



# Journal of Civil Defense™

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# TACDA Board of Directors “Up Close”™

In this issue’s Spotlight column, we would like to introduce you to one of the newest members of the TACDA Board of Directors, Dr. Gary Sandquist.



**Gary M. Sandquist, Ph.D.**

A few of Gary's credentials include:

- \* Distinguished Visiting Professor - Department of Civil & Mechanical Engineering, U.S. Military Academy
- \* Former Director of Nuclear Engineering Program, University of Utah
- \* Adjunct Professor of Civil Engineering, University of Utah
- \* Professor, Affiliate Faculty, Idaho State University, Pocatello, Idaho
- \* Registered Professional Engineer (Mechanical Engineering: UT, MN, NY, Nuclear Engineering: CA)
- \* Former NRC Licensed Senior Reactor Operator (U.S. NRC)
- \* Nuclear Science Expert for United Nations, International Atomic Energy Agency (UN-IAEA)

Dr. Gary Marlin Sandquist, retired U.S. Naval Reserve (USNR) Commander, was born April 19, 1936 in Salt Lake City, Utah.

His academic accomplishments include a B.Sc in Mechanical Engineering (Univ. of UT, 1960), an M.S. in Engineering Science (Univ. of CA at Berkeley, 1961), a Ph.D. in Mechanical and Nuclear Engineering and a Minor in Mathematics (Univ. of UT, 1964), an Executive-Masters Degree in Business Administration (MBA, Univ. of UT, 1995), as well as Postdoctoral Fellow in Nuclear Engineering (Massachusetts Institute of Technology, 1969 - 1970).

Through the years, Dr. Sandquist has served as technical consultant to industry, universities, state and federal government agencies, and many other technical organizations. He has also contributed to the scientific and technical communities with more than 600 publications & presentations in nuclear science, engineering, energy, health physics, & environmental sciences.

He has been involved in extensive research in the areas of Nuclear science & engineering, Safeguards and nonproliferation issues (IAEA), Risk assessment, Reactor physics, Health physics, Nuclear research reactors, Applied math & physics and Environmental radiation monitoring.

He is listed in 45 directories, citations and honors including: Who's Who in America, American Men & Women of Science, Who's Who in Atoms, Who's Who in Engineering, Who's Who in Science and Engineering, Who's Who in the West, International Who's Who in Education, Who's Who in Nuclear Energy, Who's Publishing in Science, and Who's Who in American Education. He is the recipient of the Glen Murphy Award in Nuclear Engineering Education (ASEE-1984) and is a registered professional engineer in 4 states.

On behalf of TACDA, its members, and its board of directors, we would like to say “Welcome to the Team.”

*In our next issue, we will be introducing you to another distinguished member of the TACDA Board of Directors, Jay Whimpey.*

# Message From The President



Greetings to all:

First, I would like to take a moment to thank our current members for their on-going support and to welcome all of our new members. We are excited and honored that you have chosen to join us in our mission:

*The American Civil Defense Association provides information, tools and resources that empower American Citizens with a comprehensive understanding of reasonable preparedness strategies and techniques; promoting a self-reliant, pro-active approach to protecting themselves, their families and their communities in the event of Nuclear, Biological, Chemical or other man-made and natural disasters.*

As in the past, our TACDA Board and staff continue to execute this mission and are committed to provide even greater member benefits over the next few months. While there are several new member programs being explored, our online TACDA Academy is in Beta testing and several courses will be available for member review and comment by the end of November. The TACDA Chapter committee is actively moving forward in establishing formal operating guidelines to be used in launching the approximately thirty TACDA Chapters, in queue, around

the United States, by year's end. We are very grateful for the praise we've received about our re-vamped *Journal of Civil Defense* and it's more "solutions" oriented approach to disaster preparedness. It's been a challenge but we are on the right track and look forward to finalizing our format and schedule shortly. We encourage you to consider sharing TACDA and it's valuable mission with others whom you care about. Giving the gift of a TACDA Membership is a great way to teach basic preparedness principles that empower and strongly increase the likelihood of survival.

This issue of the JCD addresses emergency food and water supplies. This is a topic near and dear to my heart. There are only a handful of critical things humans truly need to survive: some type of shelter, clean breathable air, clean drinkable water, non-contaminated food, and a sense of hope and love.

Everyone is aware, at some level, of these needs. Usually, when I'm lecturing on Civil Defense, numerous questions come up regarding "priorities" and "scarcity of resources," (usually time and money). Some people are genuinely impoverished and it is difficult to even fathom the idea of creating a stockpile of food and bottled water. Some are just too busy to even give it any attention at all. Sadly, others believe that, when push comes to shove, the (the government) will be there to supply whatever they need. All of these people have not truly taken the time to STOP (Study, Think, Observe and Prepare).

Many experts recommend having two years worth of food per person in storage. Many of us on a fixed or

limited income would see this as impossible. It would be easy to say: "Why bother?" But... just imagine what would happen if you set a budget, a firm amount of money that you would invest each and every week (\$1, \$5, \$20 or whatever you could afford) towards building an emergency stockpile of food and water?

I know of a family who was down on their luck several years ago. When they reached the point when they weren't worried about being evicted, they made it a top priority to build up some food storage in the event their situation worsened. They worked everyday to earn just an extra \$5 a day for this purpose. Within forty days, they had enough emergency food to feed each of them 2000 calories a day for one month. They now have a family of six, rotate and use their food storage and continue to invest just \$25.00 per month building towards a one-year supply.

What are you able to do?

