

The Ready Citizen Manual

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Updates In This Version

Given ongoing litigation surrounding the Berkey water filtration system, it is being removed as a recommended product. I am working to develop a better recommendation that hopefully there will be no controversy about.

In an abundance of caution, I am also removing the Survival Filter PRO. To be clear, I am unaware of any concerns with this filter system. I do want to make sure I am putting forward the best guidance on this important subject.

DISCLAIMER

This book is for informational purposes only and is not intended to be used as a substitute for medical advice from a qualified medical professional. If you have any questions or concerns about the content of this guide, please seek guidance from a reputable professional in the relevant field. Citizens are encouraged to do their own research, including a review of the sources cited in the end notes of the guide.

About the Author

These materials build upon the work of Paul T. Martin. He is an EMT-B, certified by the National Registry of Emergency Medical Technicians (NREMT) and by the Texas Department of State Health Services. He is a NRA certified instructor in various firearm and self-defense disciplines. In addition to self-defense training, Paul is certified by the Texas Department of Public Safety (DPS) to teach both the License to Carry (LTC) course as well as the Texas School Safety Officer training program.

He holds a General class ham radio license and serves as a storm spotter for the National Weather Service. Paul has also served his community as a former volunteer firefighter. Through these efforts, he has completed several FEMA training courses, including the Community Emergency Response Team (CERT) program.

Over the last several years, Paul has developed training exercises and preparedness protocols for insurance companies and law firms. He regularly speaks at continuing legal education programs on creating disaster plans for law firms and small businesses.

Paul has written two books, including *Pivot Points – Creating a Culture of Preparedness And Resiliency in America*, which is available on Amazon.

Introduction

Me, August 2015, in my previous book entitled Pivot Points – Creating a Culture of Preparedness and Resiliency in America, on page 13: “We don’t need more books on how to prepare.”

Me, March 2020: “Apparently we do need more books on how to get prepared.”

I write this as our news feeds are filled with articles and reports of a potential COVID-19 pandemic sweeping across the nation. And just 24 hours ago, a powerful tornado struck Nashville and devastated several nearby counties, killing at least two dozen people.

The contents of this book have been percolating in my mind for quite some time. The urge to make it available to readers has increased dramatically as of late due to the volume of calls, texts, emails and other messages I’ve received over the last month seeking advice on how to prepare for the possibility of a pandemic or the risk of severe weather in the future.

Back when I wrote *Pivot Points*, I devoted a single chapter to becoming better prepared on a personal level, using the rest of the book to create a blueprint on how to create a culture of preparedness in America. And I only included that one chapter on how to get prepared because my family felt it needed to be included; my instinct was to completely omit it. (My wife and stepdaughter will readily tell you I am wrong on a regular basis.)

I created much of the contents of this book to help local churches in Austin provide guidance to their membership on how to prepare quickly in the event of a looming emergency. Despite the large volume of material written about this subject over the last several years, people struggle to find guidance on how to get better situated for a wide spectrum of perils.

A while back, a friend invited me to speak to her Sunday School class at a Methodist church here in Austin on the subject of “What does the bible say about preparedness?” I think many of the attendees were skeptical of the presentation, no doubt harboring images of one of the many television shows about preppers so popular a few years ago. I walked them through the usual staples of preparedness theology: the stories of Noah, Joseph and Nehemiah, along with the guidance from Jesus found in the gospels.

What really resonated with them, however, was when I asked the class to share their favorite charitable activities, and then simply asked them, “In the event of a large emergency, will you be able to participate in those wonderful charities that help so many if you and your family are not prepared at home?” At that point, the group seemed to appreciate what I believe is the bible’s message about preparedness: *have your act together so that you can be a blessing to others during and after an emergency.*

In the aftermath of the Middle Tennessee tornado this week, we are already being reminded why it is called the Volunteer State: thousands of people are taking time away from work to clean up, to help rebuild, providing assistance and housing to those affected. Many can do this because they are what I call *Ready Citizens*.

A Ready Citizen is not merely a prepper, or even a “doomsday prepper,” but instead is someone who gets prepared, stays prepared and is willing to be an asset year round with large or small problems facing their community. I suspect you know several people fitting this description. They are the person you call when you have an emergency or a problem in your life. Or if you’re worried about a news story that may affect the community.

The Ready Citizen helps others.

The Ready Citizen consumes quality news reporting and formulates opinions based upon data and facts, rather than emotions.

The Ready Citizen is a good steward.

The Ready Citizen is charitable.

The Ready Citizen readily interacts with others who do not share their faith, politics, race or sexual orientation.

