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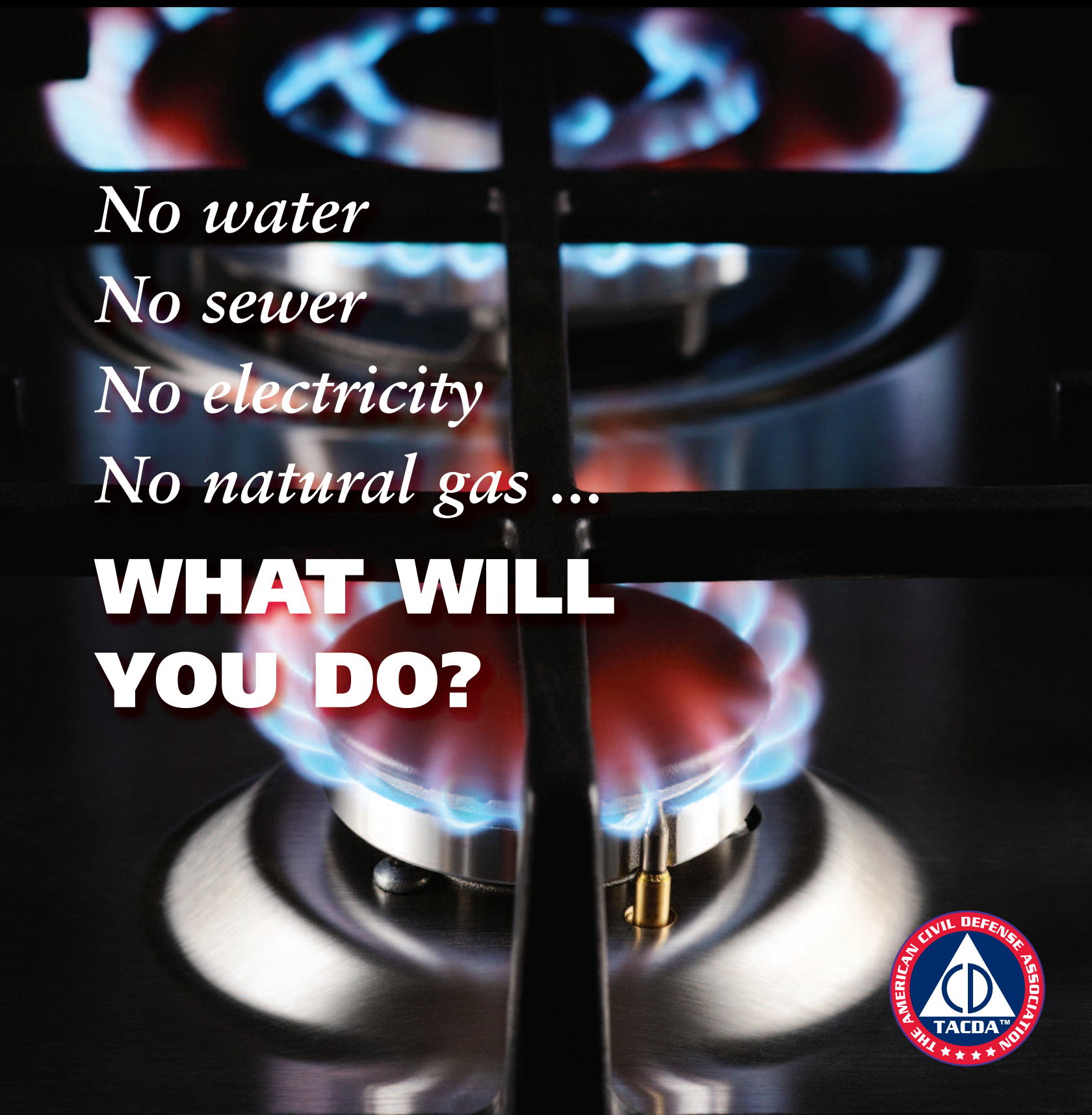

AT THIS TIME OF YEAR,

the staff and board members of

The American Civil Defense Association

hope that you and your families enjoy a

happy and peaceful holiday season.

Merry Christmas

to you & yours!

IN THIS ISSUE

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PRESIDENT'S MESSAGE

We live in a dangerous and frightening world. Syria has used chemical weapons (Saran gas – the same agent used in World War I) against its own people to maintain the Assad Dictatorship. Of greater concern to U.S. interests in the Middle East is Iran. It is apparent that Iran seeks to develop nuclear weapons. It requires about 250 kilograms (or 550 lbs) of 20% enriched uranium to produce a simple "gun-barrel" nuclear weapon similar to that used in Hiroshima in 1945. The IAEA reported in August 2013 that Iran has 186 kilograms. Only another 64 kilograms will provide sufficient material for a single 20-kiloton nuclear weapon. The Iranians are adding an additional 3000 high-speed centrifuges with sufficient capacity to produce this additional enriched uranium in months.

Hassan Rouhani, the new Iranian handpicked by the Ayatollahs, appears to offer moderation in Iranian diplomacy with the U.S. Significantly, this same Rouhani was a key agent in the ill-fated arms-for-hostage meeting in Tehran 27 years ago and who said in a 2004 speech to the Iranian Revolution Council, "While we were talking with the Europeans in Tehran, we were installing equipment in parts of the (uranium) facilities in Isfahan."

The world is in chaos around us. I encourage you to keep a watchful eye on current events while hastening your preparations.

Gary M. Sandquist
TACDA President

FROM THE EDITOR

I am excited to present to you the 2013 issue of the *Journal of Civil Defense*. It is full of valuable information and is a great resource. I would like to extend my sincere appreciation to all of our contributing authors for an outstanding collection of articles. We encourage our members to submit articles to be considered for publication. Your experience, education, and expertise could greatly benefit all of us.

I appreciate the opportunity to rub shoulders with this group of amazing people. Current events give me great cause for concern and can be quite depressing. However, I am comforted by the many incredible people who are working hard to prepare and stand tall in the face of adversity. Together we are a great force for good. Together we can survive the challenges in our future.

Thank you for your continuing support of The American Civil Defense Association. The mission of this organization is truly needed in our world today. Consider giving a membership to someone you care about this Christmas. The Journal is a great tool to educate our families, friends, and neighbors on the skills and resources needed for survival. The more people who prepare, the better off we all will be.

Sincerely,

Kylene Jones
Editor, *Journal of Civil Defense*

Dr. Gerald L. Looney

Memorial

We are saddened to report that Dr. Gerald L. Looney, a fellow board member, passed away on April 1, 2013. Dr. Looney was a great supporter of civil defense and served tirelessly for many years on our TACDA board of directors.

Dr. Looney was born on November 22, 1937. He was a native of Bluefield, West Virginia and a graduate of the Johns Hopkins School of Medicine and the Harvard School of Public Health. He had a prestigious medical career as a physician, medical professor, and medical consultant in Arizona and California with extensive experience in Occupational Medicine. He was an Associate Clinical Professor of Medicine/Occupational Health at the University of California, Irvine (UCI) College of Medicine and retired as the medical director of the Boeing Company Military Transport Division (C-17 Program in Long Beach, CA).

Previously, he held medical faculty appointments at Harvard, Boston University, University of Arizona, and the University of Southern California. The Cuban Missile Crisis occurred during Dr. Looney's senior year of medical school, so even before graduation he was convinced of the need for civil defense--and this conviction was reconfirmed many times throughout his career.

His entire professional career has supported civilian protection and public preparedness. He helped found the new medical specialty of Emergency Medicine and served on the faculty of the nation's first academic Department of Emergency Medicine. With five other physician members of TACDA, he founded the medical organization, Doctors for Disaster Preparedness (DDP). He has been a member of TACDA for nearly three decades and a contributor to the *Journal of Civil Defense* and numerous medical journals.

Dr. Looney will be greatly missed, and we express our deepest sympathy to his loving wife, Joan, and family.

Q&A ON SHELTERING

Paul & Sharon

Q **Can you please explain how you solve the sewage problem inside the shelters?**

Thanks,
Bob

A Hi Bob,
There are several options that we have seen used for the disposal of sewage in underground shelters:

- City sewage lines (don't do that)
- Chemical toilets
- Septic tanks

City Sewage
I do know of one man that connected his shelter to a city sewer line, and was rewarded with about four feet of raw sewage in his shelter. His shelter is no longer connected to the city sewer. We read with interest, the instructions shown on a well-known shelter site that read "after a major nuclear disaster, no one is using the sewer lines and the sewage would run free". It would be convenient if all city sewage systems were based on gravity drainage, but it just isn't so. Normally, the lay of the land will not completely cooperate and the sewer system will include a grinder pump or a lift station. Operations and maintenance activities are 'round the clock'. Sewage systems need electricity, and in major disasters, the electrical system will most likely fail.

Chemical Toilets
The chemical toilet is the most reliable and simple method as the shelter is buried far, far below the depth of most sewer lines. The chemical toilet is often placed in the main entrance near the stairs...shelter exhaust air is routed right past this location on its way up the stairs and out of the exhaust explosion protection valve located right under the hatch. This provides the most efficient rinse of the shelter atmosphere and does a good job of controlling toileting odors. Another option is walling off the last three feet of the shelter deck next to the entrance and using the chemical toilet there.

You may wonder why we recommend toilet placement at the entrance. Good shelter ventilation should always bring fresh air from the exit end, and wash the air throughout the shelter towards the entrance. Otherwise, as people come in and out of the main entrance, bad air (air contaminated with fallout or war gasses) will be "pulled" into the entrance, instead of "pushed" out of the entrance.

Waste is easily carried in the sealed holding tank topside where it can be disposed of and returned to service. The toilets should provide service for at least three or four days before requiring a trip outside, which by then should be safe enough to go outside for a few minutes. In the two days following a nuclear attack, 99% of the gamma radiation should have decayed. So, instead of perhaps 1,000 rads per hour (possible radiation dose rate just after a nuclear blast in your area) you will likely see about 10 rads per hour, or less. If one remains outside the shelter for five minutes, they would receive less than a rad as a penalty.

Continues on page 14

Assisting Children

in Emotionally Overcoming Stress, Trauma, and Fear

By Josh Lemon

"Bad things happen. As much as we might wish otherwise, close friends and relatives die, painful things happen to our bodies, there are natural disasters and war, and sometimes people do senselessly horrible things to other people."

– George Bonanno and Anthony Mancini

The recent devastation of Hurricane Sandy crossed over 24 different states in the US alone. Damages to homes, businesses, and cities totaled over $65 billion. While natural disasters are fairly common across the country, this single hurricane left hundreds of thousands of families homeless and, in many cases, separated. Stories are still surfacing depicting the feelings of hopelessness and dread that parents felt as they lost contact with

their children, the silence lasting for weeks in many instances. As cleanup commenced, parents across the country raised questions regarding the appropriate way to discuss this life altering disaster with their children and those they came in contact with.

What should parents do in the little time before a natural disaster strikes to prepare their children emotionally?

The popular children's television show, Sesame Street, was one of the first to respond. Elmo was sent onto "The Brian Lehrer Show" to provide a sense of comfort and hope. The show also released a series directed at helping children and parents through the emotional aftermath of natural disasters. The National Child Traumatic Stress Network provided simple activities and learning activities for parents to do with children as an educational tool to increase understanding and familiarity. FEMA and The Red Cross have also included sections on addressing the emotional impacts of natural disasters and reducing fear and trauma in these times.

While these resources have proven beneficial for many, the question at the forefront of each and every parents' mind still concerns their own children and loved ones. What should parents do in the little time before a natural disaster strikes to prepare their children emotionally? And how do they properly work through the aftereffects of these disasters which then surface in the nightmares of their children? The following tips will help through this process with your own children before and after stressful and traumatic events.

Explain the Facts and Listen
Using language your child is able to comprehend, explain what is going on. This does not mean to recount every gruesome and horrific detail, but understanding what is happening, why it is happening, and where the next step is provides a base for children to grasp on to. Do not lie to your children. Once this has been established, be prepared for questions, fears, concerns, and for the consistent and constant repetition of these. To overcome traumatic events emotionally, your child must first come to understand and accept what it is. With age comes a quicker ability to comprehend and internalize.

Create a Positive and Open Environment
The way you respond to stress and trauma will show your children how they should respond. Maintain a sense of calm, no matter the circumstances. There will likely come a time when you are not able to portray this. When that time comes, fake it. Make sure they know you love them and that these circumstances are not their fault. Show them your love by being present and approachable. Focus on the blessings in your life. Recognize their fears and do all in your power to calm and comfort them. Children may show signs of trauma for years after an event and what you do or don't do directly influences the time it takes for them to get through it.

Be Consistent and Adaptable
Children thrive in a scheduled environment. Younger children in particular should have set times throughout the day where specific events should happen; meal time, nap time, art time, play time, quiet time and so on. To the best of your ability, create a schedule that works for you and stick to it. The consistency provides a sense of safety and familiarity. It is likely that unforeseen events will arise that will interfere with this set schedule. Adapt to it, but be honest and open with your children along the way about what is happening to the schedule and why it needs to happen. This will decrease the time it takes for them to adjust to bumps in the road.

Recognize Changes in Behavior
Traumatic and stressful events tend to force children into a state of regression. Their behaviors may become more difficult and less characteristic of where they previously were. These responses are normal and will improve with time. Set firm limits and basic family rules. Spend time to understand and recognize what triggers your children and initiates the inappropriate behaviors. These are excellent moments for reassurance, learning, and improvement. Just as important, recognize what triggers you have as well so you are able to maintain your composure and consistency.

Spend Quality Time Together
You, as the parent, are the greatest sign of peace to your children. Spend time with them. Show them you can be happy through difficult times. Smile. Play age appropriate games together and invite conversation. Find activities that will steer their focus away from the stressful, frightening environment that may be ensuing around them. They will feel a sense of security and time will pass faster. This will also help create positive memories to take the place of the negative ones which will help in future times of stress and fear.

It is important to remember that your children will all respond differently to the events at hand. What works for one will likely not work in the exact same manner for the next. It will take diligence on your part to ensure the proper emotional responses from your children by walking them through the darkness step by step. While you cannot remove your children from stressful and traumatic situations, you can provide them with an appropriate response in difficult times to lessen the impact and learn from the trials. Overcoming these hardships may be the end result, but the process of doing so is what children will remember and return to in times of need. ●

"The most vibrant of flowers often come from the filthiest of soils."

– Zack W. Van

"If we had no winter, the spring would not be so pleasant. If it did not sometimes taste of adversity, prosperity would not be so welcome."

– Charlotte Bronte

The Wonderful World of WHEAT

By Jodi and Julie
Bloggers at www.FoodStorageMadeEasy.net

When most people think about food storage, they think about buckets and buckets of wheat hiding in the basement, never to be eaten. Why then is wheat such a big staple in the world of food storage? It's simple, if you store wheat and just a few other basic cooking ingredients you can make a *wide* variety of foods such as breads, tortillas, wheat grass, pasta, cakes, puddings, cookies, waffles, biscuits, muffins, crackers, and more! Not only that, but wheat is inexpensive and *very* healthy, it's definitely the "staff of life."

There are several reasons why people tend to "stash and dash" when it comes to wheat. First, they don't have any idea how to use it in their normal cooking. Second, they don't have a wheat grinder or have access to one. Third, they think whole wheat food is gross. In this article, we are going to help overcome each of those concerns by outlining everything you need to know about buying and storing wheat, choosing the correct wheat grinder for you, and how to make a few delicious items using whole wheat that we know your family will *love*.

Types of Wheat

Hard or soft: Hard wheat varieties have higher gluten (protein) and are better for making breads. Soft varieties have lower protein and nutrients, but are better for pastries, pastas, and breakfast cereals.

Red or white: Red wheat tends to have a stronger wheat flavor than white wheat. Most red wheat varieties are hard, and most white wheat varieties are soft, but you can find soft red and hard white if you really prefer one over the other. Hard white wheat is our favorite all-purpose wheat variety to store.

Spring or winter: Winter red wheat tends to have a slightly higher protein content and is a bit harder than spring red wheat. Winter red is better for baking bread than spring. There is not a significant difference in winter or spring varieties of white wheat.

Remember, don't confuse fresh ground whole grain white flour with store-bought white flour. Whole white wheat is slightly lighter in color than red wheat, but has almost the same nutritional value. Store-bought white flour has had all the nutrients stripped from it in the refining process, and therefore adds little nutritional value to products you use it in.

Benefits of Wheat

- Wheat provides you with a whole grain.
- Wheat can be stored for over 30 years, if kept in a cool, dry place.
- Whole wheat retains all of the vitamins, minerals, and fiber.
- There are no preservatives or additives in wheat you grind yourself.
- You can sprout wheat and use it in smoothies, salads, soups, etc.
- You can use wheat to extend your meat.

Storage

- If unopened, the optimum shelf life of wheat is 12 years or more. It is edible for a lot longer than that, but won't necessarily keep the same flavor or nutrient levels.
- If opened, wheat will stay good for about three years.
- Once it is ground into flour, wheat can go rancid unless you store it in the freezer.
- Add oxygen absorbers, bay leaves, or dry ice to help keep critters out of your wheat.