One can of stew or chili each time you go to the store, a bag of rice or wheat each month. In a pinch, anything is better than nothing. Don't be overwhelmed. Do what you can. Talk about and set a workable budget. This money isn't being thrown away; it's just being invested. We are optimists and strive to survive. Make "being prepared" one of the top priorities in your life. You and your family are worth it.

Best Regards,  
Sharon Packer  
TACDA President

*Remember, If you are prepared, you have no need to fear.*

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Alex Coleman - TACDA Journal of Civil Defense Editor

Dear Reader,

Once again, on behalf of TACDA, I would like to say thank you for your support of our efforts and for providing such great feedback to help us fulfill our mission to teach and promote civil defense concepts and solutions throughout America.



**Maximize Survivors!™**

We have made, and continue to make many improvements throughout The American Civil Defense Association (TACDA) and the Journal of Civil Defense (JCD) in an effort to MAXIMIZE SURVIVORS and fulfill our mission. We continue to work to develop TACDA and the JCD into the most comprehensive resource available for nuclear, biological and chemical threat solutions, *and will continue to do so with your help and support.*

This issue of the JCD is particularly important to each of us, regardless of our knowledge (or lack of knowledge) in disaster preparedness concepts, because, it deals with two topics that are essential to life. It doesn't really matter if you have the finest sheltering solution that money can buy, if you lack these two items. What are they?

Food and water.

Without an ample supply of food and water to see us through an extended disaster or emergency situation, all other efforts are essentially futile.

Why is it so important to establish an emergency food and water supply? What types of food should you store and how would you cook if there were an extended loss of power? How can you store enough water to sustain your family through a long-term disaster? These are just a few of the important topics that are addressed in this issue of the Journal of Civil Defense. We encourage you to spend some time in this issue and learn as much about food and water storage as possible. But most importantly, we urge you to take action and prepare in advance, while there is still time. To help you prioritize your preparedness strategies, remember the following important formula:

"Maximize Survivors" = STOP  
(Study + Think + Observe + Prepare)

**Without an ample supply of food and water to see us through an extended disaster or emergency situation, all other efforts are essentially futile.**

If we will follow this basic preparedness recipe, we will be well on our way to achieving the maximum number of survivors in the event that disaster should strike.

For the November / December issue of the JCD, we have chosen the S.T.O.P. theme of "Radiation and the Nuclear Threat". If you have any resources, stories, ideas or suggestions concerning this or any other relevant topic that you feel would be of benefit to our readers, we would love to hear from you. Please, send any feedback, comments or article submissions to us for review at [jcd@tacda.org](mailto:jcd@tacda.org). We will be looking forward to hearing from you very soon.

Even if you do not feel that you have anything to contribute toward this upcoming issue, remember that your input is very valuable to us. So just drop us an email letting us know that you are in support of our mission. That is a tremendous contribution within itself.

Once again, we thank you for your continued support and hope to hear from you soon.

Kindest Regards,  
Alex Coleman, Editor  
[alex@tacda.org](mailto:alex@tacda.org)





## FOOD & WATER

*By Sharon Packer*  
*TACDA President*

In this issue of the JCD, we have chosen to discuss food and water needs. Many people have inquired about the types of foods that can be eaten after a nuclear event. So, in this article, we will address some of the “do’s” and “do not’s” of post-nuclear survival, particularly as they relate to food and water.

Fallout from a nuclear explosion consists of tiny particles of dirt and debris fused with fission products. Alpha and Beta particles in the fallout can persist for long periods of time and will contaminate any food to which it comes in contact. On the other hand, gamma radiation from the fallout is not a particle and does not contaminate food. In fact, gamma radiation is actually used to purify food in some cases. Our challenge will be in differentiating between foods that can and cannot be cleansed of alpha and beta particles.

Most gamma radiation will not persist beyond two weeks after the nuclear event. Fruits and vegetables harvested from fallout zones in the first month post-attack may need to be decontaminated before consuming. Decontamination can be accomplished by washing exposed parts, removing outer

leaves and peeling. FEMA material has stated that most vegetables and fruits that can be washed and peeled, can safely be eaten. If the nuclear event were to occur at harvest time, you could still harvest smooth, hard skinned vegetables and fruits such as apples, potatoes, carrots, squashes, and any other fruits and vegetables you could both wash and peel. You should not harvest ‘fuzzy’ fruits such as raspberries, strawberries or peaches. Cauliflower and broccoli should not be eaten from the garden because of the uneven nature of their outer layers.

Storage of large rolls of plastic would be advantageous.

Some plants requiring calcium (such as broccoli and cauliflower) will take up radioactive strontium 90 because of its chemical similarities to calcium. If we eat the food containing the radioactive strontium, the strontium will be deposited in our bones. Liming of acid soil will reduce this uptake. If possible, in areas of significant fallout deposition, you should plant foods with low calcium content such as potatoes, grains, beans, apples, tomatoes, peppers, sweet corn,



People in areas of low fallout accumulation may be able to plant crops the next season. Small plots of land could be scraped of the upper few inches of contaminated soil and planted. The contaminated soil containing the fallout should be moved away from the garden area. It seems unlikely that there would be any large farming activities for some time. People may have opportunity to cover small garden plots with plastic before fallout arrives, generally in low fallout areas that have received no blast.

squash and cucumbers.

Storage of non-hybrid seeds is extremely important. Hybrid seeds will not reproduce quality fruit. Seeds last several years if stored covered in airtight containers in a cool, dry area. Farming implements should also be stored in a safe place and protected from blast.

The prudent will store at least a one-year supply of basic foods. See our basic list of food storage items in the centerfold of this journal.



