2,400 gallons of water. Rotate the CLOROX bottle from your storage to the house and put the fresh bottle of CLOROX in your storage. Ultra CLOROX is used in the same amounts. CLOROX loses one half its strength in six months.

**WARNING: DO NOT BUY SCENTED OR SPLASHLESS CLOROX TYPES FOR YOUR STORAGE.**

WATER TO CLOROX RATIO: For Drinking Water

1 quart water to 2 drops CLOROX  
1 gallon water to 8 drops CLOROX  
5 gallon water to 1 1/2 teaspoons CLOROX  
15 gallon water to 1 Tablespoon + 1 1/2 teaspoons CLOROX  
55 gallons water to 1/2 Cup CLOROX

#### As a Sanitizing Solution for

Utensils: 1 gallon water to 2 1/2 teaspoons CLOROX,

Toilet: 1 gallon water to 1 1/2 Cups CLOROX\*

\*Put mixture in a spray bottle for the toilet area cleaning each time it is used.

#### Preparation Measurement Tools

(Keep these with your water supplies in a zip-lock bag)

1 Tablespoon, 1 teaspoon, 1/2 teaspoon, 1/4 teaspoon & 1/2 Cup

Always good to have 2, 3, or more bottles on hand, as CLOROX is used for drinking water, sanitation around toilets and washing of hands.

### **LOCATE THE NEAREST FRESH WATER SOURCE**

How do you plan to get the water from the source to where you need to use it? Contaminated or untreated water can cause diseases such as dysentery, cholera, typhoid and hepatitis.

**STORE SOME ANTI-DIARRHEA MEDICATIONS,** ( in both adult and children dosages.)

### **WATER SOURCES IN THE HOME FIRST (1) TURN OFF WATER SUPPLY AT YOUR STREET! (TOOLS?)**

There are two handles or levers in the meter box. The one closest to your house needs to be turned off to prevent a potentially compromised systems, 'bad water,' from mixing with the safe water held in your house water system.

- 1.) The hot water tank. Make sure it is strapped to the studs in the wall to keep it from falling over. The tank has 30+ gallons of drinking water. Turn off your electricity or gas to the water tank so it can cool off. Start the water flowing by turning off the water intake valve and turning on a hot water faucet. Open the faucet at the bottom of the tank and drain off the first amount to get rid of the sand. Do not turn on the gas or electricity if the tank is empty.
- 2.) The refrigerator and freezer; bottled water in the freezer empty spaces will thaw for drinking water.
- 3.) Liquids from canned goods such as fruit and vegetable juices.
- 4.) The water pipes in your house.

AFTER you have shut off the water from the street, open a kitchen tap just a little bit to add air to the line. Then in the back or side yard near the rear of the house, at an outdoor faucet, you will be able to open it and the water will run out. Be sure to have a sterile container for the water.

- 5.) You will have water IF AND ONLY IF you have stored for this emergency in containers or barrels.

### **UNSAFE SOURCES OF WATER**

Radiators; hot water from boilers (home heating systems; water from the toilet bowl or flush tank; swimming pools and spas. Make sure you have stored the necessary materials in your disaster supplies for the chosen water treatment method you want to use.

### **ARE YOUR SHOTS AND IMMUNIZATIONS UP TO DATE? DON'T WAIT, GET THEM TODAY!**

It takes time to get all the shots and series of shots, and additional time for your immune system to build your bodies protection antibodies from the vaccine. Be sure to include the Whooping Cough, Polio and Hepatitis, Boosters. If you are 60+ get your Shingles Vaccine. Update your Tetanus shots.

## **SANITATION AND TOILET PREPARATIONS**

DO NOT DIG A LATRINE In Florence,  
we are on an aquifer and we do not want to contaminate  
the water source with human waste.

## **HUMAN WASTE CAUSES DISEASES IN HUMANS**

We have over 10,000 people in the area and we could all get sick.

Usually Urine is sterile as it exits the body, the problem in waste disposal is the solid waste and volume. Also, human feces can cause contamination of streams and open waters. This occurs when water runs off the land into streams and lakes because of rain or other sources.

Each family must have their own 'toilet'. No one outside of your immediate family should share a 'toilet'. Everyone is to wash their hands BEFORE and AFTER GOING TO THE TOILET for 10 seconds, sing Happy Birthday while scrubbing your hands, and use a hand-sanitizer with an antibacterial, antimicrobial, with a moisturizing compound.

Containers and Equipment for Toilets:

1.) A five (5) or six (6) gallon bucket with a strong plastic bag inside will work. Do not use plastic grocery bags as they sometimes have holes and are not strong enough. Once the toilet has been used, Spray with a CLOROX Sanitizing strength solution then close the lid. After the family has gone to the bathroom in the morning, carefully pull out the bag and tie the top of the bag tight. Put the used, closed bags into a 32+ gallon garbage can lined with a heavy contractor bag. Spray the top of each entree into the can with the CLOROX Spray and put on the lid. The garbage container should be 25+ feet away from your campsite or house.