Rotation

You should constantly be rotating the wheat in your food storage. One method is to have several buckets of wheat, well-sealed with oxygen absorbers. Open one bucket at a time and "work" out of that bucket. Bring up a Tupperware container full of wheat every few weeks so that it is in your kitchen where you will be able to access it easily and use it on a regular basis. When that "working bucket" is empty you will know you need to buy a new bucket and it moves to the end of your rotation.

Choosing a Wheat Grinder/Grain Mill

Manual Grain Mills

Pros:

- Basic models are inexpensive (good ones are similar in cost to electric mills).
- Can be used without a power source, so they are great for emergency situations.
- Many models are very small, thus requiring little storage space.
- Able to grind items such as oily seeds, nuts, herbs, and

coffee that would normally ruin an electric mill.

Cons:

- SLOW to grind (can take five-six minutes to grind one cup of flour).
- Except for the very high-end models, you cannot grind grain into a fine flour.
- Some models are inconvenient (messy and hard to fit a large bowl underneath).

KitchenAid Attachments

Pros:

- Less expensive than an electric grinder.
- Small to store.
- Convenient to use the grinder attachment, then mix bread dough in the same machine.

Cons:

- We have heard from multiple sources that these units will break your KitchenAid mixer.
- Must have a generator or battery pack to use without electricity.
- Grinds slower than electric grinders.

Electric Grain Mills

Pros:

- Grinds VERY quickly thus making it easy to use in your everyday cooking.
- Easy to select how coarse or fine to grind your grains.
- Large capacity for grinding a lot of grains/legumes at a time.

Cons:

- Fairly expensive, even for the lower-end models.
- Must have a generator or battery pack to use without electricity (unless you buy a high end model that comes with a manual crank).
- Large appliance to store in your kitchen.

Seven Ways to Use Wheat Without a Grinder

1. Thermos Wheat

Bring 1 c. of wheat kernels, 2 c. water, and 1 t. salt to a boil in a medium saucepan. Pour into a heated stainless steel or glass-lined thermos bottle. Secure cap. Place bottle on side. In the morning, pour off excess water, add butter and honey, and serve hot.

2. Wheat Berries

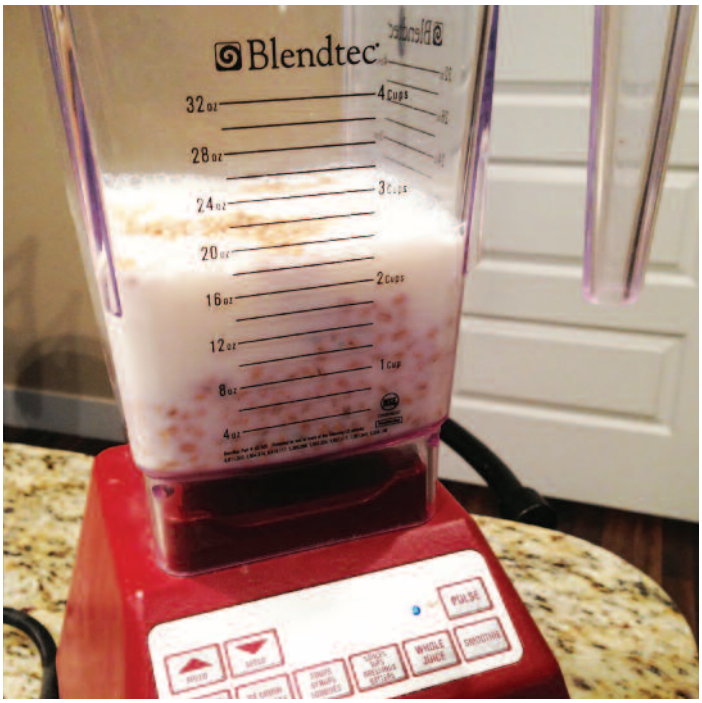
Add some of your plain dry wheat kernels to a pot of water. Bring it to a boil and cook for a few minutes. Let simmer for about 45 minutes. Drain the wheat berries and stick them in a Tupperware in the fridge. These are delicious to add to yogurt or to use to replace some meat in recipes. You can also use it in place of brown rice.

3. Popped Wheat

Take one cup of your cooked wheat berries (see above) and add to a frying pan or pot with two tablespoons of oil. Cover with a lid and cook over a hot stove shaking the pan while it cooks. After about four-five minutes the kernels will be nice and toasted. Put the popped wheat on a paper towel to get the extra oil off, and sprinkle with your choice of seasonings. These are delicious on salads as a topping, mixed with trail mix, or as toppings for a desserts or just as a healthy snack.

4. Wheat Grass

Most people have heard how healthy wheat grass is for you, but most people *don't* know that you can make your own wheat grass at home for free with just a little bit of your food



storage wheat. You can snip bits off and add them to some delicious fruit smoothies, or if you have a juicer you can use them in other healthy juice drinks.

5. Cracked Wheat

You can crack wheat in a blender or a coffee grinder. To do it in a blender you simply put in about 1/4-1/3 cup of wheat and pulse it until it looks like little cracked kernels. These kernels will cook much faster than regular wheat, and cook up in the same way that you cook rice on the stove. You can use cracked wheat to make hot cereal, add it into bread, or cook it up and use as a meat filler.

6. Wheat Sprouts

Making wheat sprouts is a different method than making wheat grass. You can sprout wheat just like any other vegetable seeds, legumes, or other grains. Most people like wheat sprouts to be very small, just barely sprouted. These are delicious to throw on salads or to add into your whole wheat bread for a little extra texture and flavor.

7. Blender Wheat Flour

If you are cooking a recipe for something like pancakes or waffles, you can *easily* use your whole wheat kernels, mix the whole recipe in your blender, and pour it straight from there onto a griddle or waffle-maker. Just make sure to add the liquid for your recipe into the blender, then add in your wheat kernels and blend for about five minutes. Then add the rest of the ingredients.

• RECIPES •

PUMPKIN CAKE WITH WHOLE WHEAT FLOUR

4 eggs
1 2/3 c. sugar
1 c. cooking oil
1 large can pumpkin
2 c. fresh ground whole wheat flour
2 tsp. baking powder
2 tsp. cinnamon
1 tsp. salt
1 tsp. soda

Frosting:
6 oz. cream cheese
3/4 c. butter
1 1/2 tsp. vanilla
3 c. powdered sugar

Directions: Preheat oven to 350°. Beat eggs, sugar, oil, and pumpkin. Stir in dry ingredients. Mix well. Bake for 30-35 minutes in a 9×13 ungreased pan. Mix together frosting ingredients and pour on top. EAT AND ENJOY!

CORNMEAL PANCAKES

1 1/4 cups fresh ground whole wheat flour
1/3 cup cornmeal
1 egg
1/3 cup granulated sugar
1 1/2 cups buttermilk
1 tsp. baking powder
1 tsp. baking soda
1/4 cup vegetable oil
1/2 tsp. salt

Directions: Preheat a skillet over medium heat. Spray skillet with nonstick spray. Combine all ingredients in a large bowl with a mixer set on medium speed. Mix until smooth, but don't over mix. Pour the batter by 1/4 – 1/3 cup portions into the hot pan and cook for 1 to 3 minutes per side or until brown. Repeat with remaining batter.

Energy Efficiency in Emergency Situations – COOKING

By Jay Whimpey, P.E.
TACDA Board Member

Energy efficiency is critical in emergency situations, where fuel supplies may be severely limited. It is very important to prepare in advance to use fuel resources as carefully as possible. A little preparation in advance can significantly improve your situation later on.

Cooking food is an essential function, and may be even more important during an emergency situation. Cooking can make food more palatable and easier to digest, and can eliminate disease-causing organisms. Thorough cooking of our food reduces

disease incidence, especially in instances in which the availability of medical help is limited. It also helps us maximize the nutritional value of whatever foods we may have. Can anyone subsist on raw beans?

Energy efficiency is aided by heating food as efficiently and quickly as possible, thereby reducing the amount of energy lost to the surroundings. The process of cooking consists simply of heating food to a specified temperature, and maintaining that temperature for a prescribed timeframe. Cooking time can be a function of the convective environment around the food, which dictates how fast heat can be transferred to the food, as well as by the size of food chunks, since heat must be conducted through each piece of food to ensure thorough cooking.

Under normal circumstances, when energy resources are not significantly limited, we can cook by simply having pots/pans heated by a gas or electric stovetop or an oven for a given amount of time at a given temperature setting. While relatively easy and convenient, this method does not maximize energy efficiency. As we hold the temperature of a pot on a stovetop, a significant amount of energy is released to the environment. We can sense this because the kitchen becomes much warmer while we are cooking. Most of us leave a pot of boiling water on the stove and think nothing of the amount of energy being released to the surrounding area in the form of steam rising from the pot. When food is boiled, it is held at the boiling point of water. Whether the boil is significant or consists of just a few bubbles forming, the speed of the cooking process remains essentially unchanged. The amount of energy wasted can vary significantly with different cooking methods and styles.

For example, by using a few simple techniques we can significantly reduce the amount of energy required to cook a pot of potatoes. First, a lower temperature setting can be used, especially once the water has started to boil because adding more energy only creates more steam, but does not cook the potatoes any faster. The pot can also be covered

with a lid to help reduce the amount of escaping steam, thereby reducing the amount of energy lost to the environment. The potatoes themselves can be cut into smaller pieces to reduce the amount of time required to cook them thoroughly.

A pressure cooker can also be used to raise the temperature of the boiling water, and therefore cook the food faster. Molecular activity increases by a factor of two for each 20°F increase in temperature. Thus, if it raises the pressure by about 15 pounds per square inch, a pressure cooker can raise the temperature of boiling water by over 40°F and reduce cooking time by a factor of four. Many newer brands of pressure cookers have tight-fitting lids that do not let steam escape, and therefore are very efficient at reducing energy loss. An insulated container can be constructed to contain a heated pot that has reached temperature, and can further reduce energy requirements. A pot placed in an insulated container will continue to cook, since the temperature remains high for a long time. This method also eliminates scorching and the need to watch the pot.

Consider the example of cooking a pot of potatoes. One individual may bring the potatoes to a strong boil with high heat and a significant column of steam rising above the potatoes. The potatoes have not been cut into smaller pieces, and therefore the pot of potatoes might have to boil for a full 30 minutes. The heating element on the stovetop probably uses about 1200 W of electricity while on high for the entire 30 minutes, which results in a total electricity expenditure of 600 watt-hours. Most of the energy has actually been used to create the steam that does little more than make the kitchen warmer and more humid. This can be a good thing during cold weather, but can make it uncomfortable when it gets too hot inside.

On the other hand, that same pot of potatoes might have been cooked on the stovetop in a covered pan at a setting half that of the first pot, which perhaps may have taken ten minutes longer to come to a boil. There was much less energy used to create steam, but the potato was still cooked in 40 minutes, with an average use of 600 W of electricity. The total amount of electricity would be 600 watts times two-thirds of an hour, or 400 watt-hours of electricity.

In the third case, the individual may have sliced the potatoes into smaller pieces, requiring less cooking time. If you combine that with the lower setting on the stovetop and the use of a lid, you may be able to reduce that amount of energy needed to roughly 30 minutes at 600 watts, and therefore you would only use a total of 300 watt-hours of electricity.

In a fourth situation, if a pressure cooker were used, the cooking temperature could be increased by roughly 40°F. In that particular case, cooking time could be reduced to one quarter of the original time, thereby allowing the pot of potatoes to be cooked in only 10 minutes. Multiplying 10 minutes by 600 watts, we see that 100 watt-hours of electricity are used to cook the same pot of potatoes. We could half the amount of energy required again by placing the covered pot in an insulated container, once it has reached full temperature. In this manner, it would perhaps take only five minutes to cook the same pot of potatoes. The amount of electricity needed would be reduced to 50 watt-hours of electricity.

We have used electrical heating for this example, but the principles would apply to any heat source or fuel used. In most cases electricity would not be used for cooking during a power outage.

I would like to mention a few examples where cooking with electricity supplied by a generator may be quite efficient. I have tested a small convection oven that has a fan in a heated base with a plastic dome top. The fan in the bottom of the unit greatly increases convective heat transfer to the food, and thus significantly reduces cooking time. This is the same principle as a wind chill factor, but in this case we are heating food, rather than cooling a person. I was intrigued when I saw these units advertised, since they indicated that they could cook a five-pound roast from a frozen state instead of the expected four to five hours with a conventional oven. I acquired one of these small convection ovens and tried it on a frozen roast. It worked quite well. For indoor baking needs, one of these ovens would be preferable to a conventional oven, especially since it uses a maximum of 1200 watts and can be powered by a relatively small, efficient generator. The unit only used an average of 600 watts, according to the Kill-A-Watt meter used to measure power usage for the test.

Microwave ovens are also very efficient at cooking with electricity. If you consider the operation of the microwave, it has a very penetrating form of energy, and therefore does not need to rely on conducting heat through the food. It also loses a relatively small amount of heat to the environment. A microwave does have its limitations, since it can only heat food with relatively high moisture content, and must be used with non-metallic cookware. It is, however, great for heating soups and stews. Combining a microwave oven with an insulated container for your cookware can result in one of the most efficient ways to cook indoors.

Slow cookers can also be relatively efficient, but represent a much less attractive option when one considers that they exert a very small load on a generator for an extended period of time. They can, however, be quite useful for initial heating followed by the use of an insulated container.

Insulated containers can be as simple as using a thick down blanket, pillows, or a rigid container with roughly three inches of insulation. Beyond three inches, the effectiveness of the container does not increase substantially with increased amounts of insulation.

I hope I have provided some ideas for using less energy for cooking. I would encourage the reader to make a modest investment in some of the appliances described above and practice cooking with minimal energy resources. I recommend the use of a Kill-A-Watt meter for measuring the efficiency of your process. It can make food preparation a little more interesting, and can help save energy in times of scarcity. ●

The WONDER BOX Cooker

By Kyle Christensen, DC, ND, MH

In a recent article published by respected author and *Survival Blog* founder, James Rawles, it warns that in a grid-down or economic crisis: "You're gonna want to be able to cook without any spices whatsoever … From an efficiency standpoint … you're going to want to use a special insulated cooker … It's essentially like crock-pot cooking where you bring your water to a boil, add your rice, meat, vegetables, whatever … and you're going to enclose it in a double-insulated container. With that cooking method you have a couple of advantages. One is you don't have cooking odors escaping and the other is you have the absolute minimum energy input."*http://www.thedailysheeple.com/james-rawles-warns-be-prepared-to-hunker-down-formonths_092013#sthash.qrf4TOKk.dpuf*

We live during times of great uncertainty. Warnings of food and fuel shortage, amid impending ecominc upheavel have motivated many of us to prepare for a myriad of possible scenarios. We have discovered that the Wonder Box Cooker fills the need to conserve fuel as well as prepare delicious meals. Using very little fuel, you can bring your food to the required temperature, then allow it to snuggle into its thermally insulated cocoon to continue cooking for hours. While camping, we can prepare dinner over the breakfast fire, tuck it away in the Wonder Box and hours later open a steaming pot of stew, rice, casserole or jambalaya. Delicious!

Using the Wonder Box Cooker is Simple

- Boil your food in the Wonder Box Pot for 5 to 10 minutes until the food is heated to boiling temperature throughout. (Different foods may vary – see chart within this article.)

- We use a stainless steel pot that can be found at WalMart or Kmart. Make sure it does not have a long handle and has a lid that fits well. The Wonder Box does not work as well if there is a large air space. Everything should fit snug and tight.

- Put the lid on the pot before you remove it from the stove or campfire so the lid can also get hot. Have the Wonder Box nearby so you don't lose too much heat. Place the pot into the nest of the Wonder Box and quick-

ly cover with the top cushion making sure there are no gaps or air pockets.

- Do not open the lid while cooking or the food will loose heat and may not cook properly.
- Do not leave the Wonder Box on a metal surface as this will draw heat away through the bottom.
- When cooking meat, like a roast or a whole chicken, it is important that the liquid covers the meat and that it has come to a boil. Meat must be covered with liquid! Plan on cooking for at least four hours or all day. It will never burn.
- The Wonder Box was designed for cooking meals, but is also used to keep food hot, cold or frozen for three to six hours. We also use ours when grocery shopping and can keep ice cream frozen solid for several hours in a hot car without having to rush home.
- We've made our Wonder Box from cotton material and filled with polystyrene balls (like those in a bean bag chair). This Wonder Box can be washed with hot water and soap and hung on the line to dry.

Our Wonder Box is also the best yogurt maker we have ever come across. Here is our recipe.

YOGURT BY THE GALLON

4 cups powdered milk	or	1 gallon of whole milk
4 quarts of warm water		1 cup of powdered milk

Mix well, heat to scald (165°F), cool to luke warm (between 100-110°F). Use your stainless steel pot that came with your Wonderbox. We've found that pasteurized milk can simply be warmed up to 110°F. The scalding is designed to kill any bacteria or microbes that may compete with the yogurt start or innoculant that you want to promote in making your yogurt.

Add to your warm milk 1 cup of starter – plain commercial yogurt or yogurt from a previous batch. You can also purchase powdered yogurt starter that works well.

Mix well and place your pot with the lid into the Wonder Box. Put on lid and tuck in securely.

Leave undisturbed for 12-14 hours (overnight). It will have thickened and set up nicely. It will thicken even more by refrigerating.