Before opening canned foods, the can should be wiped or washed if contamination is suspected. Meats and dairy products that are wrapped or are kept within closed showcases or refrigerators should remain free from contamination. Refrigerated foods should be eaten first, then food from the freezer as it thaws, and then canned and non-contaminated packaged foods.

Crops, which are in the early stages of growth in heavy fallout areas, will absorb radioactive materials through their leaves or roots and would be difficult to decontaminate.



If possible, animals should be put under cover before fallout arrives and should not be fed contaminated food and/or water. Animals can be slaughtered for food, if they do not appear to be sick. The bones and organs, however, should be removed and disposed of before cooking the meat. The animal may have been foraging on plants and grasses contaminated with Strontium-90. Since Strontium-90 looks chemically much like calcium, the bone cannot differentiate between Strontium and Calcium, and will absorb the Strontium into the bone. If we cook the meat with the bones, the Strontium from the

bones will then be absorbed into our bones.

Eggs from poultry can be eaten. Fish from streams and lakes, such as trout and perch can be eaten. Bottom feeders such as carp and catfish should not be consumed because their food sources would be contaminated by radioactive particles.

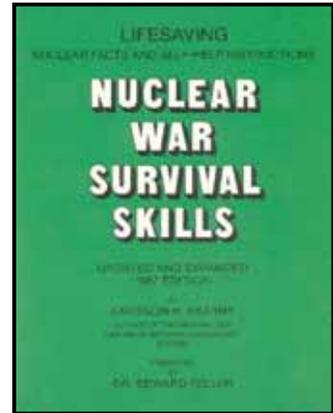
Thyroid Blocking Agents (TBA) tablets should be started as soon after the nuclear attack as possible. Consult your physician NOW, for proper dosages for you and for

each member of your family. People with thyroid problems may not be able to take TBA, therefore make sure your physician is aware of any thyroid irregularities you may have. The thyroid is always 'looking' for iodine and cannot distinguish between pure iodine and the radioactive isotope. TBA fills the thyroid with healthy iodine and prevents the uptake of radioactive form of the isotope. The thyroid will only accept iodine in certain forms. TBA is formulated with potassium and the proper isotope of iodine. Do not take iodine internally in any other form. TBA is a medicine and can cause certain side effects. TBA should

only be taken in the event of a nuclear disaster.

Well water will likely not be available during a power failure. Hand pumps which will pump from as deep as 200 feet are available through many Amish catalogs. Emergency water filtration and decontamination methods are discussed in a different area of this issue of the journal. Be creative. Drinkable water can be found in many unexpected places, such as hot water heaters, toilets tanks (not the bowl), etc.

A deficiency of vitamin C could cause symptoms of scurvy within 4 to 6 weeks. Store a year's supply of vitamin C as well as other multi-vitamins and minerals. A good expedient way to provide vitamin C is through consumption of sprouted seeds or beans. Instructions are given in the book entitled, ***"Nuclear War Survival Skills"***, which is available through the TACDA Store at [www.tacda.org](http://www.tacda.org).



We cannot overly express the importance of a year's supply of food. Many disasters, both natural and man-made, likely will cause a shortage of food or even famine. Even the most God-fearing people will often reconsider and/or **lose** all moral values when their children are starving. As always, we encourage you to be prudent and alert. Don't forget...Study, Think, Observe and Prepare.



### A Winter To Remember

Prudence was a friendly squirrel; kind, good-hearted and generous. She loved her family very much, and they loved her too. They always had lots of fun working and playing together.

Prudence decided that she better start gathering her winter supply of food, as all of the signs were pointing to an early, and extra cold Winter this year. Her Father had taught her to pay close attention to the weather, and showed her how to tell if Winter would be early or late, and if it would be colder than usual.

She tried to tell all of her friends that they should get ready too, but they did not want to hear it. After all, "winter isn't coming early this year, and we have plenty of time to gather food! Let's play!" they would say. They were more interested in playing games and having a good time than they were in going out and gathering food and supplies for Winter. After all, winter preparation was not their idea of fun.

Well, Prudence went ahead and began her preparations for winter. She gathered enough nuts and acorns to feed her entire family throughout the winter. Her family helped her gather supplies. They all worked together and got the job done. Since they worked together, they were able to gather all of the food they would need in just a few days. After everything was properly stored away, they had plenty of time to go outside and play with the rest of

their friends and enjoy the rest of Autumn.

Well, before they knew what was happening, Winter was here. The snow came early that year, just as Prudence had said it would. All of her friends began to head home to safety, but they soon remembered that they had not gathered any food for the winter. They so wished that they had listened to Prudence while there was still time.

Now they would have to go out into the horrible cold and try to find enough food to last them and their families through the Winter. It would be very, very hard and extremely dangerous. Whatever food was left out there would soon be covered over and hidden by the snow until Spring.



Since Prudence and her family took care of the important things ahead of time, they were warm and had full bellies all winter long. And, because Prudence and her family had gathered a good bit of extra food, just in case, they were able to share a little with each of their friends, who were very grateful. All of her friends made a promise that they would pay more attention to what was happening around them and that they would certainly be prepared for next Winter.

### Like Prudence and her family:

\* We should take time to learn about the different emergencies that could happen in our home, our neighborhood, our school, and anywhere else that we often go.

\* We should think about these different emergencies and talk about what we would do if something happened. Where would we go? Who would we call? What would we eat and drink? How would we cook our food and brush our teeth?

\* We should always be alert and watch and listen very closely to things going on around us. This is called being aware of our surroundings. When Prudence realized that Winter would be coming early, she was able to prepare before it arrived and had plenty of time to spare.

\* We should prepare for emergencies before they happen. We should make a list of some of the things that we might need if the electricity went out for a few days, if we got snowed in and couldn't leave our home for a while, or if any of the other emergencies that we thought of and talked about actually happened.