The Ready Citizen looks for ways to build community and relationships.

The Ready Citizen keeps enough on hand to take care of their family’s needs during a shortage or disruption.

The Ready Citizen learns new skills important in an emergency.

This is an action plan aimed at providing definitive guidance you can take right away to improve your Ready Citizen abilities.

I strive to be a Ready Citizen. I encourage you to do the same. And in the coming pages, I will make some recommendations that will hopefully help get you started on that path.

March 4, 2020

Austin, Texas

First Steps

Why are we talking about this preparedness stuff?

There are many valid reasons a citizen would want to increase their level of preparedness. Severe storms, the threat of a financial crisis (either nationally or just to your family), concerns over a possible pandemic, cyberattacks on the grid or general unrest caused by political tensions in our nation may have convinced you to take action. Rest assured you are not alone.

But perhaps the best reason to prepare is the charitable one: **Being prepared at home means we can be an asset our neighborhoods, employers, churches and communities in the inevitable recovery process.** When we haven't prepared ourselves and family, we are less able to help others during a crisis.

Secondary and Tertiary Effects

Many people who are both new to and experienced in preparedness misunderstand the phenomena of secondary and tertiary effects of a disaster.

After a disaster, we expect immediate effects and resulting effects from the immediate effects. The resulting effects can effectively create a chain reaction of several iterations. To help us keep describe this phenomenon, disaster experts will often refer to *primary, secondary and tertiary effects*.

- The primary effects of a disaster are a result of the disaster itself.
- The secondary and tertiary effects are a direct result of the primary effects.

Back in 2018, major flooding upstream from Austin overwhelmed the city's ability to purify drinking water, requiring the city to issue a boil water order for hundreds of thousands of residents.

While this primary effect – having to boil drinking water - was significant in and of itself, the secondary and tertiary effects caused significant disruptions well beyond the need to boil water to make it safe. For example, many schools could not boil water in sufficient quantities to support students. This caused schools to close – a secondary effect of the boil water order. When schools closed, many parents who didn't have day care options had to stay home, increasing work absenteeism – a tertiary effect.

In a pandemic situation, we would expect similar secondary and tertiary effects to take place. As schools close due to extended illnesses, parents will be forced to stay home with their kids. Other adults may stay home from work out of fear of the disease. This could create significant disruptions for the economy:

- reduced shipments of fuel and groceries to local stores;
- fewer first responders and medical professionals on duty;
- cancellations and delays of various business transactions.

In the days after Hurricane Harvey, the electrical grid was significantly damaged in storm ravaged areas (primary effect). This resulted in a number of gasoline refineries going offline for lack of power (secondary effect). The reduced production capacity led to shortages of gasoline in a number of cities, spurred on by media reports of long lines at gas stations and outages around town (tertiary effect).

Oftentimes, your community may not feel the primary effects of an emergency, but you can still experience significant secondary and tertiary effects. **Prudent citizens focus not just on the primary effects of disasters, but the secondary and tertiary effects as well.** Understanding these effects may better enable you to explain the need for preparedness with skeptical friends and family members.

How To Use This Manual

This manual was developed to help the motivated citizen achieve a baseline level of preparedness quickly. To make this work, you will have to make two key decisions:

- Decide to make time to obtain the necessary items, training and preparations to ready yourself and your family.
- Decide to make the necessary expenditures to obtain the necessary items and training.

Here's the good news: I've streamlined this as much as possible to make it affordable and relatively easy to do. A sharp teenager living in your home should be able to take these materials and, over a weekend, develop a family plan to purchase the necessary items to prepare your family for the timeframe you'd like to be self-sufficient.

Self-sufficiency should be a goal of every American. As we become a more urbanized and suburbanized society, we leave behind our rural background. This migration has provided more access to quality healthcare and educational opportunities, but it has also decreased our self-sufficiency. We improve our communities when we become more self-sufficient.

In short, good preparedness is good citizenship. We should stress this is designed to give you a base line level of preparedness.

My goal is to provide you with the necessary guidance to get:

- **As prepared as you can,**
- **As fast as you can,**
- **And as inexpensively as you can.**

In this program, I will provide you with an action plan and recommendations on what you need to do and acquire to prepare yourself and family in seven different areas:

- Food
- Water
- Cash
- Health and Sanitation
- Energy and Lighting
- Security
- Communications

Afterwards, we will spend some time discussing what churches and civic groups can do to prepare themselves to be a place of refuge and restoration during and after an emergency.

I recognize this can seem quite overwhelming. To overcome that, I've formulated a step by step plan to help you reach your preparedness goals – a training calendar of sorts. By dividing the tasks into bite sized chunks and taking them in order, you will be able to make quick and steady progress.