Now here is the secret between good homemade yogurt and GREAT yogurt!. We like our yogurt to be a little thicker – like the popular Greek yogurt. Greek yogurt is not some special strain of bacteria from Greece, rather Greek yogurt has some of the whey strained from it. Of course, most commerial yogurts and Greek yogurts add thickener and all sorts of other undesireable chemicals.

Here's what you do. Go to the hardware or paint store and pick up a couple packs of paint strainers. You heard me right, paint strainers. These are the greatest tools ever. Do not waste your time with cheap crummy cheese cloth to strain anything. Get paint strainers – they come in one gallon or five gallon sizes. You will need at least two, probably three. Nest them inside of each other and pour in your yogurt. If you don't have a double or triple thickness, the yogurt (a lot of it) will strain right through. Triple thickness will catch the curds (milk solids) and strain out the whey (the clear liquid). Hang the yogurt filled paint strainer – we typically hang from a cupboard handle tied with string, and a bowl underneath to catch the whey. Depending on how thick you want your yogurt, you can hang it for three to 24 hours. The longer you let it strain/hang, the thicker your finished product. At 24 hours it is pretty close to cream cheese.

Once strained to your desired thickness (try it over night for your first venture) – stir it up in a bowl to even out the thickness (it will be thicker around the edges than in the middle) and add raw honey and vanilla extract for flavor. Serve with homemade granola, raw milk and fresh fruit. Rinse your paint strainers, throw in the wash and save for next time. They last forever.

Here is the chart we use when making food in our Wonder Box.

RETAINED-HEAT COOKING TIMES - *Approximate*

Food	Simmering Time	Wonder Box Time
White rice	5 minutes	1-2 hours
Brown rice	10-15 minutes	2 hours
Potatoes (*whole white*)	5-10 minutes	1-2 hours
Creamed soups	2 minutes	1 hour
Dried beans (*etc., soaked*)	10-15 minutes	3-4 hours
Meat roast	20-30 minutes	3-5 hours

The major benefit of the Wonder Box is to reduce the fuel you need to cook your meals. Simply bring your food to boil-

ing temperature, turn off the heat, and quickly place the pot in the Wonder Box. The important point is to make sure that the food is at boiling temperature throughout, so large pieces of meat may need to be cubed or make sure you give it time to heat thoroughly. The heat already in your food, combined with the insulation of the Wonder Box, will allow your meal to keep cooking "at safe cooking temperatures" for hours. Remember, the less space there is around the pot, the less heat will be lost. You can't burn food in a Wonder Box. As long as your food stays over 160° F, your food can cook all day.

You can save up to 80 percent of your needed fuel by using a Wonder Box because the heat used for simmering is eliminated. Most meals that you would cook in a Crock Pot can be cooked in a Wonder Box. With a little creativity, even other foods can be cooked in the Wonder Box. For example, a few whole potatoes in an oven cooking bag placed in a pot of water brought to a boil, will cook without being water logged. As a slow cooker, the Wonder Box will cook rice in about an hour, a whole chicken in three to four hours.

There are many patterns to make your own Wonder Box online or you can purchase a Wonder Box with a perfectly fitting pot. For more details on getting a Wonder Box and recipes, send us an email at kylesinthegarden@gmail.com. ●

National Geographic's
AMERICAN BLACKOUT

By Paul Seyfried

If you haven't seen "American Blackout, you might take a look at it. The program was an effort to depict life in America after a cyber attack-induced power grid failure. It had some good parts, and some poorly thought out parts.

Naturally, the prepper guy was made out to be a dufus. Inconsistencies were, of course, in the film, like fire fighters using water to put out a fire in day five, when there was no water in the pipe system. People trapped in the elevator were in there for several days - how did they get water? How did they handle sanitation? Guess they didn't want to go there. People with guns were portrayed as dangerous and stupid, and of course, some will be. But not all will be. It was a rather pampered ending, but worth some of your time.

By day ten, things would have been far worse than depicted in the film. I don't get where the police continued to get fuel for vehicles, food for their people, and maintain radio communications without power (generators run out of fuel, too).

So, most of you will ask lots of these questions as you watch the film. Some of you will think of areas you could improve. North Korea, China, and other rivals have huge staffs dedicated to cyber warfare. It's a well-documented threat to our government.

You can watch American Blackout online at *http://www.youtube.com/watch?v=hwfo3ma6w3m.* ●

Q&A
continued from page 3

Septic Systems

Flush toilets require a great deal of water. Water is your limiting factor. One flush takes two days of critical drinking water. If you have an unlimited supply of water and your septic tank is downhill from your shelter and can drain by gravity, this solution is very convenient. Electrical pumping of sewage, on the other hand, requires a great deal of valuable power.

In some locations it may be acceptable to install a "lift pump" toilet, which can pump waste through a 1.5" PVC line all the way up to near the hatch (but still below grade), and through a larger sleeve leading back downward to a septic tank outside. The septic tank should never be located so that it could drain back down through the system into the shelter. Septic tanks are not designed to survive blast or major ground movement. If your shelter is on a hill, you can gravity feed the sewage to a septic system below the shelter. Some folks mistakenly believe they can bury a septic tank below the level of the shelter floor. Not so. They are not designed to carry a heavy dirt load, and need access from the top for maintenance. Remember, this is not a permanent home - it's a combat shelter. While the grinder toilet is more easy and friendly to use, it is much more complicated, and subject to failure, like all electro-mechanical appliances are. Even if you elect to use a grinder toilet, you should keep a chemical toilet inside the shelter. I don't have a grinder toilet in my personal shelter... maybe I will someday. But I will still have those chemical toilets handy.

I hope that helps answer your question. Please call us with any questions you might have. ●

Best regards,
Paul Seyfried (801-631-7684)
and Sharon Packer (801-380-2932)

Emergency LIGHTING OPTIONS

By Jonathan B.& Kylene Anne Jones
TACDA Advisory Board Members

Lighting requirements will vary depending on circumstances. What purpose is the light intended to serve? A headlamp provides great hands-free light, but a lantern would work better to provide light around a table. What specific lighting needs do you have? Which light sources would be safe to use in an underground shelter? Consider short-term solutions for short power outages, and plan for sustainable options in the event of extended power outages.

In this article, we will review a variety of light sources. Carefully consider your options, and plan for a few different sources to light your world when the rest of the world goes dark.

Lumens

Light output is measured in lumens. This table will give you an idea of the brightness of a few common light sources to assist in your planning. The bulb makes a big difference in the amount of light produced with the same amount of power.

LIGHT SOURCE	LUMENS
Glow Stick	4
Candle	13
Kerosene Lamp	20-100
3.5 Watt Light-Emitting Diode (LED)	150
40 Watt Standard Light Bulb	450
8 Watt LED	450
10 Watt Compact Fluorescent Lamp (CFL)	500
Propane Lantern	830-1500
100 Watt Standard Light Bulb	1600

Flame Light Sources

Let us begin by reviewing sources that use a flame to provide the light. These sources can be dangerous, and great care should be taken around any open flame. Some situations, such as a gas leak, may necessitate the use of a sparkless option. It would be wise to plan for a flameless option as well. Store matches, butane lighters, or some way to ignite the flame. It is a good idea to keep a working fire/smoke alarm, carbon monoxide detector, and a fire extinguisher handy.

Candles

There are many different forms of candles available. A candle lantern or chandelier may increase safety. Candles provide a soft, low light, and burn for a long period of time. Candles are easy to obtain and to store. The open flame presents a fire hazard and consumes a small amount of oxygen, so be sure to provide a little ventilation. Candles have an indefinite shelf life if stored in a dry, cool place.

Never extinguish a candle with water, as this can actually increase the size of the flame and break any glass container the candle might be in. Do not blow on a candle to extinguish, as the hot wax may accidentally be blown on you or surrounding objects. Always extinguish a candle by smothering. A "snuffer," which robs the flame of oxygen, is often recommended, as it will safely extinguish the flame. If the candle is giving off smoke, extinguish and trim the wick to ¼ inch. Never leave a burning candle unattended. Keep all open flames away from flammable objects and children.

One type of emergency candle is designed with a plastic base filled with liquid paraffin. It is smokeless, odorless, and has no hot wax to make a mess. It may last for over 100 hours.

Oil Lamps

Traditional oil lamps or lanterns put out more light than candles. The flame is usually surrounded by glass, which is a nice safety feature. Many are designed to be set on a table or hung for greater distribution of light. Practice using the lamps at dinner to create a cozy atmosphere. Oil lamps can easily be kept handy, because they can add beauty to the home décor. Owing to the fact that we live in an earthquake zone, we display ours empty.

Wicks should be kept trimmed to burn cleaner and to provide the most light. Be sure to store fuel, wicks and matches for these light sources. We will review the common fuels for oil lamps, each of which may produce some carbon monoxide as a byproduct of combustion. Burn in a ventilated area.

Liquid Paraffin – Great for use in liquid lamps. It is smokeless, odorless, cleaner than kerosene, and slow burning. It can be used in traditional oil lamps and in wick oil candles. For safety purposes, the flame should be restricted to a half-inch. Liquid Paraffin is fairly safe and has a long storage life. One quart will provide roughly 200 hours of candlelight.

Lamp Oil – A liquid petroleum product designed to burn in lanterns with less smoke, soot, and other pollutants. It is a relative of kerosene. Store at or near room temperature. Do not allow to freeze, as fuel may explode during the thawing process. Depending on wick size and type of lamp, one quart might provide 75 hours of burn time.

Kerosene Lanterns - A kerosene lantern with a one-inch-wide wick will burn approximately 45 hours per quart of kerosene. A kerosene lantern uses one-fourth as much fuel as a gas lantern. The light is comparable to a 40W-60W light bulb. Ensure proper ventilation when using indoors, as kerosene produces carbon monoxide when it burns. Kerosene also produces black smoke when burning.

Gas Lanterns

Gas lanterns are designed to be used outdoors. They produce a nice bright light. The fuels produce carbon monoxide, so while they are great for outdoor use, plan alternative lighting for indoors. The lanterns require both fuel and mantles. Just as candles will not burn without a wick, gas lanterns must have a mantle to burn. The mantles are fragile, so store several extras.

Outdoor Liquid-fuel Lanterns – This is a good old camping favorite. The light is adjustable, quite bright, and gives off a fair amount of heat. Liquid-fuel lanterns are designed to be powered by specific fuels. Kerosene, Coleman or white gas, or unleaded gasoline may be used, depending on the model. Use only the fuel recommended for your specific model. Dual-fuel models are specifically designed to accommodate two fuels.

Never use white gas or unleaded gasoline indoors. Always provide adequate ventilation. Burn time varies by lantern and fuel type. A Coleman Premium Dual-Fuel Lantern will provide seven hours on high and 14 hours on low from 1.3 pints of either Coleman fuel or unleaded gas. Two pints of kerosene in

a Coleman 1-Mantle Kerosene Lantern may only burn 5.5 hours. Calculate your needs based on your specific lantern and fuel choice. Do not store lanterns full of fuel, as this can damage the appliance.

Propane lanterns – Very bright lanterns are fueled by a one-pound propane bottle. They are available in one- or two-mantle models. Depending on the setting and lantern, one cylinder of propane may produce between eight and 14 hours of light. These perform well in windy and wet weather.

Electric Light Sources

Battery-powered lights are a safe and effective option for most of your lighting needs. Batteries are safe to store and last for long periods of time. We find it easy to rotate through our battery stockpile and keep supplies fresh. Light Emitting Diode (LED) bulbs will far out perform standard bulbs in both energy performance and bulb life. Select lighting products that take advantage of this technology. Store extra batteries. If you are not using LEDs, store extra bulbs also.

Quality is important when selecting your light sources. A dollar-store flashlight will not perform well for any length of time. Name brands, such as Maglite, are made of quality materials, and can be depended upon for many years. They cost more, but light is a critical resource.

Handheld Flashlights - When the lights go out, the first reaction is to reach for a good flashlight with fresh batteries. They provide a quick, reliable source of light, and are available in a wide variety of shapes and sizes. Purchase quality, and the flashlight will serve you well for many years.

LED Headlamps – These highly efficient task lights are sometimes also called headlights. They are worn around the head, and direct the light source to follow your vision. Many headlamps can be adjusted to create different lighting effects: area, spot, or flood light and even a red night-vision light. Due to efficient LED bulbs, most operate using very little energy. Designs and efficiency vary. Three AAA batteries may produce 14-30+ hours of run time. The more expensive models tend to be more efficient.

Power-failure Nightlight and Flashlight Units – We have handy lights in the bedrooms. They work as a night light, but are actually small rechargeable flashlights. They plug into the wall and keep the small flashlight charged and handy when needed. When the power goes out, the flashlight goes on automatically to ensure it can be safely located. This way you are not left in the dark when a disaster strikes.

Battery-powered Lanterns – These are designed to provide area lighting. Sizes vary from personal to family size. They vary greatly in intensity and efficiency, so shop wisely. The Coleman 8D Family Size LED Lantern will run for 66 hours on low and 32 hours on high (170 lumens), using eight D batteries. They also come in a rechargeable model. The charge will last six hours on high and nine hours on low. A similar personal-size model uses four D batteries to produce 23 hours on low or 14 hours of light on high (190 lumens).

Personal Lights – Energy conservation is an important consideration in providing light. Do not use energy to light an entire room if you only require a little bit of personal lighting. Small clip-on book lights may provide enough light for reading or small tasks. The energizer Trim Flex uses two 3V Lithium Coin batteries, and will last for 30 hours between battery changes. The Energizer LED Book Light will only provide 10 hours of run time with two Lithium coin cell batteries. Understand the limitations and performance requirements of each light and plan accordingly.

Touch Lights – These are lights which can be mounted or attached magnetically in virtually any area to provide some light. They turn on and off by simply pushing the lens. An Energizer Professional 3-LED Puck Light will provide 50 lumens of light for up to 31 hours on three AA batteries. The Garrity 3-LED Touch Light will provide light for up to 16 hours on four AA batteries. Size, brightness and quality are all important considerations when shopping for lights.

Chemical Light Sources

Chemical light sticks are a popular treat at nighttime gatherings. They are a short-term, disposable light source. Quality varies greatly. Military-grade or industrial light sticks provide intense light for up to 12 hours, and can be seen up to a mile away, depending on model. Dollar-store glow sticks emit a soft light for six to 12 hours. Purchase the right light stick for your intended use.

Cyalume Light Stick – A plastic stick which comes in a variety of shapes and sizes. Generally the sticks are four to eight inches in length. Hydrogen peroxide fills an inner glass inner tube. When broken, the hydrogen peroxide mixes with dye and diphenyl oxalate inside the plastic tube, creating a chemical reaction. To activate the stick, bend it hard enough to break the glass stick inside and shake to mix the chemicals. Depending on the brand, it will provide a bright-colored light for six to twelve hours. It is windproof, weatherproof, does not create sparks for flames, and is safe for all ages. If the chemicals come in contact with skin, wash immediately.

Light sticks may be purchased online, at sporting goods stores, dollar stores, and other retail outlets. They have a shelf life of four to five years, gradually becoming dimmer over time. These are a safe form of indoor lighting in case of an earthquake or other situations where flammable gasses may be present.

Solar Light Sources

We love using solar products when possible. There is little risk of fire danger or carbon-monoxide poisoning. The sun's energy is renewable, free and readily available. Solar devices capture the sun's energy and turn it into electrical power. This power is usually stored in a battery until ready to be used. We recognize the wisdom in having other light sources available, but we use as much power from the sun as we realistically can. Features and capabilities vary, depending on the specific model.