### Discussion Points:

1. What are some things that could happen that would force us to have to stay at home for several days, or even weeks?
2. What are some ways that we can be more aware of our surroundings, and what should we do if we sense that something is wrong?
3. What types of things should we store at our home that would help us be more comfortable if we had to stay in doors for several days, maybe even without electricity to cook, watch TV, play video games, or even turn on a light?
4. What are some ways that we can help other people realize that they should prepare for emergencies before-hand, instead of waiting until it is too late?





**EMERGENCY SANITATION**

*Todd, a TACDA member, recently asked the President of TACDA, Sharon Packer, about proper sanitation during an emergency situation. Sharon replied with the following:*

During times of emergency, when normal sanitation methods of food, water, garbage, trash, and sewage may be disrupted, it is critical that rules and procedures be established and followed, in order to safe-guard proper health. If they are not, disastrous results may be experienced.

**Disposal of Garbage and Rubbish:**

Garbage may sour, decompose, breed bacteria, and/or attract insects and small animals, -- rubbish (trash) will not. Garbage, or any mixed refuse containing garbage, must be carefully stored and handled if odor and insect nuisances are to be prevented. Garbage should be kept separate from trash.

Garbage should be drained before being placed in storage containers. If liquids are strained away, garbage may be stored for a longer period of time without developing an unpleasant odor. After wrapping in double thicknesses of newspaper place in a container with a tight fitting lid.

Garbage should never be dumped on the ground because it will attract rats, skunks and other scavengers. If collection by authorities is not possible garbage may be buried in a hole deep enough to cover it with at least 18 to 24 inches of dirt, which will prevent insect breeding and discourage animals from digging it up.

Trash and rubbish may be burned in open yard areas or left at dumps established by local authorities. Cans should be flattened and bottles should be broken to reduce their bulk

**Chemical Toilets:**

Proper management of toilet facilities during times of emergency may have a greater affect on your health than any other single element of sanitation. Bacterial infections such as typhoid and dysentery can be just as devastating as the disaster that caused the emergency.

A temporary toilet can be made from a water tight container with a snug-fitting lid or cover (5 gallon plastic buckets work great).



Line it with a garbage can liner or leaf bag.



Mix one cup of liquid chlorine bleach to one half gallon of water (one to ten ratio), or mix laundry detergent or other disinfectant with one half gallon of water and pour the mixture into the temporary toilet. Do not use dry or powdered bleach as it is caustic.

Every time the chemical toilet is used sprinkle on a little more pinesol, chlorine, bleach, baking soda, alcohol, laundry detergent, ammonia, insecticide or other disinfectant to keep down odors and germs. Replace the lid tightly after each use.

When the container is one third to one half full, tie the garbage bag liner shut and empty it into a larger, covered container (such as a 20 or 30 gallon trash can). Put another liner inside the bucket, can, or other temporary toilet and continue to use.

Never deposit human waste or garbage on the open ground. If you have no other alternative for disposal, it is safe to bury waste in trenches deep enough that the waste is covered with 24-30 inches of dirt.



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**VISIT [www.METTAG.com](http://www.METTAG.com) FOR MORE INFORMATION**

## **FOOD STORAGE**

It is recommended by Dr. Art Robinson, of The American Civil Defense Association Board of Directors, that the following one year rations would sustain one adult person for one year.

\* 240 lbs. wheat

\* 240 lbs. dried corn

\* 120 lbs. soybeans

\* 10 lbs. salt

\* 1 kg. vitamin C (only in the form of crystalline ascorbic acid)

\* Canned dried milk should also be stored for infants.

This ration would provide 120 grams protein with good amino acid balance, 45 grams of fat, and 2,700 calories of energy per day.

Shop your local preparedness stores for current prices. We have found the price to be under \$150 per person per year.



# ALCOHOL STOVES

The by-products from burning cooking alcohol are CO<sub>2</sub> and water only. However, always use a well-ventilated area when cooking on this stove as it will use up oxygen. Use caution, as this stove will produce a flame similar to a gas burning stove. Do not use this stove inside a tent or anyplace a fire could start in the event the burning fluid tips and spills.

The first time you use the stove, there will be some smoke from the lining of the paint can. Outside use is recommended in order for the smoke to dissipate.

Store the alcohol outside, or in an uninhabited building away from your home. The alcohol could act as an accelerant in a fire.

(NOTE: One gallon of cooking alcohol should provide enough fuel to cook two hours a day for one week.)