In the following pages, I'll cover what you need to do. I strongly recommend that you do these tasks **in the following order**:

1. Set your two parameters: (1) how many people are you preparing for, and (2) for what timeframe do you want to be self-sufficient?
2. With the help of the section on Food Planning, purchase and store the food necessary for the number of people and the time frame you selected.
3. With the help of the section on Water Purification and Storage, purchase and store the water and supplies necessary for the number of people and the time frame you selected.
4. With the help of the section on Cash, set aside the cash reserve you determine you need for the time frame selected.
5. Obtain the health and sanitation items referenced in the Health and Sanitation section, AND get the recommended training/health check ups referenced in that section.

6. Obtain the cooking, batteries and lighting supplies referenced in the Energy and Lighting section.
7. Obtain the items referenced in the Security section, but do not purchase firearms for now. If you already have reliable firearms and plan on using them as part of your security plan, take the necessary training to use them safely in a self-defense situation.
8. Obtain the items referenced in the Communications section.

Then, and only then, should you:

- begin to increase the amount of food, water, cash and other supplies for a longer crisis or more people;
- make purchasing decisions about generators/larger capacity power supplies discussed in the energy; and
- make purchasing decisions about firearms.

Why do it this way? Because we often see people who rush out to buy a lot of things, not knowing if they're buying the right things or enough things. In this program, I will identify the items you need to acquire and tasks you need to accomplish. I have tried to take out the guess work for you, so that you can quickly acquire what you need.

When in doubt, stick to the plan – because it works!

Moving Forward

You may already know there are countless books written about this subject which would have you spend far more money than we are suggesting. I recommend that once you have achieved a base line level of preparedness that you reassess and decide what areas of your plan you'd like to develop further. There is always room for improvement.

You may reject some of our recommendations as not being suitable or the best option for your family. I respect your opinion; my only ask of you is that you not let any difference of opinion regarding my recommendations deter or delay your efforts to becoming prepared.

Preparedness offers us tremendous benefits. Aside from helping us meet our daily needs in times of crisis, our preparedness efforts teach us about:

- The natural world around us. Through better preparedness, we learn about nature and science.
- How to build a sense of community. Preparedness is an obligation of good citizenship, not the sign of a mental illness. We prepare so that we can be in a position to the leaders our community needs in the rebuilding process.
- Our government agencies and their response to emergencies. Knowing more about how the government is likely to respond to emergencies helps us have more informed opinions about matters of civics and public policy.

I should advise you up front: the first person you're preparing for is the most expensive. As you add family or friends into your preparedness plans, each successive person generally costs less to add on. For example, if you elect to purchase a generator, that expense could be significant for just one person. But if the generator is there to help a family of four, the generator on a per person basis becomes more affordable.

To that end, you may find it beneficial to find like-minded people to network with in times of extended crisis. In doing so, you can share resources so that not everyone has to purchase a generator or water filtration system. This is an effective way to keep the costs down. **If you elect to do this, I highly recommend you reach an agreement among those planning to shelter together, so that everyone knows what the expectations are.**

Finally, before you get started on this project, you should decide how long of a time frame you want to be self-sufficient. This will vary from person to person. FEMA currently recommends citizens be self-sufficient for a minimum of two weeks.¹ Depending on the peril, you may wish to prepare for several months or longer.

I encourage you to become fully prepared for a given timeframe before increasing your level of readiness. For example, you should consider becoming self-sufficient for two weeks, having all of your food, water and other supplies squared away rather than purchasing a year's worth of food but not having any water or other supplies squared away.

Ask questions along the way. Do your own research on the best options for your family. And above all else, take action so that if and when a crisis comes, your family's needs are covered and you're in a position to help others.

Bibliography

For those looking for more help launching a family preparedness plan, I recommend the following books:

Surviving an Urban Disaster: The Survival Essentials Made Easy, Small Steps, Big Results and *Surviving Doomsday: A Guide for Surviving an Urban Disaster* by Richard Duarte.

How to Survive the End of the World as We Know It: Tactics, Techniques, and Technologies for Uncertain Times by James Wesley Rawles

31 Days to Survival: A Complete Plan for Emergency Preparedness by M.D. Creekmore

**Preparing Yourself and Family
For Extended Emergencies**

FOOD

Creating a good emergency food storage program is by far the most difficult part of preparedness. That's because:

- Storing up several months of food can be expensive.
- There are nutritional considerations to be met.
- Food must be stored in such a way that it can be used months if not years from now.
- Preparing the food in a grid down situation can be challenging.