Solar-powered Camping Lanterns – Chose from a wide variety of solar-powered lanterns which may be charged with

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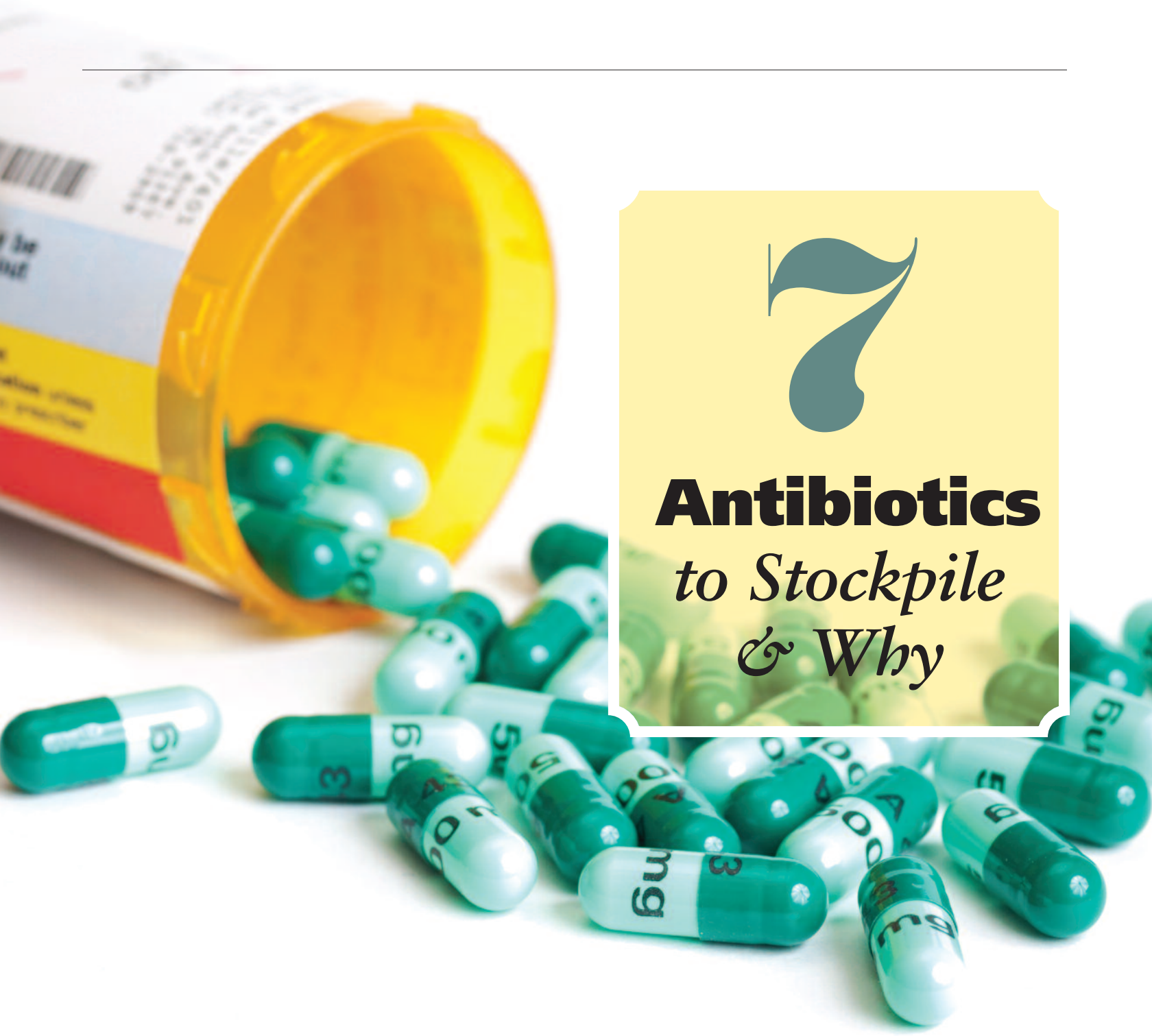

7 Antibiotics to Stockpile & Why

By Cynthia J. Koelker, MD
www.armageddonmedicine.net

Assuming your personal physician will help you stockpile antibiotics for TEOTWAWKI, which should you request? Is there a logical reason to have amoxicillin on hand rather than doxycycline?

Here's what I would suggest and why.

No antibiotic is effective against every type of microbe. Certain ones will kill aerobic bacteria, others are used for anaerobic bacteria, still others are effective against resistant strains, and certain people are allergic to or intolerant of various antibiotics. The following are all generics, running about $10 for about a month's treatment.

- **Amoxicillin** is the old standby for most respiratory infections (probably most of which are viral and don't even require antibiotics). It is excellent for strep throat and some strains of pneumococcal bacteria. It is also safe for children and pregnant women. It is well-tolerated, causing little stomach distress or diarrhea. The drawbacks are that some people are truly allergic, and many bacteria have developed resistance to amoxicillin (especially staph)

through overuse among both humans and animals. Anyone truly allergic to amoxicillin should substitute erythromycin or another antibiotic.

- **Cephalexin** works on most of the same bacteria as amoxicillin, plus is stronger against Staph aureus, which mostly causes skin infections. It rarely works against MRSA (resistant staph), however. It is also well-tolerated in children and is safe in pregnant women, causing few side-effects. Like any antibiotic, it carries the risk of allergy. People who develop anaphylaxis (a life-threatening allergy) with amoxicillin probably should not take cephalexin, as there is a good 10% cross-reactivity between the two. If I had to choose between stockpiling amoxicillin or cephalexin, I would choose cephalexin. The combination drug, amoxicillin-clavulanate (Augmentin), is as strong against staph, but more expensive and harder on the stomach.
- **Ciprofloxacin** is useful for anthrax (which I've never seen), urinary tract and prostate infections (which are very common), and many forms of pneumonia and bronchitis. One of the more important and selective uses of ciprofloxacin is in combination with metronidazole for diverticulitis. This potentially life-threatening infection usually (or at least often) requires two antibiotics to resolve. (Levaquin and Avelox are a bit stronger than ciprofloxacin and could be substituted for this, but are much more expensive.) Ciprofloxacin is not used in women or children unless the benefit clearly outweighs the risk, although the risk of joint damage (seen in animals) appears minimal. Taking ciprofloxacin by mouth is nearly as effective as taking by IV.
- **Doxycycline** is useful in penicillin/amoxicillin-allergic adults for respiratory infections and some urinary/prostate infections. It is avoided in children and pregnant women unless the benefit clearly outweighs the risk of permanent tooth discoloration in children under the age of eight. Doxycycline is sometimes effective against penicillin-resistant bacteria. If I were limited to either doxycycline or erythromycin, I would choose erythromycin for stockpile.
- **Erythromycin** is useful for most of the same infections amoxicillin is used for, and thus can be substituted in penicillin-allergic patients. However, erythromycin tends to cause the intestine to contract, often causing cramps or diarrhea. (This property is sometimes used to help patients with conditions that impair intestinal motility.) It can be safely used in children and pregnant women.
- **Metronidazole** is an unusual antibiotic used for very specific infections. It is aimed primarily at anaerobic bacteria, primarily those found in the intestine. It is also used for certain STDs, including trichomonas. As mentioned above, it is very useful in combination with ciprofloxacin (or SMZ-TMP, below) for diverticulitis. It is the only inexpensive antibiotic effective for Clostridium difficile (c. diff, or antibiotic-related) colitis. It is also effective against certain amoeba. This drug is not used in children unless the benefit clearly outweighs the risk.
- **SMZ-TMP** is a combination drug of sulfamethoxazole and trimethoprim. The latter antibiotic is used mainly for urinary infections. The sulfa component is effective against many respiratory bacteria and most urinary pathogens, although ciprofloxacin is somewhat stronger. The main reason to stockpile SMZ-TMP is due to its effectiveness against resistant staph (MRSA).

Of course, only the most understanding fellow-prepper physician is likely to prescribe all these in quantity. The list can be narrowed a bit, by dropping doxycycline (since erythromycin covers most microbes that doxycycline would kill, and can be used in young children) and amoxicillin (because cephalexin covers most amoxicillin-sensitive bacteria and has the benefit of effectiveness against staph aureus).

My top five antibiotics would therefore be:

- Cephalexin
- Ciprofloxacin
- Erythromycin
- Metronidazole
- SMZ-TMP

Of these, SMZ-TMP and ciprofloxacin have the most duplicate coverage, as do cephalexin and erythromycin. Since the intolerance of erythromycin is much higher than is allergy to cephalexin, I would favor cephalexin. Ciprofloxacin is stronger for intra-abdominal infections than SMZ-TMP, and is less likely to develop resistance. Although its use in children is a bit of a concern due to the question of joint pain (although this is rare), I would favor ciprofloxacin over SMZ-TMP, even though SMZ-TMP is effective against MRSA. However, when the use of antibiotics is severely curtailed, antibiotic resistance will also decrease, and therefore MRSA will become less of a concern.

Therefore, my top three antibiotics to stockpile would be:

- Cephalexin
- Ciprofloxacin
- Metronidazole

Using these three alone or in combination would cover around 90 percent of the infections physicians commonly encounter, as well as several less-likely threats (including anthrax and C. diff).

About The Author: Cynthia J. Koelker, MD, SurvivalBlog's Medical Editor is the author of the book, "101 Ways to Save Money on Health Care," which explains how to treat over 30 common medical conditions economically, and includes dozens of sections on treating yourself. She also hosts the popular medical prepping blog at www.ArmageddonMedicine.net.

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Ten Essential Over-the-Counter Medications

By Cynthia J. Koelker, MD
www.armageddonmedicine.net

In three decades of medical practice I have witnessed an astounding number of potent drugs changed from prescription only status to over-the-counter availability.

Having less than a dozen carefully selected medications on hand will allow you to treat hundreds of ailments effectively on your own including: headache, fever, sore throats, ear ache, menstrual cramps, heartburn, arthritis, ulcers, diarrhea, allergies, hives, congestion, dizziness, mild anxiety, nausea, vomiting, poison ivy, athlete's foot, ringworm, eczema, insomnia, backache, gout, diaper rash, yeast infections, and many more common illnesses.

Each of these drugs has demonstrated safety in both adults and children. All are both readily available and extremely affordable.The following ten are essential to a well-supplied medicine cabinet for both daily and emergency use.

1. Ibuprofen (Motrin, Advil)

Among the OTC anti-inflammatory medications, ibuprofen is probably the most versatile. Primarily indicated for pain and inflammation, it may also be used to relieve headaches, earaches, sore throats, sinus pain, stiff neck, muscle strains, menstrual cramps, arthritis, including gout, and back pain. It is also effective at reducing fever and is generally safe for use in children. It is not advisable for most stomach-related pain, although may decrease the pain of kidney stones, kidney infections, and possibly bladder infections. The most common side effect is stomach irritation or heartburn. When combined with acetaminophen it is nearly as effective as codeine, tramadol, or hydrocodone in relieving more severe pain.

2. Acetaminophen (Tylenol)

Acetaminophen is the only OTC pain-reliever that is not an anti-inflammatory drug. It will not irritate the stomach like ibuprofen, aspirin, or naproxen. It is useful for the same conditions as ibuprofen, though effectiveness varies according to patient. As mentioned above, it may be combined with ibuprofen in full doses for more severe pain. Side effects are very few, though in high dose, especially when combined with alcohol, it can lead to liver failure. It is available in several pediatric dosages, both for pain relief and fever reduction.

3. Diphenhydramine (Benadryl)

An inexpensive antihistamine, diphenhydramine is primarily used for drainage due to respiratory infections and nasal allergies, in both adults and children. It is also indicated for hives and itching, including itchy rashes such as poison ivy. Although not all patients become drowsy when using diphenhydramine, many do so, making this medication useful for insomnia as well. Some people find the drug relieves nausea or mild anxiety.

4. Loperamide (Imodium)

The most effective OTC medication for diarrhea is loperamide, which is available both as tablet form and liquid for children. It is often useful for relieving intestinal cramping.

5. Pseudoephedrine (Sudafed)

Pseudoephedrine is effective at relieving congestion of both the upper and lower respiratory tract due to most common causes including infection, allergy, chemical irritation, and mild asthma or bronchitis. It frequently has a stimulatory effect, similar to caffeine. The most common side effects are those resembling a burst of adrenaline: rapid heart rate, palpitations, and increased blood pressure. Years ago this drug was used in young children, even babies, though now most pediatricians do not advise it in patients younger than about six years old.

6. Meclizine (Bonine, Dramamine)

This antiemetic drug is available both over the counter and by prescription. It relieves nausea, vomiting, motion sickness, and vertigo-like dizziness. For some patients it causes drowsiness, and therefore may be used as a sleep aid. It is related to medications for anxiety and may help with this as well.

7. Ranitidine (Zantac)

Although several medications are available OTC for the treatment of heartburn, ulcers, and other acid-reducing conditions, ranitidine is among the best-tolerated, is inexpensive, and is also useful for relieving hives. Doctors often advise an acid-reducing medication such as ranitidine for patients who experience stomach upset when taking ibuprofen, though this must be done with caution.

8. Hydrocortisone cream

The one percent version of hydrocortisone is the strongest steroid cream available over the counter. It is safe for use in both adults and children in treating inflamed and/or itchy rashes such as eczema, poison ivy, diaper rash, and other minor genital irritations.

9. Bacitracin ointment

This ointment is best used to prevent skin infections when the integrity of the skin has been breached, as by an abrasion, laceration, insect bite, or sting. It also may be used to treat a superficial skin infection such as a mildly infected wound or impetigo. It is less likely to produce a topical skin allergy than other topical antibiotic preparations that contain neomycin. It cannot be used to treat deeper infections, however, which generally require an antibiotic by mouth.

10. Clotrimazole (Gyne-Lotrimin)

The same antifungal medication, clotrimazole, is contained in both Lotrimin and Gyne-Lotrimin. Gyne-Lotrimin may be used to treat both female yeast infections and any other yeast or fungal infection that Lotrimin would treat, including athlete's foot, jock itch, ringworm, diaper rashes, and skin fold irritations. ●

Cynthia J. Koelker, MD is an instructor at Survival Medicine Workshops and the author of:
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"101 Ways to Save Money on Health Care" www.101waystosavemoneyonhealthcare.com

Treating Your Own INJURIES

By John S. Farnam

It's not just about being alert, aware, and unfalteringly prepared to defend yourself.

During the London transit bombings of July 2005, it was in excess of 40 minutes before authorities deemed it sufficiently safe to allow EMTs to enter the area and tend to the injured. As a result, many among the injured died in place due to lack of timely treatment of otherwise survivable injuries.

Much the same occurred during the Columbine massacre in Colorado in April, 1999. A number of badly wounded were left unattended while police hesitated outside. Again, many victims thus bled to death, who could have been saved had someone been there to treat their injuries in a timely manner.

By all means, be armed and ready whenever and wherever possible. But, also be prepared to treat your own injuries, as it will predictably be a long time before any kind of EMT gets to you!

The "Big Three" life-threatening circumstances that are readily treatable in the field are:

1) Blood loss, particularly from wounds to limbs
2) Compromised airway
3) Tension pneumothorax due to a penetrating chest wound(s)

With a small trauma-kit, and a day's training, nearly anyone can effectively and efficiently treat and stabilize these three. In the process, a needless death is prevented, and the injured person stays animated, conscious, and able to pull triggers!

Every gun operator needs this training! It is called "Tactical Treatment of Gunshot Wounds," and it is offered by a number of competent instructors, including me. It is as important as going armed!

sunlight, an auto adapter, or a UL-listed house adapter. Some models utilize solar, manual winding, and/or battery back-up. The more power options you have available, the greater the chance of having light in any situation. Every model is just a little bit different.

Hybrid Solar Camping Lantern boasts six hours of light (200 lumens) from an eight-hour charge. See more of their products at www.hybridlight.com. The SolaDyne Solar Lantern has a dynamo hand crank to back up the solar energy. A full charge provides 16 to 48 hours, depending on the setting.

We have two small basic solar lanterns we bought several years ago. They are kept in a south-facing window to ensure they are charged when we need them. They have survived the abuse of family camping, and were well worth the investment.

Solar Headlamp - Headlamps can be worth their weight in gold when working in the dark. Hybrid Solar produces a super-bright compact headlamp, which can be charged using 10 hours of sunlight or only one hour if charged via a USB port. Another option might be the Everlite Solar Clip Light with three LEDs. It will provide 20 lumens of bright light for up to 12 hours. One hour of charging will provide one hour of light. The clip light would need to be attached to a hat to work like a headlamp.

Solar Landscape, Path, and Security Lights – These handy devices are available just about everywhere and in every style imaginable. They are designed to provide interest, beauty, and safety lighting in landscaping. Most are reasonably priced. These lights will emit light throughout the night, gradually growing dimmer.

Wireless solar-powered motion sensor lights are worth considering. They can provide security lighting outside your home even when the power fails. Accent or garden lights could be kept charging in the yard, but be brought in for light during emergencies.

Solar Powered Flashlights – Many solar-powered flashlights include other options such as an AM/FM radio, a cell-phone charger, or a siren to call for help. The Goal Zero Solo Flashlight is a compact rechargeable flashlight with a self-contained solar panel and five LED lights. Expose the panel to eight hours of direct sunlight to recharge, and it will produce 15 lumens for two hours. The Energizer Solar LED flashlight boasts a hand crank for charging at night. Five hours of full sun will power 3 LED lights for two hours, or one minute of cranking will provide four minutes of light.

Solar Battery Chargers – If you want to use standard battery-powered lighting devices, consider purchasing rechargeable batteries and a solar charger. The initial investment can be a little bit painful, but the returns are great. Instead of throwing away all those disposable batteries, recharge them using the free energy of the sun.

Manual Light Sources

These are light sources that require some kind of human-energy input to work. Frequently, you will find products which use solar power along with manual cranks to enable the device to function without sunlight. The combination lets you enjoy the best of both worlds. Manual devices can be annoying if the emergency lasts for any length of time.

Hand Crank Lanterns – These are nice for general lighting. They are available with florescent or LED bulbs which make the batteries last much longer. There is also a battery-less hand-crank model available with LED bulbs that claims to last for 20 minutes after 60 seconds of cranking. The Lighthouse Lantern with USB Power Hub can provide light, and can charge your cell phone, MP3, Tablet or other devices. It charges by AC, DC and crank for six hours of runtime from four hours of charging time.

Hand-crank Flashlights – Operated by manually winding, these flashlights come in a wide variety of quality and styles. The Energizer Weather Ready 3 LED Carabineer Crank Light will provide three minutes of light from one minute of cranking. The L.L.Bean Crank Flashlight produces 20 minutes of light from one minute of cranking. Some models will also charge your cell phone or have an AM/FM radio in addition to the light. Buy quality.