## Equipment:

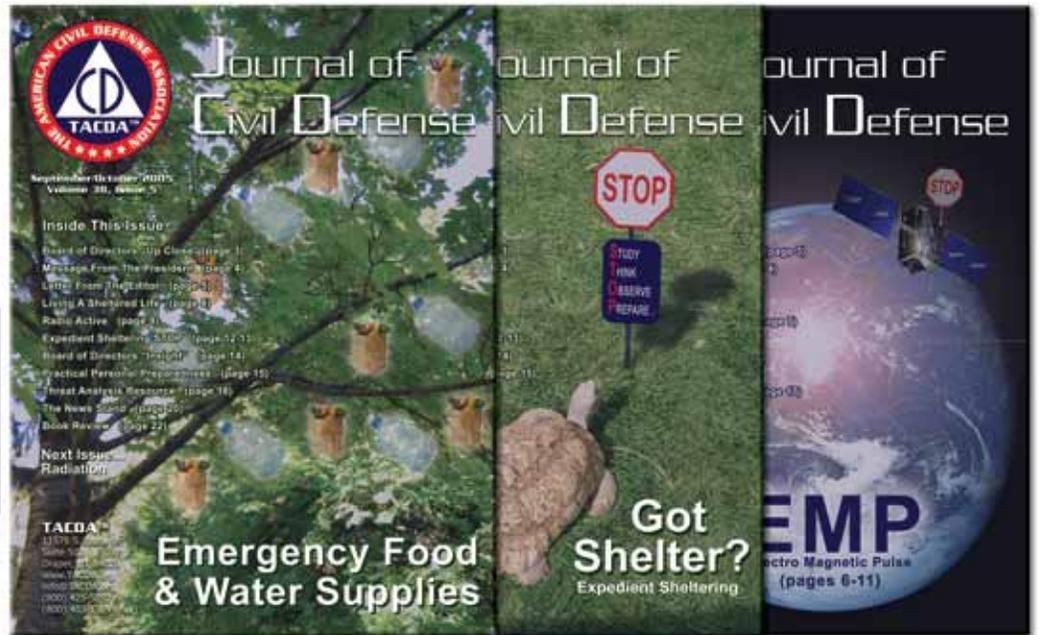
- 1 qt. paint can (new) with lid
- 1 roll toilet paper with center cardboard removed
- 1 #10 can without lid
- Cooking alcohol
- Matches
- Small pressure cooker or pan
- Punch-type can opener

## Directions:

1. Remove the center cardboard roll from the toilet paper, and place one full roll of toilet paper into the 1-quart paint-can stove.
2. Using a large nail or punch type can opener, punch 3, one-half inch diameter holes around the sides of the #10 can about 1 inch from the open top of the can.
3. Punch 6 to 8 holes around the sides of the #10 can about 1 inch from the bottom of the can.
4. Fill paint-can stove with cooking alcohol to top of toilet paper roll.
5. Place the 1-qt. paint can stove on a flat, fireproof surface.
6. Strike the match and light the alcohol on fire.  
(The alcohol must be at least 53 degrees to burn.)
7. Carefully turn the #10 can upside down over the 1 qt. paint-can stove (this forms a flat surface for your pan to sit on. A small pressure cooker will conserve your fuel.
8. When finished cooking, carefully remove the #10 can (it will be hot), and loosely place the qt. sized paint-can lid over the stove to smother the fire. Allow the alcohol to cool and then press the lid firmly over the can to protect against spillage and evaporation of the alcohol.



# WE WANT YOU TO SUBMIT TO THE TACDA JOURNAL OF CIVIL DEFENSE™



- Concepts in emergency sheltering.
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- Public safety, emergency management and Homeland Security topics and developments.
- National and international security issues and developments.
- Advertisements for civil defense and disaster preparedness related products and supplies.

The Journal of Civil Defense is published bi-monthly by The American Civil Defense Association (TACDA) as a main vehicle for the distribution of current and reliable civil defense and disaster preparedness information and resources to our members and subscribers.

The Journal of Civil Defense presents articles that cover the wide spectrum of civil defense and disaster preparedness and mitigation issues on both the personal and the professional levels.

**For more information, or to submit to the TACDA Journal of Civil Defense™, email: [info@TACDA.org](mailto:info@TACDA.org).**

# TACDA MEMBER FEEDBACK



This section is designed to provide a forum through which you, our members, can express concerns and submit questions relating to TACDA and civil defense and disaster preparedness in general.

Your questions and comments are reviewed by our editorial committee and addressed by one or more members of the TACDA Board of Directors.

We encourage you to send any questions or other relevant feedback to us for review at: [feedback@tacda.org](mailto:feedback@tacda.org).

We will be looking forward to hearing from you very soon.

In this issue, we are discussing a misunderstood quote from an article printed in the prior issue of the Journal of Civil Defense.

## **A Member from Utah writes:**

In the article on Expedient sheltering against Biological Attack, right hand column, 2nd paragraph, Volume 38, issue 4, you state the following:

"If you don't have the disease (small pox), you won't get it. If you have the disease, you won't give it to anyone else."

It was my understanding that Small Pox was very contagious....have I missed something along the way?

## **TACDA's Response:**

Thank you for bringing this quote to our attention. What was meant by this statement is this; If you do have small pox, but you are self-quarantined and not in contact with anyone else, you cannot give it to anyone else. You can only infect someone if you come in contact with them.

## **Member Writes:**

And If this self-quarantined person should happen to come down sick, should he/she contact the Public Health Department for treatment?

## **TACDA's Response:**

As a general rule we would have to say, yes. However, that decision would very much depend on what kind of illness you had (i.e. appendicitis vs. small pox) and what other kinds of illnesses were being treated there. If there were large numbers of cases of small pox or other contagious diseases in the community, you should not expect to get much help there. Once a person becomes symptomatic of anthrax, which is not contagious, there is little that can be done. Herculean measures might save them if there were only a few cases being treated. However, in my opinion, if small pox got out of control, it would not take long for our medical system to become over-whelmed.



With Barbara Salsbury

**Know-How is necessary before the Crisis Occurs.**

Having a shelf of resource books and manuals that you can lightly review annually is a smart idea. But emphasis must be placed on the principle of “being prepared.” The information between the covers of a book is essentially useless if you do not have the confidence or understanding of how to apply it. Having several cookbooks on the shelf will not make you a skilled cook. Likewise, having a book on how to survive a disaster will not keep you safe and warm if you don’t know the skills or have the supplies before the disaster occurs. It’s too late for preparation once the need arrives. Here are a few ideas to help you on your way.