2.) Other containers can be used, but all should be lined with strong, non-leak type plastic bags. Examples are: Plastic Kitty Litter containers that have lids. Ask your cat loving friends for their clean used containers. Plastic Coffee containers, camp toilets, Bedside Commodes (look for them at St. Vincent or other used item stores), A five (5) or six (6) gallon bucket and a toilet seat from the house, or a bucket with a piece of wood across part of it to sit on, a plastic garden chair with a hole cut out of it and a bucket underneath, a small child's chair with a hole cut out and a bucket underneath for little children.

A Tote-able Toilet can be purchased from: Emergency Essentials, 1-800-999-1863 or [www.BePrepared.com](http://www.BePrepared.com)

3.) To make a SANITIZING SOLUTION FOR TOILET use, use 1 1/2 Cups of CLOROX to 1 gallon of water. Pour into a spray bottle and spray the toilet and around the toilet after each use. This solutions should also be used to spray inside the 32+ gallon garbage can with a tight fitting lid that holds the human waste.

### **DO NOT GET THIS SOLUTION MIXED UP WITH YOUR DRINKING WATER.**

4.) Store several bottles of CLOROX

5.) You will need PRIVACY around your toilet. Have some clothes-line or rope, tarps, and tent stakes to create a PRIVACY curtain around the toilet. A tent for the toilet would work well. It might be raining. With a tent a light could be hung up for night time trips to the toilet. Camping stores or stores that sell camping equipment have specially designed privacy tents for this purpose.

6.) Toilet Paper, count how much your family uses in 1 week. Multiply by 4 for month supply. Add some extra for diarrhea, runny noses, etc. Store your Toilet supplies in the 32+ gallon container.

If you can stay in your home after the earthquake the sewer lines could be broken. Do not flush the toilet. Turn off the water valve to the toilet. Remove the water from the toilet and pack it tightly with towels. Stuff all you drains to prevent sewage from backing up into your home. Insurance does not cover this. You would have to pay

for it in addition to your Homeowners Policy. Line the toilet with a heavy duty plastic bag. Before disposing the bag, spray with CLOROX, securely tie the bag, and place it in the 32+ gallon can with a tight fitting lid outside your home. If there is no large garbage can available, dig a hole and bury the plastic bag in it. Leave a marker where it is for professional removal in the future. If your home has an anti-backflow device in the main exit sewer line from your home to the street sewer access, you will not have to worry about packing all of your drains with tight fitting towels.

**SOLID WASTE IS THE USUAL SOURCE OF TYPHOID, CHOLERA AND A HOST OF WATER BORNE DISEASES. SPRAYING CLOROX IN THE CONTAINER HELPS WITH GERMS AND ODOR.**

**HYGIENE**

Tips for staying clean in an emergency.

Continue your regular hygiene routine. such as; brushing your teeth, washing your face and hands with a couple of wet wipes or a wet cloth, shaving and so on. Wet wipes can be made by cutting a roll of paper towels in half, putting the half roll of paper towels in a plastic zip baggy or Folgers Coffee Can with lid, and adding a some water that has just a hint of soap in it. Use commercially bottled water or PURIFIED water to drink, eat and cook with. If you do not have bottled water or a PURIFIER, treat your water with CLOROX. However, this will not kill all viruses and Cryptosporidium is becoming more resistant to CLOROX. Sterilize your cooking equipment and utensils by rinsing them in PURIFIED water that has 2 1/2 teaspoons of CLOROX per gallon.

Sinks and small toilets can be made from Folgers Plastic Coffee containers, small buckets , or a small plastic trailer sink. In a coffee can sink, store the bar of soap in a nylon knee high so it can be hung up to dry or use liquid soap, a wash cloth, A hand towel or paper towels could be used for drying and then as a fire starter after they dry out. Buy hand sanitizers with moisturizer, a very large container or many small ones enough to last for 30 days. Hand Sanitizer lasts indefinitely. Non-latex or latex gloves, marking pen to label the cans with the name of the user if you have one Folgers plastic container for each family member for washing or toilet use. Talk to your coffee drinking friends to see if they have extra containers.

Put the following in a large zip baggie for laundry,clothesline, clothespins, liquid laundry soap diluted with water. Use a very small amount of soap. Otherwise the soap will use up too much water to rinse completely. There are many lists of what to put in your personal Hygiene Kit. Choose what you use and put it in a large zip lock plastic bag , or two. Have your children fill their own bags and put their names on them. Remember to pack enough for 30 days.