Shake Flashlights – Some of these flashlights claim they never need batteries or bulbs. They are powered by magnetic-field energy, which is generated by shaking and charges the internal cell. Thirty seconds of shaking powers the LED bulb(s) for up to five to 30 minutes, producing up to eight lumens. Quality and performance vary greatly. Some of these are undependable junk, while others may work quite well. Shop carefully.

Perpetual Light Sources

These are light sources that do not have a limited useable life. They will last practically forever. The sun is a perpetual light source and the supreme source of light. Natural lighting through windows is amazing, and should be used whenever possible. Other than the sun, these sources tend to be dim, although their dependable long life makes them worth exploring.

Natural Lighting – Increase the natural light in your home by taking full advantage of sunlight from windows. Decorate using white or light colors to

reflect the natural light that enters a room. Mirrors increase the natural light by reflecting it into different parts of the room. Light colors and mirrors will increase light from other sources as well.

Darkness is depressing. It can be dangerous to fumble around in the dark, as even a minor injury during a disaster may prove to be life threatening.

UVPaqlite Products – These light sources do not require batteries, bulbs, electricity, chemical activation or fuels. There are no mechanical parts to fail and they are completely waterproof. UVPaqlite products are made from strontium aluminate, a high-quality glow-in-the-dark material. It absorbs photons and UV rays to charge, so it can charge in low-level indoor light conditions or by shining a flashlight on it for a few minutes.

4EverLights are designed to provide a functional light source, and are not intended to replace the bright lights produced by lanterns or flashlights. The amount of light emitted is similar to the light given off by glow sticks. They would be a great addition to a survival pack, and might prevent injuries resulting from having to fumble around in the dark. UVPaqulite products come in a variety of forms. You can find the complete gallery of products at www.uvpaqlite.com.

Darkness is depressing. It can be dangerous to fumble around in the dark, as even a minor injury during a disaster may prove to be life threatening. A little advanced planning and stocking up can keep you safely in the light during a disaster. Is your back-up flashlight sitting in the kitchen drawer with corroded batteries inside? Where are your lighting tools? Keep them handy and in good repair.

Where will you be when the lights go out? With a little planning, you won't be in the dark. Happy prepping!

FARNAM QUIPS

Ready, *or Not?*

By John S. Farnam

Here in northern Colorado, we've recently experienced the worst flooding in many decades, maybe the worst ever. Major highways are just now reopening (as of September 14th). Some won't reopen for months. In the high-country, there are still many stranded in enclaves - even entire communities. There is no way to get in, or out, except by helicopter.

Most have no power and no telephone - at least no landline. Cell-phone service is sporadic. Most have no internet service either, so there is no way for them to effectively communicate with the outside world.

Some, among the wise, have adequate stores of food, water, medicine, passable clothing, and guns and ammunition for themselves and immediate family. They will be okay. However, I'm amazed at newsreel footage of many who have had to be rescued, wearing flip-flops and T-shirts. They can't even walk, or protect themselves. They're hungry and dehydrated. Utterly dependent upon the good will of others -utterly unable to do anything for themselves. All they can do, and all that they're apparently willing to do - is wait around for someone else to come and help them.

Mother Nature is about as "understanding" and "sympathetic" as is lightning, bacteria, and gravity. The sage and prepared have a fighting chance. The foolishly unprepared have no chance.

"History is strewn with the wrecks of nations, which gained a little 'progressiveness' at the cost of a great deal of hard manliness, and thus prepared themselves for destruction." — Walter Bagehot

Finding and Keeping a

Balance in our Preparations

By Jonathan B. Jones

I have noticed that there are a few main groups of people that attend our preparedness classes. The first group I will call *Obsessed*, as their lives revolve around anything to do with preparedness. Then we have the *Unengaged* who are there because a spouse dragged them, or possibly they have just woken up to the reality that it would be smart to do what we have all been asked to do. The final group is what I consider to be the *Ideal*. These are the ones who have prepared and executed a plan, over a substantial period of time, and steadily worked to bring it to pass.

It's really about balance. As I have experienced life, I have come to the clear conclusion, at least for myself, that balance is the critical component in a successful life. I wouldn't actually fully know, because I'm not there yet, but I am sincerely trying to get there. The more I try, the better life gets. I might compare this to the tires on my car, and how nice the ride is when they are appropriately balanced. I have also ridden in cars where the tires are badly out of balance…the ride is rough and it can be dangerous. I firmly believe that achieving balance in our lives is one of the most important and difficult tasks. I won't even try to tell you how to find balance in your life. What I hope to do is provide a little (emphasis on little) perspective on finding and keeping a balance in our preparedness efforts based on my own experience.

Begin with a Plan: At least for me, without a plan, it all just goes round and round. There is no clarity or direction. With a plan, we can prioritize and focus…that is when we get things done! I would encourage you to not just use someone else's list or plan (although it may provide you with great ideas). The value in your plan is that it is, in fact, *your plan*. Think through your plan yourself, and with others who are a part of it, and rely on, that plan. Don't worry that your plan won't be perfect from the start. Like most things in life, it will get better with time. Start with a notebook, or whatever works for you. For me, it's a spreadsheet, the ultimate weapon in my book. As you get started, make it a priority, and continue this journey. You will have new insights and your plan will evolve into just what you need.

Act on that Plan: Plans are wonderful, but they don't get the job done … *we do!* It would be nice to have it all at once, and for those of you who can do that, *great*! However, for most of us, we have to take one step and then another, gradually moving forward. I get great satisfaction from the little victories along the way, and there are many. The important thing is not necessarily the speed at which we travel (although we don't want to doddle), but that we get there.

Live Fully: Ah yes … this is where the balance comes in. Life is wonderful, and for most of us, there are many aspects to our lives that are significant

Continues on page 28

Emergency Water Filters

THE MUST-HAVE DISASTER TOOL

By Lynn Wilford Scarborough

Hazmat suits are not often required for flooding in American cities, but in September 2013 the Colorado Department of Public Health required all workers to wear protective gear while working in flooded areas around Boulder. Warnings were issued because the historical flooding caused contamination from chemicals and raw sewage. Some communities placed "boil water advisories" in effect and water quality will need to be assessed for years to come.

Hurricanes, tornados, floods, tsunamis and drought all cause incredible damage, displacement, and impact the safety of drinking water. Most organizations plan on the availability of bottled water for disasters, but this requires access and availability. What do you do when roads are washed out, or impassable, due to storm damage like in Hurricane Sandy? What happens when there is no bottled water available?

The answer is emergency water filters. Quality water filters and water purification systems are essential tools used by emergency managers, first responders, families, businesses, and municipalities during disasters.

Weather related disasters often cause widespread damage to housing and utilities, which result in evacuation and displacement. Regardless of the damage resulting from the initial disaster, more people are impacted by the lack of clean, safe drinking water than the initial event. The numbers are often 10 times greater than those being displaced by lack of shelter.

In 2005, Hurricane Katrina covered 80 percent of the city with a toxic mix of chemicals, garbage, human waste, and sea water. Naturally, this placed an overwhelming strain on the water systems. Hurricane Katrina impacted over one thousand water treatment facilities. She also damaged 172 sewage systems, depended upon by over 2.4 million people. Testing revealed E coli bacteria and high levels of lead in the drinking water. Boiling will deactivate bacteria, but only filtering can lower the levels of chemical contaminants.

Public health concerns are foremost in the mind of emergency management specialists. They understand how disasters impact water quality for weeks and months beyond the initial crisis. Disease and water borne illness occur due to the lack of clean drinking water, inadequate hygiene, and poor waste management. Ten months after the earthquake rocked Haiti, water and waste issues caused the cholera outbreak which killed over 7,000 and sickened 470,000 Haitians.

Safe drinking water is not just an issue in third world countries or after natural disasters. Man-made disasters such as the explosion in West Texas, resulted in lack of safe drinking water for over a week. Municipal systems are also challenged with bacteria and contamination in drinking water. In August 2013, the City of Grand Prairie, Texas announced that a damaged water main had compromised the water supply. Citizens were cautioned against drinking tap water for several days.

Whether the disaster is from natural sources, industrial accidents, or biological contamination, water safety issues are of primary concern for all of us. FEMA and the American Red Cross recommend that citizens should store a minimum of one gallon of water, per person, per day, for three-seven days. A family of four should store between 12 to 28 gallons of water. Water takes up a lot of space. What do you do when the supply runs out? Emergency water filtration systems are practical, economical and portable. Every home should have one at home and in each emergency kit.

Water filtration systems are available in many varieties designed for specific uses. The perfect filter for you

depends on your specific needs, number of people, range of contaminants you want removed, and the price. A water bottle filter with purification tablets might be a great solution for an evacuation kit. A gravity drain system with ceramic filters would provide long term water purification at home.

Individual Water Purification

For decades, the standard gear of all scouts, military, and wilderness adventurers has been water purification tablets or drops. This basic level of protection may be adequate when the threat of biological contamination is at a lower level.

The process is simple. Fill the canteen from the stream, drop in a tablet or a few drops, shake, and wait for 10-30 minutes. Another alternative is chlorine dioxide tablets or liquid, which has less after taste, but works as well to remove potentially harmful viruses and bacteria. Both are available in stores, or online, with a 30 count pack of tablets priced under $15. Pregnant women and individuals with certain health conditions should avoid using iodine to purify water.

Water purification chemicals are highly effective at deactivating viruses and bacteria, but iodine and chlorine are not able to deactivate some protozoa, such as cryptosporidium. Those critters have a thick skin which helps them resist the chemicals. The good news is that protozoa are large and may be easily filtered out. A highly effective way to purify water is to treat it with chemicals first and then run it through a quality filter to remove residual biological and chemical contaminants.

Gravity Water Filters

Gravity water filters are a simple and effective way of dealing with water purification because they use gravity and do not require electricity to operate. There are many brands of quality gravity water filters available to the consumer such as; Berkey, AquaRain, Katadyn, and Just Water. Each brand offers a slightly different system and price range.

One of the most effective and affordable emergency water filter systems that I have found, are made by Just Water. A newcomer to the public market, Just Water emergency water filters are used in over 71 countries by private relief agencies. The most popular is the "Double Bucket System" which utilizes two five gallon buckets, a ceramic filter, and a spigot. The water is poured into the top bucket, cleaned by the ceramic filter, and accessed through the spigot at the bottom. This system can produce up to 30 gallons of safe drinking water a day.

Just Water filters use gravity to force the water through a silver impregnated ceramic filter with efficiency of 0.2 micron. Just Water's filtration systems have lab tests which show they eliminate 99.999 percent of bacteria and provide virus reduction/removal that causes water borne diarrhea and numerous diseases. These USA made filters also remove fluorides, chlorides, sulfides, heavy metals, pesticides, cysts and other chemicals.

"Having provided water filters for disaster sites all over the world, we know that potable water is critical to survival and recovery for every community," explains Ron Mathis, managing partner of Just Water and former chair of Texas Baptist Men's Water Ministry. "Quality control is important to American consumers, which is why we moved our manufacturing into the U.S. and are working with an FDA approved lab to provide testing and certification."

The systems are sold online and through distributors. The low cost makes these filters available to many who would otherwise be unable to afford an emergency filtration system. The complete two bucket system sells for only $60. A DIY kit is only $35, but you provide your own buckets. The buckets must be food grade and should never have stored chemicals, pesticides or hazardous materials.

For a more compact portable system, Just Water offers a four gallon, sturdy hanging bag for $75, which produces up to 60 gallons a day. It has the same quality filter as the double bucket system, but it is less bulky. It can be hung over a door, or tree limb, and is perfect for kitchen use. Just Water filter bottles and military style hydration packs are also available.

Texas Baptist Men have used Just Water systems for nine years. They helped serve clean water to 90 percent of the Red Cross during Texas disasters.

The industrial-sized Just Water systems provided over seven million gallons of water for Katrina victims.

The **Berkey and AquaRain** water filtration systems. Home water systems come in different sizes, capacities, and flow rates. The units are attractive, sit on a counter or table, and come with emergency grade water filters. Models are available to fit specific needs.

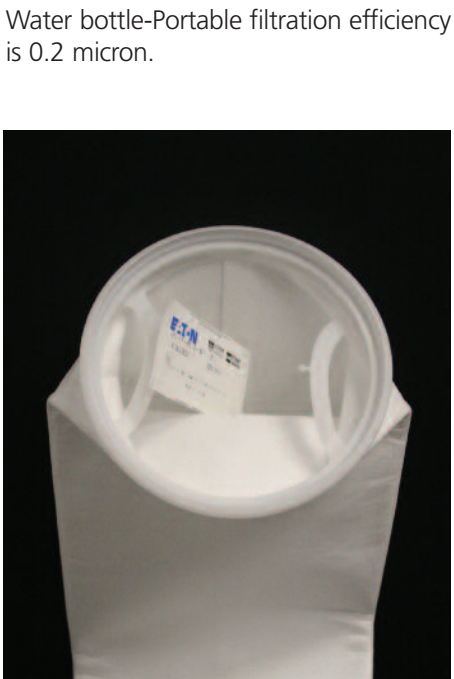
The Berkey indoor systems are tall columns of stainless steel or plastic which have two containers that fit on top of each other. Water is poured into the top and filtered through to the lower compartment. The rate of the filtration depends upon the number of filters. The more filters the faster the flow. These ceramic filters remove 99.99% of the bacteria, parasites, heavy metals, chemicals and viruses. Filters last for up to 3,000 gallons of water.

These systems are considered a practical way to insure daily water safety while being prepared for potential disasters. It is also economical. Instead of spending money on cases of bottled water, you simply refill bottles and carry your own.

Water is critical to life and keeping people hydrated after a disaster and is critical to recovery and health. Statistics show that for many international disasters, more people die from water borne illnesses after the event, than die from the initial disaster. In truth, clean drinking water is more important than food. Having ways to generate safe potable drinking water is critical to public health and recovery. Water filters are low tech, effective, practical and essential tools to provide safe drinking water.

Quality water filters are a must have for every individual, family, emergency kit, and emergency response team. Water filters are available in many styles and price ranges. For those on a limited budget, I highly recommend the Just Water two bucket system for home emergency water filtration. For as little as $35 dollars and a few buckets, you can provide safe drinking water for an entire family. Whatever your budget, invest in a quality water filtration system before the disaster strikes. ●

Water bottle-Portable filtration efficiency is 0.2 micron.



Cloth "Water Sock" – filtration efficiency is 0.1 micron, (www.tacda.org/store)

BALANCE, *continued*

and important. We encourage those we teach to make their preparations an aspect of their lives in harmony with all the other wonderful things they do. Slow and steady wins the race!

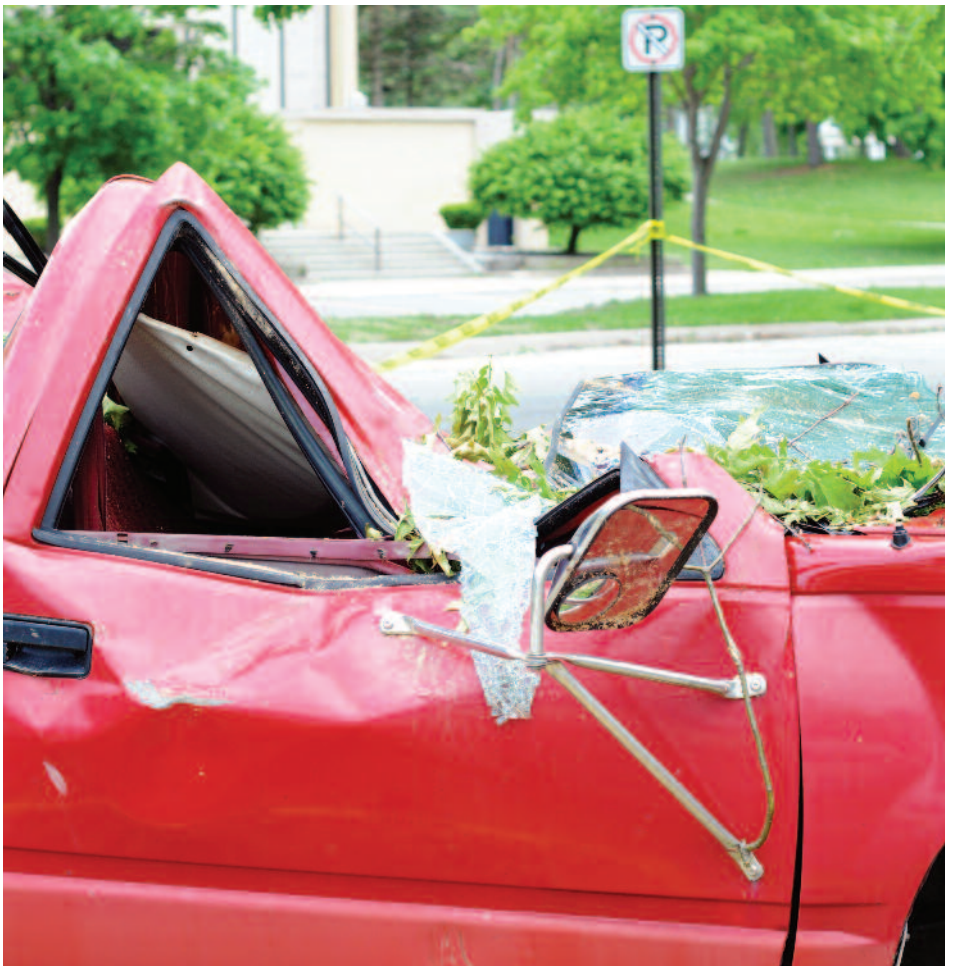
Accept Set-backs: I do not know of anyone who has not experienced set-backs along the way. It is a part (I would argue a necessary part) of our lives. Accept these situations as a natural part of life and learning, and courageously move forward the very best you can.