**Make Sure the “Stuff” In Your Cupboards Can Be Made Edible – Or It Won’t Do Anyone Any Good**

Oftentimes people will stock up on basic staple foods like grains and legumes because these foods can be stored without constant attention

for extended periods of time. Usually these people hope that circumstances will never get so bad that they’ll actually have to eat them. This is a shame. Not even staple foods will last forever. They need to be rotated and replaced, just like any other food (even if it isn’t quite as often.) The best way to do this is by using them.

It does very little good to have shelves full of good-for-you foods if you have no idea how to prepare them so that you and the members of your household will eat them. It’s

not only discouraging, it’s a waste of your hard earned money. A worthwhile goal is to make the “stuff” in your cupboard edible. This is especially true for *different and difficult* situations such as the aftermath of disasters. There is security in knowing that what you fix will be eaten and enjoyed. And in the middle of a massive power outage is not a good time to figure it’s time to get out the beans.

However, there are a few ideas to start with now. Adding a few simple complementary foods like packaged seasonings, sauces and *fixings* to your basics can give new life to foods that you may have never considered in an everyday perspective. In case of a long-term aftermath of a disaster, where you must rely on these basic staples as your sole food supply, these complementary foods will make the basics palatable. In an everyday situation, seasonings, spices and sauces can bring basic staples out of the deep recesses of the basement or closet and make them a useful and desirable part of your regular menus. These added items will greatly expand the recipe potential of staple foods.



cupboard where bugs, rodents and moisture usually cause rapid deterioration.

Look at your regular recipe book with “staple cooking” in mind. You can substitute almost any grain for regular rice in any recipe. Experiment a little and you’ll find how easy it is to use your grains and other staple foods on a regular basis, so that when hard times do come it won’t be a disaster to try to eat the stuff.



**Storage life of dry milk**

Dry milk is an economical item to keep on the pantry shelf, as well as an essential cooking ingredient – especially in Power Outage Cooking. How in the world can you make good tasting hot chocolate if you don’t have dry milk when the fridge isn’t working and the *real* milk is gone?

Dry milk/Instant non-fat milk in a sealed, airtight container will keep anywhere from 18 months to two years. After that the milk will get stale, but because the fat is removed, it usually doesn’t go rancid, and it still safe to consume. Aged dry milk - as in times ancient, the kind that has been stored as an inheritance for your grandchildren - takes on a beige brown cast and has a distinctively musky smell. Depending on the age and appearance of the milk, it can usually be



Plan to take the time to take a tour of your supermarket with preparedness in mind. Have in mind the staples that you already have stored or are planning to store, such as rice (lots of varieties available), barley, wheat, pasta, lentils, split peas and so on. Jot down a list of these items on a sheet of paper to take to the store with you, with space to make notes. Then choose a variety of seasoning packets, sauce packets or a good supply of your favorite, most used seasonings or other “convenience type foods” to make simple meals from just one or two ingredients that you already have. (Keep in mind, if you are dealing with a long term power outage situation, your *makeshift meals* most likely will not contain meat, unless you already have a supply of canned meat.)

Spread the search over several paydays to make sure you have a sufficient variety and amount of “additives”. After all, how in the world can you make a batch of rice taste like spaghetti unless you have oregano and basil, let alone garlic salt? These kinds of simple items can truly make the difference between getting through rough times and having edible foods, or surviving by having nothing to eat except boiled grains. Yes, you can survive or exist on boiled grains, but why plan on that when, if you prepare ahead of time, you can make a difference!

A gallon jar or Rubbermaid-type storage container will hold a good-sized variety of packets in the cupboard. The protection of a solid container will allow for a longer shelf-life than just setting the packets or packages in the



used in recipes and mixes without a problem, even if you don't want to mix and drink it as straight milk. It may eventually reach the point where the flavor is so strong that it overpowers any other flavor in a recipe. Dry milk kept in cardboard packaging deteriorates much more rapidly than when stored in an airtight container. In fact it becomes so hard you can use it for building blocks and won't have to worry whether or not you will like the flavor.

Just for your information, instant dry milk is made from regular non-fat dry milk. Often it costs twice as much for half the volume, just for the convenience of instant. There are also several *milk alternatives*, based on whey, that are now available are not a straight across substitute for dry milk. Whey is a buy-product of milk and is significantly less nutritious than regular dry milk. I'll discuss these whey based milk alternatives in more detail in a future column.

**Getting Water Out of a Water Barrel.**

Water storage is an important part of any emergency preparedness program. And if you are considering "cooking with staple foods" or in fact cooking anything, you'd better have more than survival rations of water on hand.

Rather than using dozens of two-liter pop bottles or even 5-gallon jugs, you can purchase 15, 35 or 55 gallon water barrels in which to keep your water. (Five-gallon jugs are a good alternative, however, this article is going to talk about the barrels.) The fifteen-gallon sized barrels are great for apartments or small areas. One or two can be stashed in tight or small areas where the larger ones might not fit, such as under a stairwell. Water barrels are compact and convenient, that is until it comes

time to actually using the water. Then you may have a problem unless you've planned ahead.



A full 55-gallon barrel will weigh several hundred pounds. That is too heavy to realistically tip even slightly to access the water. Even a 15 gallon barrel is heavy when it is full and impractical to attempt to tip every time you need to get the water out. Your best bet is to go to a local hardware store, a well-equipped supermarket, or a company that sells the water barrels (check the yellow pages) and ask for a siphon hose. They should cost \$10 to \$15 apiece. Most water barrels are created with a fitting on the top to attach a siphon hose to, as well as the plug that opens to allow air flow so that you can get the water out. Make sure that the type of siphon hose that you purchase has a small hand pump built in and is designed specifically for using with water barrels or similar containers. Then you just pump away and out comes exactly as much water as you want. It is not difficult to use (even I can make it work.)