That's why I'm beginning with creating the food plan. Preparedness is pretty much downhill task once you've created and accomplished your food planning.

Please note:

- This food plan is designed to be developed and acquired quickly. The more time you have to develop your food storage program, the more variety you can incorporate.
- This food plan is to enable you and your family to survive an emergency. It will meet your dietary requirements; however, you may not find it as exciting as your current diet.
- You can choose two of the three characteristics: *low cost, ease of preparation and nutritional value*. It is quite difficult to create a quickly assembled food storage program that encompasses all three of these. I will be spending most of our energy working to create a low-cost program with nutritional value. That means the meals from this program will require some basic preparation on your part.

The recommended food plan for those of you quickly trying to prepare for an extended emergency is what I call the **CRISIS Diet**. The CRISIS Diet is designed to be:

Cash friendly

Relatively easy to acquire

Inclusive of essential nutrients

Safe to store for months or years

Intended to keep you alive during the emergency

Scalable to your own situation

The CRISIS Diet does not require you to:

- grow your own food
- learn new cooking skills
- purchase and eat “space food” or camping food
- buy a lot of fancy cooking equipment

In short, this program is designed for you to be able to go to your local grocery store or discount club store and within a weekend assemble enough food for you and your family for several months.

Let’s get started!

Food Math

To create a viable food program, you will need to do some basic arithmetic. Don’t worry; all you will need is a calculator and notepad, along with some very simple formulas discussed below.

The first formula is not so much a formula but rather a rule of thumb: **every day, you need to plan on consuming 2,500 calories and 50 grams of protein.** Let’s spend a minute discussing how we arrived at those figures.

According to the U.S. Office of Disease Prevention and Health Promotion, a moderately active adult between the ages of 18 and 65 should be consuming 1,800 to 2,800 calories a day.² For active adults, defined as “a lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the activities of independent living,” those daily caloric intake goals go up to between 2,600 and 3,200.³

For planning purposes, we are using 2,500 as a starting point. You may wish to adjust that target up or down, depending on the makeup of your family. Bear in mind:

- Active teenagers require more calories
- Males require more calories than females
- Pregnant and nursing mothers require more calories than women who are not pregnant or nursing

In addition to calories, you will need protein. During a crisis, getting enough protein can be challenging. Further, protein tends to be a relatively expensive nutrient. The plan is to make sure

we have enough calories and protein in our diet, using supplements and variety to ensure we get enough of the other essential nutrients as well.

Since we will be purchasing large quantities of storable food, we need to make sure that we are purchasing the right amounts. Purchasing too much or too little can create problems down the road.

That brings us to the next formula:

$$\text{Number of Servings per container} \times \text{Amount of nutrients per serving} = \text{Total nutrients in container}$$

Most people know this, but as you work through the math to determine what food you plan to purchase, this formula needs to be an integral part of your purchasing decisions.

Let's look at an example.

Dried pasta is a great option for those who like eating pasta. Suppose we find pasta available at our local store with the following nutritional information:

Servings per container: 8

Amount per serving

Calories: 210

Protein: 7g

Folate: 30%

Riboflavin: 10%

Iron: 10%

Niacin: 15%

Thiamin: 30%

How much of these nutrients are in the container? Using the formula, we would multiply each of those numbers by eight, since there are eight servings in the container. Thus, this container of pasta would have:

Calories: 1680

Protein: 56g

Folate: 240%

Riboflavin: 80%

Iron: 80%

Niacin: 120%

Thiamin: 240%

In other words, this container of pasta has two thirds of our daily calorie goal, more than enough protein for our daily protein goal, and quite a bit of our other nutrient requirements. As of 2019, a package of dry pasta like this one sells for about a dollar.

Let that sink in for a moment: you can purchase two thirds of your daily caloric needs and all of your daily protein needs for one person for a month for about \$30. Granted, it would mean that you'd be eating a lot of pasta (and that would probably get boring pretty quickly!) But you would be getting much of your essential nutrients.

Note the percentage figures in those nutrients. These are the percentages of the Daily Values (DVs) recommended for consumption. DVs are just an easy way for us to see how nutrient rich a particular food is. You may wish to consume more or less of a particular nutrient; you'll need to adjust your food storage program accordingly if that's the case.

Our Expensive Friend: Protein

We need protein. It can be challenging for those creating a food storage plan to acquire enough of it in our food plan, simply because it's an expensive nutrient.