Never Give up: Sometimes our meager progress seems insufficient to win the day. Generally, however, we are making more progress than we might at first see. Our progress in acquiring understanding, strength, wisdom, skills, experience, and the physical aspects of our preparations makes us better people, and more capable of being useful to ourselves and others. When you look at your accomplishments as compared to doing nothing, you can give yourself major kudos!

Community: We encourage our preparedness students to be a part of helping their community. There is an old saying that "If your community is not prepared, you are not prepared." I don't know who said it first, and I don't think it really matters. What matters is that it is true. I think we are here to help each other. Obviously, we need to start with ourselves, but there is so much good that we can do when we think beyond ourselves.

Endure: All of this becomes naught if we don't keep it going. I think most of us are famous for beginning something(s), then letting it fall by the wayside, prior to completion. Sometimes we begin and begin and begin, but never make much progress. I believe that if we keep the balance, we can sustain our efforts and enjoy great peace of mind in the process.

Speaking of peace of mind - I think it is for this purpose that we make our preparations. Peace of mind can come to each of us as we do *now* what will be important for the future. I encourage you to begin today, and make progress in a balanced way! ●



The Importance of Private Sector and Local Government MOUs

By Bruce Curley
TACDA Board Member

Most emergency managers know about government-to-government memoranda of understanding (MOUs) that often include a mutual aid agreement. What is often more critical, however, is a memorandum of understanding between private-sector companies (Walmart, Ace Hardware, tree-service and debris-removal companies, for example) and a local government.

Why? Because when a disaster strikes, before first responders can get to the place where people are hurt, dying or disoriented, trees, cars and debris must be cleared. The completion of this task requires a skilled construction worker that knows how to cut through the trees, cars and debris. How can you know who that person is and how to reach him/her?

Well, if you have a signed MOU in place with an individual, it is simply a matter of getting him/her onsite to aid in the recovery effort during the critical first 72 hours. Now that social media is such an important part of our daily reality, you should incorporate that fact in the MOU. For example, in addition to the usual cell phone and email address, include a space for a Facebook address and a Twitter address so you can communicate through those media as well.

I have included (see following page) an MOU template that I created a few years ago for the Town of Mt. Airy, where I live. I encourage you to get started on your MOU as soon as you can. In my experience, I had to go through the Town Council and their lawyer. Both added several years (not months) to the process.

The town lawyer likes "Whereas" and other archaic clauses that added pages and text, and necessitated a long rewrite period. I like plain English, but the reality is that this is a legal document, and the lawyers will have their say. They try to cover every contingency. Any disaster has multiple unknown contingencies, but they go about their work diligently, hoping to protect the town from everything. It's just the way it is.

Eventually, the local Town Council gave the MOU its approval. The Town Administrator and I identified numerous local businesses with whom we wanted to sign an MOU. They include Walmart, Ace Hardware, two local tree-removal companies (skilled construction workers), some local grocers, and the local utility company. We signed an MOU with them and have it in place in the event an emergency hits

This is a basic step that you can take to ameliorate problems before an event strikes. There are so many unknowns that add to any disaster. This is one positive step you can take to prepare the supplies, people and expertise you will need to get through an event.

We offer several pages from our MOU in hopes that it will provide you with a template you can adapt and use in your local situation. Although it takes time, effort and grit to get it written, approved and signed, it is well worth it. When you are hit, it can be the difference between frustration and action during the critical first 72 hours. ●

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") is entered into this **(Date),** between **(Vendor or Contractor** _____, (hereinafter referred to as "Vendor") and the **Town , Maryland** (hereinafter referred to as "Town").

WHEREAS, the Town, in cooperation with other jurisdictions, is responsible for providing for and securing the safety of its citizens and properties in the event of an emergency or disaster; and

WHEREAS, the Town intends to use this MOU as a method to immediately secure on an emergency basis necessary goods, materials and services in the event of an emergency or disaster; and

WHEREAS, for the purposes of this MOU, an "emergency" or "disaster" shall be defined as defined in the Code of the [Town], Section 26-2A, and/or any natural or man-made event that has caused or threatens to cause imminent serious and/or widespread personal injury and/or property damage to citizens residing in the Town or in reasonable proximity to the Town, or to property located in the Town or in reasonable proximity to the Town, and which has been declared to be such by any appropriate officer of the governments of the United States, State of Maryland, Carroll County, Frederick County and/or the Town, to include the Mayor of the Town; and

WHEREAS, a declaration of an event as an "emergency" or "disaster" by any appropriate officer of government as described above shall be conclusive as to whether any such event was of such character as to constitute an "emergency" or "disaster;" and

WHEREAS, pursuant to the Code of the [Town] Section 26-2C, the Town is authorized and encouraged to enter into arrangements for standby services in the event of an emergency as defined in the Town Code.

NOW, THEREFORE, the parties agree as follows:

1. The Town and Vendor hereby agree to jointly collaborate during an emergency or disaster occurring in the Town to provide the necessary goods and services needed to respond to such an emergency or disaster.

2. Vendor agrees to provide to the Town without advance payment the following equipment, goods, materials and/or services on an emergency basis needed to respond to an emergency or disaster:

   - **Item(s) or Services**

3. The Vendor will thereafter promptly submit to the Town adequate documentation for the cost of goods and/or services provided. The Town agrees to reimburse Vendor the fair

market price for such goods and/or services acquired and utilized by the Town to respond to the emergency. The Town shall promptly return to Vendor any such goods or materials that the Town did not utilize in substantially the same condition as such was received. The Town will reimburse Vendor the reasonable price of any such goods or materials, even if not utilized to respond to the emergency if not promptly returned to Vendor in substantially the same condition as was received by the Town. In no event will the Town be responsible to reimburse Vendor for any goods or materials, although initially acquired by the Town to respond to the emergency or disaster, but which is promptly returned to Vendor in substantially the same condition as such was received by the Town.

4. Nothing contained herein shall be construed to bind the Town to procure the goods and/or services outlined herein or to provide such to any area within the Town or outside the Town limits even in the event of an emergency.

5. Nothing contained herein shall be construed to provide an exclusive right on the part of Vendor to supply materials, goods or services to the Town. It is expressly acknowledged that the Town has or may enter into similar MOUs with other vendors for identical or like goods and/or services and that the Town pursuant to any such Memoranda shall have complete discretion on determining from which vendors to obtain any such goods and/or services.

6. The parties agree to comply with all federal, state, and local laws and regulations during an emergency of disaster.

7. This MOU is effective on **[Date],** unless modified in writing before that date. This MOU shall automatically renew for an additional 24 months at the end of the initial term and upon the same terms and conditions as set forth herein, unless, at least 180 days prior to the end of the initial term, either Party provides the other Party with written notification of its intent not to renew.

8. This MOU may be terminated by either party upon thirty (30) days' written notice. Termination of this MOU shall not relieve the terminating party from any obligations assumed prior to the effective date of termination.

9. The following persons shall serve as the contact persons for any issues related to this MOU (please supply both regular and after hour contact information).

   a. All notices and invoices given under this MOU, except for emergency service requests, shall be made in writing.

   b. Each Party to this MOU shall identify single points of contact in support of the administration of this MOU for addressing of interagency issues that may arise hereunder and to whom notices provided or required hereunder shall be delivered.

   c. Each Party will make certain that it has an updated list of staff contacts to facilitate communication and to resolve issues as they may arise.

d. Each Party agrees to assign appropriate staff to serve as a single point of contact should any personnel changes occur.

e. All notices shall be sent to the addresses set forth below:

Town: [Mayor Name]
[Town Hall Address]

Vendor/Service Contact Information (complete all that apply):

Business/Service Name: _____

Business/Service Contact: _____

Address: _____

Email: _____

Phone: _____

Fax: _____

Website: _____

Facebook Page: _____

Twitter Name: _____

10. This MOU shall be governed and interpreted under the laws of the State of [Name].

11. This MOU may be amended only with the written consent of both Parties. Amendments may not change significantly the scope of this Agreement.

12. Neither Party assumes liability for the acts or omissions of the other party or its agents. Nothing in this MOU shall be construed to extend the immunities of one Party and its agents to the other Party or its agents.

13. Neither Party may assign any rights or interests nor delegate its duties under this MOU, in whole or in part, without the express prior written permission of the other Party. Without such written permission, any attempted assignment or delegation shall be wholly void and totally ineffective for all purposes.

14. A waiver by any Party of any breach or default by the other Party under this MO shall not constitute a continuing waiver by such Party of any subsequent act in breach of or in default hereunder.

15. This MOU signed by all Parties constitutes a final written expression of all terms of this MOU and is a complete and exclusive statement of those terms.

16. This MOU contains the entire agreement between the Parties hereto, and shall not be modified, amended or supplemented, or any rights herein waived, unless specifically agreed upon in writing by the parties hereto. This MOU supersedes any and all previous agreements, whether written or oral, between the parties.

IN WITNESS WHEREOF, the parties have executed this MOU on the date set forth above.

THE MAYOR , MARYLAND

_____

By: [Mayor's Name]
[Email]
[Phone #]

_____

By:

_____

Title:

_____

Vendor/Service:

Our Fragile SEWER SYSTEMS

By TACDA Staff

The sewer system in a local neighborhood failed at a lift station from disposable diapers that had been flushed down a toilet. Personal carelessness can result in system failure when items are flushed that are not designed to be flushable.

People think that just because it can fit down the drain, it is fine to flush it away. Thin cleaning wipes, baby wipes, or sanitary products do not dissolve like toilet paper. They clog sewers and damage equipment, costing taxpayers a lot of money and inconvenience.

Stop and consider the implications of a system which fails during the best of times. As you prepare, make sure to think about how you would handle waste if the sewer system in your area failed. Are you prepared to prevent it from backing up into your home? What alternatives do you have in place if you can't flush human waste down the toilet? Not a happy thought, but one well worth your time to prepare to plan and prepare for. ●

By Jonathan B. and Kylene Anne Jones

The actual shelf life is not determined by the date on a can, but by storage conditions. We were given a unique opportunity to personally test some food storage which was purchased in 1960. It had been stored under the stairs, in a basement for 45 years. To our surprise it was still edible. The wheat made great bread. The dehydrated applesauce and other foods looked and smelled fine. Everything we tasted was of acceptable quality. We did not consume all of it due to the decreased nutrient content, but it would have been safe if we were desperate.

We also had the opportunity to evaluate wheat that had been stored in sacks and square metal cans since the early 1970's. To our surprise, even the sacks of wheat showed no evidence of infestation. The cans were rusted on the exterior, but the wheat was fine.

The steamboat Bertrand sunk to the bottom of the Missouri River in 1865. In 1968, canned food items were recovered from the wreckage including; peaches, oysters, plum tomatoes, honey, and mixed vegetables. The chemists at the National Food Processors Association (NFPA) analyzed the products for bacterial contamination and nutrient value. The food had lost its fresh appearance and smell. However, there was no microbial growth and the food was determined safe to eat. Significant amounts of vitamins A and C were lost, but protein and calcium levels remained high.

NFPA chemists analyzed a 40-year-old can of corn from a California basement. The corn looked and smelled like recently canned corn. It was safe from contaminants and maintained most of the original nutrients. The U.S. Army conducted a study which revealed that canned meats, vegetables, and jams were in an excellent state of preservation after 46 years.

We are not advocating storing foods for long periods of time. The point we are trying to make is that food is edible long past the date printed on the can. As a rule, rotating food storage is the best way to receive optimal quality and nutrients from the products. We purchased a few too many cans of peaches during a case lot sale one year. The first year the peaches were firm and delightful. As the years passed, the peaches became softer and mushier, but maintained the flavor.

The "best if used by" date is the length of time food retains most of its original nutrients and quality. "Life sustaining" self-life is the length of time food will preserve life and is still edible.

- Minerals and carbohydrates do not change significantly during storage.
- Proteins can deteriorate and denature. Fats can go rancid by developing off odors and flavors.

Rotating food storage is the best way to receive optimal quality and nutrients from the products.

- Vitamins may be destroyed by light, heat and oxidation.
- Calories are not destroyed during extended storage.

Do not let the date on shelf-stable food products discourage you from stocking up on a good supply of commercially canned products. They are perfect for maintaining a supply of foods which are easy to prepare, require no fuel to consume, and add great diversity to a diet. ●

— LESSONS FROM THE —
SCHOOL OF HARD KNOCKS

THE GREATEST INVENTION IN THE WORLD!

By Clod B. Hopper

(Name changed to protect the guilty)

Growing up I have often heard school teachers say that you learn the most from your own mistakes. There is also a proverb that says "A wise man learns by the mistakes of others, a fool from his own." So which way is the best method to learn from, your own mistake or someone else's? Either way, a mistake can be expensive, and in an emergency it could even be dangerous, disastrous, or life threating. So, please learn from my mistake before an emergency hits home with you.

Greatest Invention in the World

Have you ever wondered what the greatest invention of mankind is? A couple of things come to mind; space rockets, planes, electricity, automobiles, refrigeration, TVs, and microwave popcorn. Pick what you want, but there is one invention that I personally believe tops every single invention of mankind. It's the toilet and toilet paper!

You're probably thinking, the toilet and toilet paper is the greatest invention? You are also thinking this guy must be crazy! Well just think back to when you really needed a restroom and there was not one available. Got that in your mind? Now think back to when you were in a public restroom doing your business and you realized that the toilet paper dispenser was empty. What did you do?

Being without a toilet and toilet paper is just plain uncomfortable and scary. It's something we don't like to talk about. Now be honest, you know that I'm right. If you still are not convinced, just wait till the next time you are stranded without either, you will be the first to realize that I'm right. I will share with you an embarrassing learning experience I had with emergency sanitation, so hopefully you won't have to learn the hard way.

Old Timers Sanitation

I come from pioneer stock. Some of my ancestors left the old world and came to America, got covered wagons

You may have seen the toilet seat in the camping section. They are black plastic and have a lid. Put together, they look like this.

and headed out west for free land. My parents both grew up on farms. My mother's parents' dairy farm was out in the country and she grew up in the late 30's and early 40's without electricity or indoor plumbing (for you younger people that means an outhouse). Just after WWII the family moved from the old homestead up to the "big house" with all the modern conveniences. Visits to my grandparents' farm was always an adventure. I would explore the old homestead and loved to throw rocks at the old outhouse, which had become home to wasps and hornets by the thousands.

Based on my heritage, I figured I was made of pretty tough stuff and could handle any outdoor bathroom challenge in an emergency. Besides, I was an Eagle Scout and had used "cat holes" in the woods often on camp outs and hunting trips. I had taken my wife and children camping at National and State Parks with both improved flush toilets and unimproved "hole" toilets that smelled really bad (you know the ones I'm talking about) but we survived the weekend.

But even with this background, as I was watching scenes of national emergencies (earthquakes in California, tornados in the plains states, and hurricanes on the coasts), I began to realize that I was unprepared in the sanitation department. I could not imagine my wife and girls squatting over a small hole in the backyard if there was an emergency. Not pleasant to think about is it?

I began researching about sanitation and I learned that more people will die or get sickened from diseases spread by improper human waste disposal than the actual emergency. I also learned that diseases are spread by water contamination (that's why a water filter is so important), flies, rodents, and human touch.

The Wrong Way to Do Sanitation

In current day Africa, in some countries, the sanitation problem is handled with "Flying Toilets". What's a Flying Toilet you ask? Well, I will tell you. You do your business in a plastic bag, tie the top and let it "fly," thus the term "Flying Toilet". You are probably thinking, come on Clod, you're joking. Well look it up on the internet for yourself if you don't believe me.

Flying Toilets do not solve the problem; it only moves it as far as you can fling the bag and its contents. Once the plastic bag rots or tears it is an open sewer. Just imagine if Americans starting doing Flying Toilets in an emergency situation. Soon there would be Flying Toilet wars as everyone flung their dirty business plastic bags over the fence into the neighbor's back yard. A retaliation strike would soon follow with new bags, plus your own, coming right back. This would continue until the bags finally broke. You think that the Hatfield's and McCoy's feud or the Cold War with Russia was scary? Flying toilet squabbles in an emergency would make both of those events look like a church picnic on a lazy, August, Sunday afternoon.

One Solution

So what was the solution? I saw on the internet that many people had suggested a possible solution. So I jumped in the old pickup and went right down to the local Big Mart store and got me a five gallon bucket, some heavy duty trash bags and an emergency toilet seat. You may have seen the toilet seat in the camping section. They are black plastic and have a lid.

But the thought of sitting on this in the backyard was downright embarrassing! What would my girls do? No privacy. Just a shelf away was the answer - a camping outhouse tent. So I bought it.

Wow, I had an outhouse, a bucket and a toilet seat, and unlike my ancestors I didn't have to break a sweat digging a deep hole. I packed the 5 gallon bucket with toilet paper. It was all compact so I could easily carry it in an emergency. I was set. It sure beat the outhouse my grandparents had!