A decidedly second best solution is to use a rubber tube to siphon the water out of barrel, like a thief would do to siphon the gas out of your car. Get a long flexible rubber tube (a narrow garden hose might do in a pinch) and stick one end

(that has been washed) well down into the water in your barrel. Then start sucking on the other end of the tube like a straw. When the water hits your mouth, quickly place that end of the tube into a bucket on the floor. The water should start pouring out of the tube. (Make sure the bucket is lower than the water level in the barrel.) It's not nearly as convenient or easy as a siphon pump but it is an option if a disaster should happen today before you get a chance to buy your pump. An important point to remember is to pay close attention to the water as it fills your container. Stop, shut off, kink the hose – whatever you have to do to stop the flow of the water well before the bucket is full. There will still be a small amount of water in the hose that will drain into the bucket. If the bucket gets too full, it will overflow, wasting your water.

Here are a few other important points to consider as you think about using the water you have stored. The other item that is critical, before you begin to siphon water out of the barrel, is the container in which to catch and carry the water. It needs to be small enough for you to carry when full, yet large enough to hold sufficient water for your needs.



Remember a five-gallon bucket when full weighs forty pounds. Also remember to not get your container too full. As you walk the water will slosh. If it 's too close to the top you



could lose quite a bit of a precious commodity.

Do not worry about whether your stored water is safe to drink or cook with. Keep on hand a water purifier such as liquid household bleach. If there is any question DO NOT THROW OUT THAT WATER. Purify it in small batches at a time as you need it.

**Preparedness Pantry Maintenance**

Ok, so you've been budgeting your money, buying your foods to fill your pantry or cupboard, your emergency kits are ready and you've got enough spare water to live a year in the Mojave desert. What's left to do? Lots! Being prepared takes work and it's an ongoing process that never really ends. Whether you're a preparedness guru or just getting started, here are a few helpful hints for maintaining your emergency preparedness supplies.

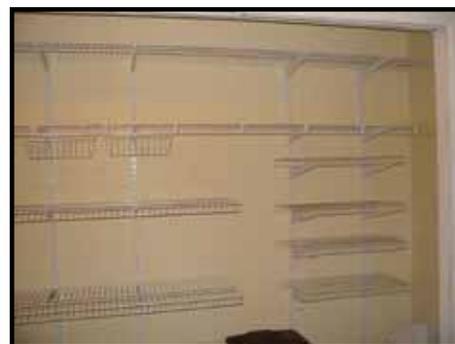
1. Rotate your foods. This is one of the most important factors for keeping food storage within your budget. Make sure your food isn't wasted; consume and replace items on a regular basis. Even if you have easy access to fresh items like milk and eggs, use dried eggs and powdered milk in cooking to rotate them before they spoil or are wasted. Remember that all foods, whether fresh, or the type set aside for longer-term storage, have limits to their shelf life. Become familiar with the lifespan of the items in your cupboard and use them accordingly. It is a good idea to write the date of purchase on all items that go onto your food storage shelves, and to put new items at the back of the shelf and move older ones up to the front to ensure usage. Having a pantry does no good if the food is inedible.

2. Clean your storeroom or pantry closet. Food storage gets dirty! Dust and elements can take their toll on food storage items, in addition to creating an unsanitary environment for your family.

Besides, dust bunnies are not pets that need a two-month supply of food. Don't let your storage room become the black hole where all dirt ends up! Make sure to clean the area regularly to make sure that all the work and money you've put into it doesn't end up in the garbage.

Maintenance is a vital part of the process of preparedness. It's not always easy but it's necessary to ensure you the best chance at stability in any situation.

So once again the Preparedness ideas are Practical. Sometimes all



we need is the encouragement to keep going. Or maybe it's just an idea that you had already thought of, but needed reassurance that it was okay. Winter is coming, storms may be on their way. But if you do the best you can, find a shelf to stock and have a good book and some chocolate to get you through, it won't look so dreary. Stay enthused as you work on your own practical preparedness plans.



# RADIO ACTIVE™

## Ham radio operators to the rescue after Katrina By Gary Krakow

*[Editor's Note: The purpose of this column is to encourage our readers to become active in the amateur (HAM) radio community, and to make them aware of opportunities where they can utilize their skills, with emphasis on emergency and post-disaster communications. Very soon, TACDA will be rolling out its Civil Defense Amateur Radio Initiative that will provide a national network of qualified civil defense communicators that can serve the communications needs of TACDA members and others during and after a wide-scale disaster. We urge each of you with an interest in emergency communications to obtain your amateur operators license so that you can participate in this program. We will be providing updates of our progress with this program in future issues of the JCD, on the TACDA web site and in special member notices. Stay tuned.]*

With telephones down and wireless service disrupted, at least one group of people did manage to use technology to come to the rescue of those in need.

Often unsung, amateur radio operators regularly assist in emergency situations. Hurricane Katrina was no exception. In recent weeks, operators of amateur or ham radios have been instrumental in helping residents in the hardest hit areas, including saving stranded



flood victims in Louisiana and Mississippi.

Public service has always been a large part of being an amateur radio operator. All operators, who use two-way radios on special frequencies set aside for amateur use, must be tested and licensed by the federal government, which then issues them a unique call sign.