**HYGIENE KITS**

Toothbrush and toothpaste, wash cloth and hand towel, bar soap or liquid soap, hand sanitizer with moisturizer, shampoo and conditioner, comb and brush, deodorant, denture equipment, Chapstick. body lotion and/or cream, razors and shave cream. Perfumed products will invite insects. Try for products with as little aroma as possible. A hygiene kit will give each family member great comfort after a disaster. We are not used to living without bathing, shaving, creams, soaps, lotions, and chap stick. The Hygiene kits are simple to put together. They should be kept with your Medical Grab 'N' Go Bag. The Hygiene Kit can be used on trips. Just be sure to refill them when you return home.

A potential list of 'suggested hygiene needs.' Choose what fits your needs or add to this list:

- 1.) Women and girls should have panty liners since changing clothes will be a problem.
- 2.) A Female Urinal Director, for each female in the family;  
( FUD from REI, \$23.00, a woman or girl does not need to undress to use this).



- 3.) Female Sanitary Products as needed.
- 4.) CLOROX, 3 gallons.
- 5.) Toilet Paper and Paper Towels.
- 6.) Cornstarch
- 7.) Vaseline (Petroleum Jelly), Chapstick, Bag Balm, and a Sunblock (Zinc-Oxide).  
Cracked skin invites infection.
- 8.) Disposable diapers for infants and sanitary container.
- 9.) Sanitary Briefs for Elderly who are incontinent.
- 10.) Large and small plastic bags and ties
- 11.) Rubber sheets or water proof throw away 'Chucks' from Bi-Mart
- 12.) A week or more supply of newspapers for each member of the family for sanitary uses or insulating bedding from floors and lining clothes against the cold.
- 13.) Latex or Non-Latex Gloves
- 14.) Insect Repellent
- 15.) Baby wipes/bath size wipes are great to freshen private parts of your body.
- 16.) Fingernail clippers, files and small scissors
- 17.) A small First Aid Kit

### **MEDICAL GRAB 'N' GO BAGS**

The U.S. Government recommends you carry at least \$50.00 for emergencies.

'I do not know if that is necessary here, but if you do make sure it is in \$1.00 bills and stored in a zip lock baggie. It should be in your 72 hr. kit or you Medical Bag. I prefer the Medical Bag.'

Purchase an expandable insulated beverage can bag with a solid plastic liner in the inside and a front zip pocket. They come in 6, 12, 18, 24 and 36 can sizes. The largest variety and lowest prices are at Walmart in the sporting goods section. Some sizes are available at Fred Meyer's and Bi-Mart. Just remember, the larger the bag the heavier it will be. You will need a larger bag if you plan to combine your Medical Bag and Hygiene Kit. Store a plastic trash bag large enough to cover your Medical Bag and Hygiene Kit in case it is raining. All of your records that are in a safe deposit box should also be in water tight zip-lock bags. Deposit boxes are not watertight. If possible put all of your medical history, financial records, insurance policy numbers and any other important information on a CD, flash or zip drive. Make a couple of them. Send or give one to a trusted relative out of the area and keep the other one with an extra set of keys in your medical bag.

### **Some suggestions for the Medical Bag are:**

Small flashlight and extra batteries, Extra, or an older pair of glasses and repair kit, Hearing Aid batteries and supplies, Paper copies of your prescriptions from the pharmacy in the front pocket of the bag. It is necessary to list WHY you take a certain medication. When you run out of a particular medication, keep the empty container in the bag. The Dr. will be able to see by the bottle what you take and if he knows WHY you take it, he will be able to substitute another medication for you. The names, addresses and phone numbers of who to contact, Medical consent forms for dependents (spouses) and copies of personal identification or passport.

### **DO NOT STORE YOUR MEDS ON THE KITCHEN SINK, BEDROOM NIGHT STAND, BATHROOM SINK OR ANY WHERE BUT IN YOUR MEDICAL GRAB 'N' GO BAG!**

If you want to get a months supply of medication, the Dr. will give you a prescription when he knows you are trying to plan for a disaster. The insurance will not pay for the extra medication. If you get an extra month's supply that you have to pay for be sure to rotate it. Always put the new prescription in your stash and take from your stash the previous prescription to use. Do not use up your extra supply. The medications are expensive.

Choose only the most important for your health when you buy them without insurance help. ADD to your Medication Bag some non prescription medications such as: pain relievers, anti-diarrhea medication, antacid, laxative, stool softeners, vitamins, etc..

This class and materials are made possible by WELOG (West Lane Emergency Group), Siuslaw Valley Fire and Rescue and the many volunteers that give of their time so you and your family can be better prepared for a Disaster

Your Class Notes & Questions Here:

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More on CLOROX (R) REGULAR BLEACH at [www.clorox.com](http://www.clorox.com) .

Water, Sodium Hypochlorite, Sodium Chloride, Sodium Carbonate, Sodium Chlorate, Sodium Hydroxide, Sodium Polyacrylate.

Material Safety Data Sheet :

[http://www.thecloroxcompany.com/downloads/msds/bleach/cloroxregularbleach0809\\_.pdf](http://www.thecloroxcompany.com/downloads/msds/bleach/cloroxregularbleach0809_.pdf)