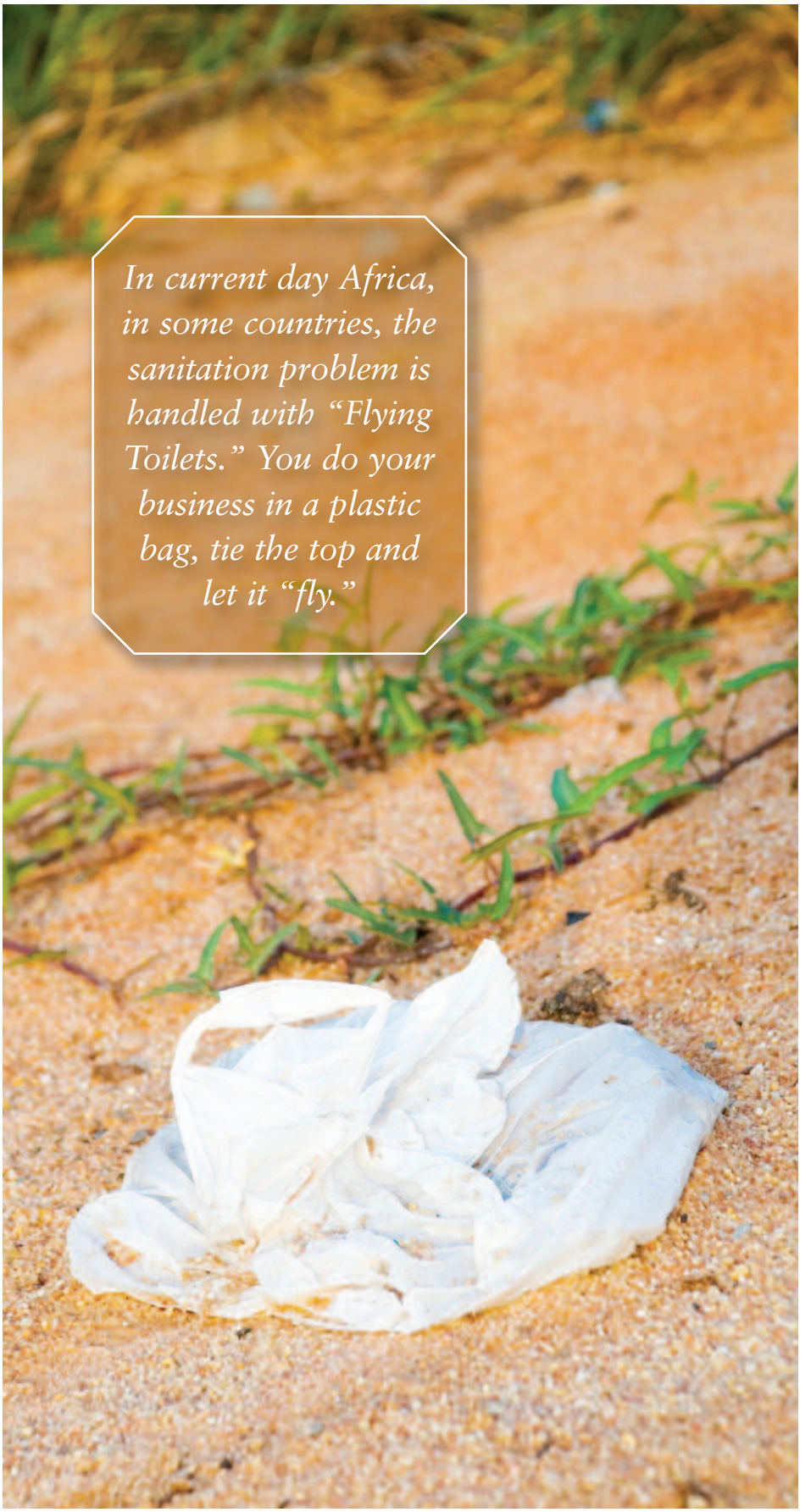
My plan was very simple. I would just do my business in my modern nylon outhouse, on a modern plastic toilet seat, on the plastic bucket with a plastic bag in it. Once full, I would tie off the plastic bag and, like a gentleman, put it in the garbage can or later dig a hole depending on how long the emergency was and given the weather conditions.

I was now *prepared* - bring on the emergency, I thought. My sanitation solution was on the basement shelf, ready for me to use.

The Experiment

After Katrina, in 2005, I really began to wonder how prepared I really was as I watched all the real life horror scenes of people trapped or homeless. You have often heard about doing an emergency drill. Well, I convinced my wonderful wife to do a week long drill that October. It would be just like camping in the backyard, I explained. We still needed to harvest a lot of garden produce. So we could kill two birds with one stone. We would only go into the house when we really needed something. We would make a list of what we needed and buy extra. This would be a great learning experience. She hesitantly agreed.

We both took a week off work. The plan was to start on Friday afternoon, go over the weekend and the coming week and clean up on the following



Saturday. The youngest child was away at college. This week would be like a hillbilly honeymoon.

On the first Friday after work, we put up the tent and the neat little nylon outhouse. October in the Intermountain West is wonderful. We have warm days and chilly nights. Our first evening was nice, Dutch oven cooking, relaxing around a fire pit and listening to the sound of crickets and the crackle of the fire. No TV, cell phones or the hum of florescent lights. Just like camping, without all the driving and packing. As I sat in my folding recliner watching the flames of the fire, I thought that I should have done this more often.

Around 11 p.m., before climbing into our sleeping bags we both used the outhouse to tinkle. Piece of cake for me - standing up and aiming for the bucket was easy. Being the gentleman I was, I took the whole seat right off the bucket. My wife said that the bucket was unstable but she survived. I did make a mental note that when it got dark, holding a flashlight and going to the outhouse at the same time could cause problems.

The next morning we got up and moved about quickly because it was really chilly with frost on the grass and tent. We had breakfast and practiced some outdoor cooking skills. The day was clear and the sun soon warmed the morning chill away. By 9 o'clock it was hot. About 10 o'clock the call of nature came to me. The outhouse door was facing the east toward the warming sun. The door was open and the lid on the seat was up. I stepped in, zipped the door closed, undid my pants and began to sit down. My first thought was that I need a taller, six gallon bucket instead of the five gallon one. Being six feet tall, I found that the five gallon bucket was pretty low.

Experiment Gone Bad

As my tender white rear-end touched the black toilet seat, I got the shock of my life. I got barbequed! The black plastic seat was searing hot. I've been sunburned many times in my life, but never on the tender back side. The pain

was somewhere between the zing of the electric fence and the zap of an electric cattle prod. Don't ask how I know the difference, but I will tell you that young boys on a farm do a lot of dumb things when they get together to see who is the toughest.

Anyway, I let out a yell and was trying to unzip the outhouse door so that I could get some cold water on my BBQ flesh as fast as I could, at the same time trying to pull up my pants. My dear, wonderful wife came running thinking I must have been stung or bitten by something or cut myself while playing with one of my knives.

Still don't think that the toilet and toilet paper is the greatest invention in the world? Well I dare you to live a week without them. I double dare you!

Talk about a funny smile on her face while she tried smothering a laugh that was forming while I excitedly explained what had happened to my tender backside. I called timeout and ran into the house to the bathroom and checked my rear end out in the mirror. Yup, I was BBQ. I had a red line, just like those grill lines you see on a nice tender steak hot off the grill. This was no laughing matter! My pride and rear end were hurt! All thoughts of doing my business had vanished. I got some Aloe Vera, gently put some on, pulled up my pants like a big boy and went outside like the man I was. I made a management decision and announced it loudly. "From now on, the outhouse door will be zipped up at all times and the toilet lid will be put down so that no one else will suffer like me". That said, I closed the lid on the toilet and zipped up the door and went about digging potatoes from the garden all the while nursing my burnt pride (and my backside).

Second Try

Later, in the early afternoon, the call of nature came again; more urgently this time. I was tempted to come up with some excuse about something I needed in the house and sneak into the bathroom without my darling wonderful wife getting the wiser. But since I wanted this to be a learning experience I toughed it out and headed to the outhouse. Unzipping the nylon door, I gently touched the lid with one finger like I was testing a hot stove. It was warm but not hot. I lifted the lid and again, cautiously, touched the seat. It was cool; not the searing heat that I had experienced that morning.

Sitting down I realized that my first thought had been right. This toilet was mighty low. I also discovered that it was wobbly. Boy, it was really unstable. Thankfully, I didn't tip over. The nylon sides of the tent would not give you any additional support if you needed it. The nylon outhouse was tinier than an airline toilet restroom. But I managed to do my business, closed the lid, zipped the door, and washed my hands.

Unpleasant Odors

Later that afternoon I realized that my backyard outhouse smelled just like the National Forest "hole" toilets and had attracted all the neighborhood flies. I had to come up with a solution before my neighbors called the city sewer department about a sewage problem. I got my shovel, walked to the garden, got some soil and went back and covered the business. Boy, the art of outhouses was harder than I thought. Flying Toilets were now beginning to make sense.

I quickly realized that the bucket solution could work, but if an individual was older, sick, heavy set (obese), a young child, or not physically strong, the outhouse and bucket system would simply not work. It is just too unstable. My experiment was also in the fall not in January in the freezing cold of winter.

We learned a lot that week. We survived, but I never did see my wonderful wife inside my nylon outhouse. I have a sneaking suspicion that every time she called time out and went into the house for some pan or something, the porcelain throne was used.

Lessons learned:

- You are not as tough as you think
- It is easy to get hurt
- Test out your preparedness tools and products before you really need them (practice)
- Consider your family's physical condition in your preparations
- Think about the sick, the old, the children and the physically weak
- Remember that lighting in out houses at night is essential
- Get a woman's perspective, it's way different than a man's
- Consider the weather (rain and cold or searing heat) in your preparations
- We take for granted the necessities of life
- Always have the outhouse door face north or south.

So what will you do in an emergency when the sewer system is down? Do you think you can survive? Still don't think that the toilet and toilet paper is the greatest invention in the world? Well I dare you to live a week without them. I double dare you!

Next time, I will give you some additional lessons learned as I tried to improve upon my nylon outhouse.

By the way, Rod Stewart's song "Hard Lesson to Learn" makes more sense to me now.

Rod Stewart "Hard Lesson to Learn" Lyrics

And it's a hard lesson to learn
my friend
Hard lesson to learn
Sometimes you gonna get
what you want
Sometimes you gonna get burned
Sometimes you gonna get
what you want
Sometimes you gonna get burned

TACDA Annual Conference Review

The American Civil Defense Association's annual membership meeting and conference was held on Saturday, October 12th, 2013. We express our appreciation to the amazing speakers who took the time to present valuable information to our members and others who were in attendance.

Presentations included the following:

"Iranian Nuclear Weapons Issues" was the opening presentation given by TACDA President Dr. Gary Sandquist. Interesting facts on events and great motivation to prepare.

"Social Media and Emergency Management" was the topic presented by Bruce Curley, a new member of the board. He discussed the key role that social media plays in disaster communications and how emergency management, as well as individuals, can utilize social media as a highly valuable tool in disaster situations.

"Disaster Mitigation through Psychological Preparedness" was a great subject presented by Jay Whimpey. You can read the meat of his presentation beginning on page 21 in the 2012 issue of the *Journal of Civil Defense*. Very interesting information which may make the difference between death and survival for you and your family.

"Death by Dehydration or Dysentery—or Not" presented by Jonathan and Kylene Jones, reviewed the importance of providing clean drinking water in emergency situations. Water storage techniques were discussed along with disinfection techniques and filtration systems.

"Innovations in Sheltering" held the audience captive as Sharon Packer presented a wonderful presentation on innovations which have been made in sheltering to make them into very nice living spaces, almost like a vacation home. Basic principles of sheltering have not changed much. If you have questions about building a shelter, contact Sharon. She is a wealth of great information.

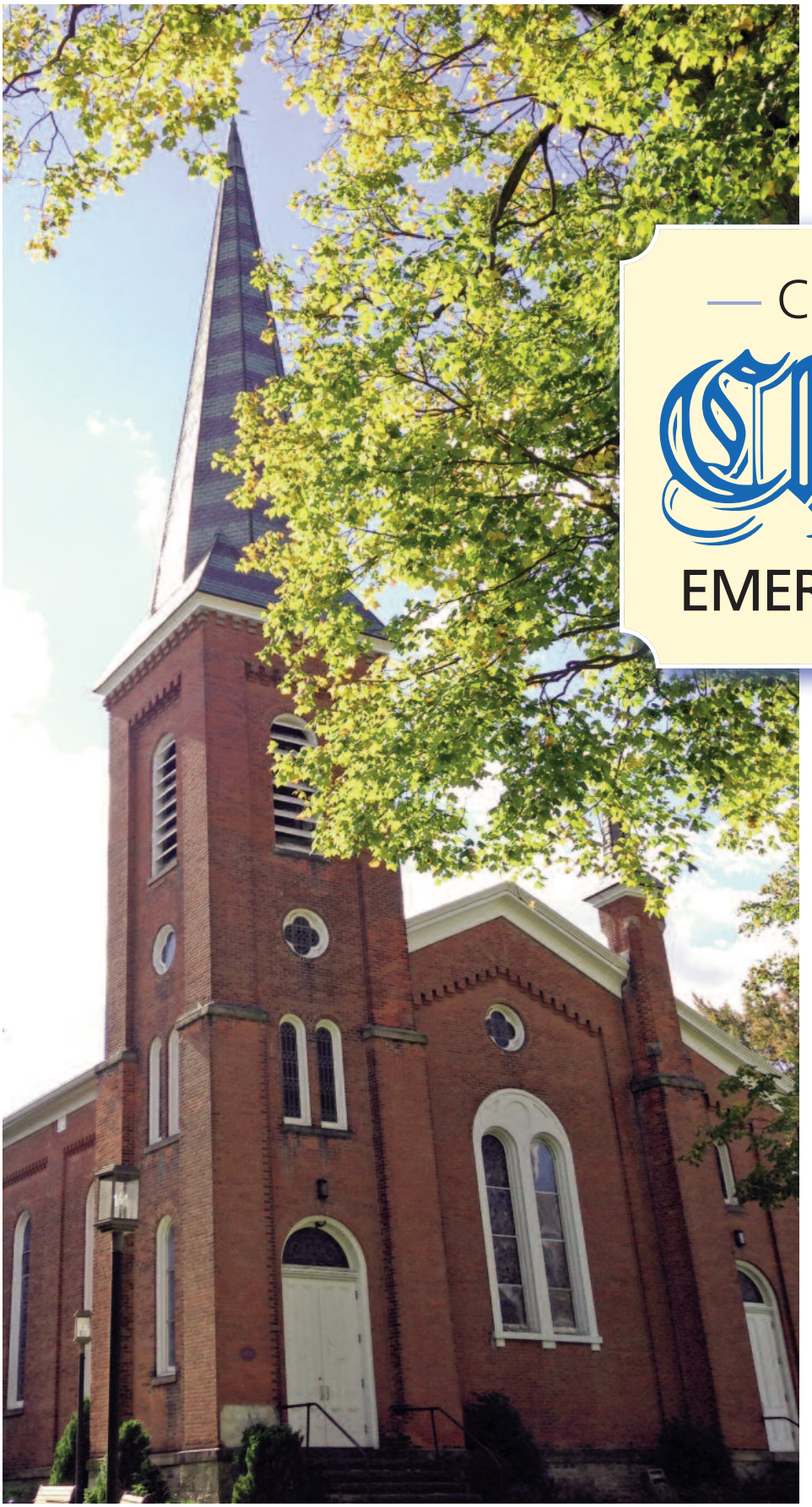
"Middle Eastern Update" was the final presentation of the conference delivered by Jay Whimpey. There is a great cause for concern as we monitor the progression of events in the Middle East and other areas of the world. Now is a great time to make sure you are ready for whatever challenges lay ahead.

Don't miss next year's conference! ●

— Save the Date —

2014 TACDA CONFERENCE

Saturday, October 11, 2014



CREATING A Church EMERGENCY PLAN

By Bruce Curley

In the early 1980's, I visited Emergency Operations Centers (EOCs) throughout the United States. The best ones were located in Texas and Utah. Texans face the most frequent and dangerous threats and therefore must rise to the event. The Mormons are survivalists, as part of their religion, and due to their history. Otherwise, most Americans are unprepared for an emergency, a state of affairs still, sadly, true today.

One of the most unprepared are churches and churchgoers.

In hopes of changing that, this article includes a template from my church emergency plan that you might use to help your church prepare for emergencies. Over a thousand people downloaded this plan on the former Google website Knol (a unit of knowledge) before that site was taken down, so it may offer something you can use.

I wrote it for my church (St. Michael the Archangel Catholic Church in Poplar Springs, MD). It was written

to be used by my fellow parishioners, but the concepts apply to all religious institutions who want to be prepared, *in advance*, to successfully deal with the multiple tentacles of the threat index.

I wrote this and gave it to Father Mike, the leader of our 1,450 family parish. He, in turn, gave it to the Parish Council (a 12 member group that helps set the policy and manage the finances, groups, and programs for the parish). They, in turn, gave it to the two directors of religious education to implement.