A	•—	N	—•	1	•—•—
B	—•••	O	—••	2	••—••
C	—••	P	••••	3	•••—
D	—••	Q	—••	4	••••
E	•	R	•••	5	•••••
F	••••	S	•••	6	—••••
G	—•	T	—	7	—•••
H	••••	U	•••	8	—•••
I	••	V	••••	9	—••••
J	••••	W	•••	0	—•••
K	—••	X	—••	?	••—/••
L	••••	Y	—••	.	••—/••
M	—	Z	—••		

Ham operators communicate using voice, computers, televisions and Morse code (the original digital communication mode). Some hams bounce their signals off the upper regions of the atmosphere, so they can talk with hams on the other side of the world; others use satellites. Many use short-range,

handheld radios that fit in their pockets.

When disaster strikes, ham networks spring into action. The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service.

In this disaster, a number of ham emergency stations and networks have been involved in providing information about this disaster; from WX4NHC, the amateur radio station at the National Hurricane Center to the Hurricane Watch Net, the Waterway Net, Skywarn and the Salvation Army Team Emergency Radio Network (SATERN).



stuck on a roof. The person was able to send a text message from a cell phone to a family member in Michigan. Once again, the Coast Guard handled the call.

Relief work is not just relegated to monitoring radios for distress calls. The organization representing amateur radio operators, The American Radio Relay League or ARRL, is now seeking emergency volunteers to help supplement communication for American Red Cross feeding and sheltering operations in Mississippi, Alabama and the Florida Panhandle — as many as 200 locations in all.

And, for the first time, the federal government will help hams help others. The Corporation for National and Community Service (CNCS) will provide a \$100,000 grant supplement to ARRL to support its emergency communication operators in states affected by Hurricane Katrina. The grant will help to fund what is being termed “Ham Aid,” a new program to support amateur radio volunteers deployed in the field in disaster-stricken areas.

One last note for ham operators in the stricken area: The FCC has announced that it’s extending amateur license renewal deadlines until October 31, 2005.

[Source: <http://www.msnbc.com>]



On Monday, Aug. 29, a call for help involving a combination of cell telephone and amateur radio calls led to the rescue of 15 people stranded by floodwaters on the roof of a house in New Orleans. Unable to get through an overloaded 911 system, one of those stranded called a relative in Baton Rouge. That person called another relative, who called the local American Red Cross.

Using that Red Cross chapter’s amateur radio station, Ben Joplin, WB5VST, was able to relay a request for help on the SATERN network via Russ Fillinger, W7LXR, in Oregon, and Rick Cain, W7KB, in Utah back to Louisiana, where emergency personnel were alerted. They rescued the 15 people and got them to a shelter.

Such rescues were repeated over and over again. Another ham operator was part of the mix that same Monday when he heard over the same Salvation Army emergency network of a family of five trapped in an attic in Diamond Head, La. The family used a cell phone to call out. Bob Rathbone,

AG4ZG, in Tampa, says he checked the address on a map and determined it was in an area struck by a storm surge.

He called the Coast Guard search-and-rescue station in Clearwater, explained the situation and relayed the information. At this point, the Coast Guard office in New Orleans was out of commission. An hour later he received a return call from the South Haven Sheriff’s Department in Louisiana, which informed him a rescue operation was under way.

Another search-and-rescue operation involved two adults and a child



# WATER FACT SHEET

## Water Storage:

Store two gallons of water per person per day -- one gallon for drinking and cooking, and the other for bathing and other needs. Store water supply in a cool dark area on pieces of wood (not directly on concrete or dirt). Put date of storage on your water. Rotate water storage every 6 months. Rinse and purify the containers before re-filling.

## Storage Containers:

Containers should stack well and have a lining that won't rust or affect flavor. Good choices would be:

- \* 30-55 gallon FDA approved food grade plastic barrels
- \* 5-gallon plastic jugs

A good water container is airtight, breakage resistant, and heavy enough to hold water. Bacteria growth will be discouraged if the container is both airtight and opaque, as bacteria needs both air and light to grow.

Water weighs over eight pounds per gallon, so do not store more than fifteen gallons (about 125 pounds) in any container meant to be portable.

## Before Placing Water in the Container:

Carefully wash and rinse the container. After draining the rinse water, rinse the container

with full strength bleach, making sure to roll and tip the container to reach every area. Leave the lid slightly loose to reach around the bung and threads. Leave bleach in the container for about 20 minutes. Wear rubber gloves, old clothing and eye protection during this process. Use about 1-quart bleach for a 55-gallon drum. Recover the bleach into a bucket and use for the next drum. Lightly rinse the bleach from the container with water.

## Storage & Use:

Add household bleach (5.25 percent hypochlorite with no additives) when storing water. This is not meant to purify the water, but to keep bacteria from later growing in previously purified water. The following amounts should be added to the full clean container:

- \* **1 teaspoon for 5 gallons**
- \* **4 Tablespoons for 55 gallons**
- \* **8 drops for two-liter bottles**

It is recommended that you obtain a siphon pump for use with large water storage barrels. Purchase a good water filter to be used when obtaining drinking water from unproven sources. Obtain a three-day supply of water per person for 72-hour kits in small, portable containers. If stored in clear containers, rotate the water monthly.

## Emergency Oral Dehydration Formula:

In severe instances of diarrhea or vomiting, water alone will not re-hydrate a patient. In the absence of an IV type re-hydration, this formula has been used in many places throughout the world to save lives that would otherwise be lost to dehydration.

### International Oral Re-hydration Formula:

Pure drinking water (1 liter)  
Sodium Chloride (3.5 grams)  
Trisodium Citrate (2.9 grams)  
Potassium Chloride (1.5 grams)  
Glucose (20.0 grams)

### Equivalent Common Formula:

Pure drinking water (1 quart)  
Table salt (1/4 tsp.)  
Morton Lite Salt (1/2 tsp.)  
Morton Lite Salt (1/2 tsp.)  
Karo Light Corn Syrup (2 Tbs.)

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