Your structure will be different, however, the threats you face are similar. I offer a few "What If's" here to get you thinking.

- What if a distraught father who lost custody of his three children shows up at Sunday religious education classes with a hand gun and demands that the volunteer instructor hand over his child? What does your volunteer do?
- What if a bad storm suddenly turns worse and, unlike what the weatherman said, shows a tornado cloud forming a quarter mile outside the religious education building where hundreds of young children, and dozens of volunteers, are teaching the tenants of the faith?
- What if the sky turns ugly and the few inches of snow that were predicted change to a snowfall of 24 inches while your students are in class, and worried parents begin to show up demanding to be able to get their children and leave?

Sound unlikely? I know of instances of each of these...and more. And this is before we even consider fire, hurricanes, shootings, and the repeated statements of multiple jihadi websites that they plan to hit "soft targets" like churches and religious education classes in the West as soon as they can. Given the torture, mutilation, rape, and death Al-Shabaab just dealt at a shopping mall in Kenya, we should take them at their word.

Granted, you are more likely to face the demands of a snowstorm, flood, fire or deranged spouse than Al-Shabaab, but this emergency plan template is created to handle the entire threat matrix, be they bad weather or bad people.

When Father Mike asked me to create an emergency plan for the families of our parish, I wrote:

"In response to your request for beginning a safety and emergency preparedness plan for the church, here are a few ideas. I tried to provide what is useful, practical, and mostly free. This is a process that will take some time. It is an all-threats approach (jihads, hurricanes, fire, shooting). Hope this is a good beginning."

Father Mike, like any one in authority in a religious institution, has hundreds of competing demands on his time and talent. I know I am one of many. Therefore, I waited until a real threat was on its way (Hurricane Irene in this case) and presented him with an emergency plan I had been thinking about and writing for years.

Father Mike, the parish council, and most importantly the religious education directors found it useful. It took about two years, but we have a number of measures in place and a parish emergency plan to deal with an emergency now. For that, I thank God.

Personal, Fire and Security Awareness

First, we completed a survey of personal, fire, and security awareness measures to see what we had in place and what we needed to implement.

Take a comprehensive approach to address personal, fire and security situations. Emphasize what is unique about each, but that common strategies for handling them exist. You will need to develop this plan. It should include:

- Fire – what to do and how to do it
- What to do if a distraught parent shows up (custody battle where the non-custodial parent tries to kidnap the child)
- Sexual predators – how to identify them, how to keep them away
- Angry parishioner out of control
- Mentally unbalanced individual
- Criminal entering the building – obvious and not so obvious
- Weather emergency
- Natural Disaster

Communication

Effective, efficient and working communication is vital to all emergency plans. We figured out what we had and what we needed in the event of an emergency. Church attendees are fluid. You cannot assume volunteer teachers know each other, even for those who have taught children in a classroom right next to each other for years. Here is what we created:

- Cell Phone Broadcast Message – Before an event, create a list of the cell phone numbers of all parents. Use this list to do a broadcast email or text message if weather or an emergency warrants it.
- Teacher to Teacher – Have teachers exchange their phone numbers with the teacher closest to them when they teach.
- Staff to Staff – Have staff members exchange their cell phone numbers with the staff member that is closest to them.
- In Case of Emergency (ICE) – ICE is a program that enables first responders, such as paramedics, firefighters, and police officers, to identify victims and contact their next of kin to obtain important medical information. Staff should program their emergency contact numbers on their cell phones.
- Telephone Contact List – Collect cell, home, work phone numbers and email addresses of all staff and vol-

unteers. Create a one page table with name, cell, home, work phone number and email. Distribute the list to all parties listed, Father Mike, and other relevant parties.

- Emergency Contact List – In addition to 911, add emergency fire, ambulance, and police phone numbers to a list for Carroll, Frederick, Howard and Montgomery Counties. When you call 911 in this area you waste valuable time explaining what county you are calling from, only to be transferred and transferred again. Dialing the direct number will avoid that problem.

First Aid

Basic first aid saves lives. Teach as many first aid techniques as possible.

- Teach staff, volunteers, and coaches basic first aid – Enlist a nurse volunteer to teach them, or have the Red Cross teach them during the blood drive.
- Distribute basic first aid kits – Store larger first aid kits in the large rooms (church, gym, cafeteria, and library) and smaller first aid kits in each classroom.
- Defibrillators – Purchase at least one and place it at the entrance where it can be reached from all areas.

Weather

Sign up staff for the Emergency Email and Wireless Network. Get notified of an emergency by email, cell and pager. Most emergency notifications will be about the weather, but this system will also notify staff of national and regional emergencies. Go to http://emergencyemail.org/ to sign up.

Emergency Supply Kits

Purchase and distribute basic emergency supply kits. Many kits are available online. One good source is the TACDA Store at http://www.tacda.org/store/index.php.

The items listed here are just suggestions. You will have to decide what is necessary, practical and useful. I believe that whistles, water, and food are the most basic and absolutely necessary. Purchase the rest as money permits. (See: http://poetslife.blogspot.com/2012/10/church-emergency-plan-template.html for a complete list.)

Continuity of Operations

Churches, and church employees, are not always the most technology savvy. This is usually because their daily tasks, those of helping to save others morally, physically, spiritually and emotionally leaves them little time to save and backup data and documents. Understandable, but a critical mistake. Here are a few ways to overcome that disaster recovery deficiency:

- Store vital documents in a fireproof box.
- Store critical computer data on backup hard drives.
- Keep backup hard drives at a secure location.
- Give staff a memory stick. Have them keep their own critical data on that memory stick.

Special Needs

Seniors, disabled people, and children have special needs, especially in a power failure or disaster. Using common sense, try to plan for and meet their needs. For example, keep back-up generators for power failures and diabetic foods ready.

One tool to extend the life of refrigerated or frozen items during a power outage is frozen WaterBricks (www.waterbricks.com). WaterBricks are a great way to store water, food, even ammo, or to build furniture or shelter when needed. Most importantly, these bricks can be frozen. If you need to keep insulin cold for a diabetic, they can be a lifesaver during the first few hours and days of a power outage.

> Pray. Pray always, and if you don't, an earthquake and major hurricane within one week should make you begin.

Young children also have special needs. Keep a few stuffed animals, toys and games around to occupy them in an emergency.

Ongoing Communication and Encouragement

The immediate threat at my church was a hurricane. With the help of our church secretary, an email was sent to all our parish members in an effort to provide information on preparing for the event. It included these helpful websites to track the hurricane:

http://www.reuters.com/subjects/hurricanes/hurricane-tracker
http://www.vuetoo.com/vue1/SituationPageNews.asp?sit=7565&ref=anm
http://www.accuweather.com/blogs/news/story/54158/hurricane-irenes-impacts-on-ea.asp
http://meteorologicalmusings.blogspot.com/

Even with an emergency plan in place and exercised several times, we may not have even reached ten percent of the parish families. Therefore, when Hurricane Irene was two days away and people were most receptive, we sent out the following email to all church members on our mailing list:

"Here is some information from our parish emergency preparedness expert:

Prepare spiritually and physically. Pray. Pray always, and if you don't, an earthquake and major hurricane within one week should make you begin. Here is how you may prepare physically:

Hurricane Irene is forecast to impact the State of Maryland this weekend. Although there are still uncertainties in the final track of the storm, we urge all residents to begin to prepare now. Please remember that this is a large and powerful storm and it will not need to pass directly over Carroll County to cause heavy rainfall and high winds. You can

receive up to date information on Hurricane Irene directly from the National Hurricane Center at http://www.nhc.noaa.gov and your local National Weather Service office at: http://www.erh.noaa.gov/phi/. Also, see the VueToo and Meteorological Musings (Mike Smith) link below.

Additional information can also be found at: https://www.facebook.com/notes/cecil-county-department-of-emergency-services/hurricane-irene/ 266632026697500.

Please consider the following items as you prepare for Irene.

- Make sure your family, friends and other important phone numbers are available.
- Know where your family, friends and neighbors are in case you need them or they need you.
- Have emergency supplies ready *before* the storm.
- Check your emergency kit. Learn more about what to keep in your kit at http://www.ready.gov.
- Ensure that insurance information is current and stored in a safe location.
- Secure any outdoor items.
- Check and clear rain gutters and drains.
- Check the serviceability of sump pumps, if your home has one.
- If you must leave your home, do not cross flooded roadways.
- Ensure that you are registered to receive emergency notifications from the Department of Emergency Services at http://www.ccdes.org.

Hurricane Irene updated strike path info and situation...
http://www.emergencyemail.org/newsemergency/anmviewer.asp?a=1352&z=1
MEMA Maryland
http://www.mema.state.md.us/MEMA/index.jsp
http://www.vuetoo.com/vue1/SituationPageNews.asp?sit=7565&ref=anm
http://www.accuweather.com/blogs/news/story/54158/hurricane-irenes-impacts-on-ea.asp
http://meteorologicalmusings.blogspot.com/

If you smell gas or suspect a gas leak:

- Leave the area immediately and go to a location where you no longer smell gas, and report the leak by calling 911 if fire rescue is not already on the scene.

In any event, *do not*:

- Light matches or smoke. Avoid use of all open flames.
- Try to locate the source of the gas leak.
- Use any electrical device, including cellular phone, iPods, etc.
- Turn light switches on or off.
- Re-enter the building or return to the area until it has been declared safe to do so by fire rescue personnel."

Did people heed the warning? Well, if you have been at this as long as I have (38 years) you know you get one compliment for every hundred complaints. I will say that when I went around with the Mayor of Mount Airy checking on senior citizens and others after Irene swept through, my mind was more at ease knowing that many additional families were prepared due to these efforts. My fellow parishioners shared that they had felt safer knowing what to do. That was its own reward. ●

A Citizen's View of Typhoon Recovery in Philippines

This is a message sent from a woman from the Philippines to her friend in the United States. The information is quite eye opening.

"Please tell your parents that I'm thankful for their concern. My family is blessed as they are safe and sound and their homes are still standing. They were just left with no power and water during this ordeal. They waited out the storm in a hotel and returned to their respective homes only when power and water were restored.

However, the devastation is massive. In Cebu, where my family is from, there were a lot of people found dead and property loss is extensive. The Cebu provincial government and community leaders immediately organized relief efforts for those badly affected who lived where the eye of Haiyan passed – the northern part of Cebu. However, in Tacloban (Leyte) and neighboring towns the devastation is horrific. There was lawlessness as everybody became victims. The policemen, government officials and the like were all victims. Government buildings were ruined and nobody can do their duties as they were rendered homeless, as well. It is very sad to see bodies lined up on the streets.

Anyway, I heard that relief goods have been arriving there although not fast enough. Some Filipino doctors from here went to Tacloban for a medical mission. There were five provinces (states) affected and are now in ruins. But the worst hit is Tacloban and its neighboring towns. If you want to help, please make a donation to the Red Cross. Specify that it is for the victims of Typhoon Haiyan in the Philippines. Otherwise, it will go to their general fund. Thank you so very much. I love you all, too, and hope to see you again in the near future.

Take care,
P."

Emergency LAUNDRY Management

By Jonathan B. and Kylene Anne Jones

Some days feel like crisis laundry management even without a big emergency. Every time our family experiences the flu or returns from a camping trip, our appreciation for a working washing machine is renewed. What would you do if you did not have enough water to use your washing machine? What if water was available, but no electricity?

Our children would not mind wearing the same clothes 24/7 and we could probably make it through a short-term crisis without worrying about laundry. But what if the crisis outlasts our clean wardrobe? How do we clean bedding? We would all smell horrible before too long.

The important consideration in a crisis is removing body fluids, sweat, odors and dirt, not stains. As with any preparedness option, there are inexpensive and expensive options. Explore your options and select the one that works best for you.

Grandma's method has been used successfully for hundreds of years. It is an old fashioned concept that still works. Use whatever containers are available and adapt her method to your circumstances.

- Sort clothes into lights and darks, similar fabrics, special handling, and level of dirt.
- Start with the dirtiest clothes first, add one cup of bicarbonate of soda, or laundry ammonia. The water should feel slippery when you rub your fingers together.
- Use three large tubs. One for washing and two for rinsing. Place the tubs on a bench to save your back. This can be done with only one tub. Wash each load one by one, set them aside, then get fresh water and rinse each load one by one, then get more fresh water to rinse each load again. Three tubs is nicer because a wringer can be placed in between them.
- Initial wash is accomplished by pouring three buckets of warm water into the first tub containing the washboard, Stand behind the board, lean over, and rub with an "up and down" motion working the dirtiest areas.
- Place the white clothes in a kettle of clean water for boiling. Pour soap over the clothes and fill with enough clean water to cover everything. Boil for 10-15 minutes, poking the clothes down in the soapy water from time to time. Fish out the clothes with a stick and put them into the first rinse water tub, then transfer into the second rinse tub and wring.
- Scrub colored clothes in the wash water heated by the soapy white load. Do not boil colored clothes as it will damage them.
- Hang clothes on the line to dry. Remove clothes as soon as they are dry. Sun and wind may damage fabric.

The Wonder Washer is a type of pressure washer. It is about the size of a 20 pound propane tank. Maximum capacity is a little less than five pounds of laundry. You add three quarts of water, two tablespoons of soap, and then add laundry. The tank is turned manually by a handle. There is a drain at the bottom. The process is repeated until the clothes are rinsed and ready to dry.

The bucket and plunger method is a pretty effective way for doing laundry short term. Dirty clothes, water and detergent are placed in a bucket with a hole cut in the lid to accommodate a plunger. The plunger is used to agitate the clothes. A quality toilet plunger with a few holes drilled in the top will work, but a Rapid Laundry Washer works better. It has internal baffles that sends water through the close to flush out dirt. Other popular laundry plungers are; Breathing Hand Washer and Washer Plunger.

The Laundry POD is a non-electric washing machine that resembles a salad spinner. The washer sells for a little less than one hundred dollars. It washes small loads and takes one gallon of water to wash a load. The water is drained out the bottom and clean water is added through the top to rinse.

The Sailor's Method uses a black garbage bag to wash the clothes. Apparently sailors would fill a black garbage bag with dirty clothes, water, and soap. The black bag took advantage of the sun to heat the water and the ship's movement agitated the wash. We could see adapting this a little by gently pressing on the bag to agitate the clothes. This might be a practical method for washing large items such as comforters, blankets or sleeping bags which will not fit in five gallon buckets to be washed.

An old fashioned clothes line is an effective way to dry laundry. Exposing the clothes to the UV rays of the sun may fade fabric, but it will also help disinfect the laundry. If you are using diapers, reusable toilet paper, or anything which may have retained germs, leave it out a little longer to help disinfect the fabric.

Laundry can also be dried indoors. Increase ventilation to promote drying and prevent moisture from building up. Indoor drying racks come in a variety of shapes and sizes. They make drying more convenient and take up little space. Clothes can be dried by hanging over chairs or doorways if needed.

Take a moment to consider how you would clean your laundry with limited water or without power. A few simple tools tucked away now can simplify the process later and make it much more pleasant to be around each other. ●

Additional thoughts on

Saudi Arabia

Nov. 14, 2013

By William David Perkins,
TACDA Board Member

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There appears to be a major rift in relations between the United States and Saudi Arabia.

The following is my opinion of what has happened and why we should be concerned.

King Abdullah of Saudi Arabia was good friends with Mubarak of Egypt and was angry when the U.S. withdrew support for Mubarak and supported the takeover of the Muslim Brotherhood. Saudi Arabia then supported the Egyptian military overthrow of the Muslim Brotherhood.

The Saudi's wanted the U.S. to intervene in the civil war in Syria. They say our State Department led them to believe that we would, and they were displeased when we backed out.

Iran is the arch enemy of Saudi Arabia.

There are two main branches of Islam, the Sunni and the Shia or Shi"ite. Saudi Arabia is a majority Sunni country and Iran is a majority Shi"ite country. The division between the Sunni and the Shia dates back to the death of the Prophet Mohammed, as to who would assume the leadership of Islam. They are very concerned with the ongoing negotiations between the U.S. and Iran. They believe our negotiations have been both weak and naïve and Iran could have nuclear weapons within months.

The BBC reported on Nov. 7, 2013 that the Saudi's have been financing the Pakistani nuclear weapons program with the understanding that some weapons would be stored in Pakistan for the Saudi's and would be available for shipment to Saudi Arabia on short notice. Several years ago they purchased missiles from China capable of delivering a nuclear weapon.

My most important concern is what might happen to the petrodollar. In 1973 the U.S. struck a deal with Saudi Arabia that they would only sell oil in U.S. dollars. In return the U.S. would sell them weapons and would protect them from their neighboring nations. By 1975 all of OPEC had signed on to that agreement. This agreement required all nations purchasing oil to have U.S. dollars to make the purchase. This solidified the U.S. dollar as the world's reserve currency. Should the rift in U.S. and Saudi Arabia relations continue to deteriorate, the Saudi's may decide to accept other currencies for the purchase of oil. This would have an immediate and devastating effect on the dollar, the bond market, and the U.S. economy.

Our relationship with Saudi Arabia is not the only challenge we face in the Middle East. In the past few years our relations with Egypt, Turkey, Pakistan, and Israel have become more tenuous. So in some ways the Middle East has not changed - it is still unpredictable. ●

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