One way we address that is to seek out cost-effective ways to include protein in our food storage plan. Some of the more cost-effective food choices for protein include:

- **Peanut butter.** Two tablespoons of peanut butter can have 8 grams of protein. A 4 pound container of generic brand peanut butter can have as much as 400 grams of protein and costs less than 7 dollars. That's 57 grams of protein for a dollar.
- **Canned tuna.** A regular can of tuna can have 25 grams of protein and costs less than a dollar.
- **Black beans.** A 16-ounce bag of dried black beans can provide 108 grams of protein for about a dollar. (There's a reason beans and rice are a staple in many diets around the world.)
- **Lentils.** A 16-ounce bag of lentils will cost about a dollar and contain 112 grams of protein.
- **Whey protein.** Many people find whey powdered protein a good way to meet their protein needs. While a high-quality whey protein isn't as cheap as the others on this list, it can be purchased at discount stores in bulk. Expect to get 30 to 40 grams of protein per dollar when purchasing high quality whey protein. One of the better choices is Gold Standard Whey Protein, which is regularly available at Costco and nutritional supplement shops.

Buying in Bulk: Pros and Cons

Those in the preparedness community who create food plans for extended periods of time are accustomed to purchasing food in bulk quantities at discount warehouses or vendors that cater to preppers. Many times, this food comes in plastic buckets, packed in mylar bags with oxygen absorbers or nitrogen.

There are some great benefits for purchasing storable foods this way, but many may find these options daunting. For someone living by themselves, the idea of purchasing 40 pounds of lentils or black beans in a five gallon bucket may not be practical.

PRO TIP: If you have friends who are preparing with you, consider buying in bulk and then splitting up the bulk purchases. For example, three single people might purchase large containers of rice or beans and then divide those purchases up amongst themselves.

Multivitamin and Other Supplements

There has been much written over the last few years about the efficacy of multivitamin supplements. According to the Mayo Clinic Family Health Book, there's little evidence multivitamins are beneficial.⁴

However, that same book goes on to say there are situations where a vitamin or mineral supplement may be appropriate, such as situations where you aren't getting the recommended daily servings of fruits and vegetables.⁵

This is certainly something you would want to discuss with your medical provider. For the extended crises for which we are planning, you may feel it is beneficial to take a multivitamin to supplement the nutrition you are getting from your CRISIS diet food plan.

One suggested nutritional supplement is spirulina, "a blue-green alga that became famous after it was successfully used by NASA as a dietary supplement for astronauts on space missions," according to the National Institute of Health (NIH).⁶ While more research is needed to fully explore the utility of spirulina, the NIH concluded it is safe to use and contains a number of nutrients.

Your Mileage May Vary/See Store for Details

In calculating the CRISIS diet worksheet, I used label data from food found at a local grocery store. As you put together your plan and read the labels, the nutrient and caloric values for the foods in your store may be slightly different than the ones in the worksheet. Please review the labels of the foods you are purchasing and do the math to ensure you are obtaining sufficient nutrition.

PRO TIP: Many grocery stores have the nutritional value of their products on line. Use their website as a tool for comparing price and nutrition when making your purchasing list.

Sample Worksheet

To give you a starting point, I've created the worksheet below. These foods fit our CRISIS Diet guidelines and, in the quantities shown below, will provide one person with at least 2,500 calories and 50 grams of protein a day for an entire month. It will also provide many of the essential nutrients you need as well.

As previously stated, you may need to adjust this list – both in the kinds of items you store and the quantities – to meet your specific needs. You may not like some of the foods on the list; simply delete them and substitute something else.

Bear in mind it is difficult to get all your nutrients without consuming fresh fruits and vegetables – which may not be available in an extended emergency.

Food	Pounds (net)	Calories	Protein (g)
Pasta	2.5	4,000	56
Lentils	2.5	2,450	280
Black Beans	2.5	2,100	270
Rice	2.5	4,000	75
Cheerios	2.5	4,500	8
Oatmeal	2.5	4,375	143
Instant Mashed Potatoes	2.5	4,400	80
Tang Orange Drink	2.5	4,500	0
Saltine Crackers	2.5	3,500	70
Bisquick	2.5	4,350	85
Spaghetti Sauce	17.0	4,200	120
Canned Tomatoes	6.0	525	21
Canned Spinach	5.0	625	63
Canned Oranges	4.0	1,200	0
Walnuts	2.5	7,600	160
Almonds	2.5	6,800	240
Peanut Butter	2.5	6,400	600
Canned Tuna	3.0	900	200
Canned Chicken	2.5	1,200	240
Canned Ham	2.5	750	175
Powdered Milk	2.5	4,000	400
Whey Protein	2.5	4,500	900

In the example above, this plan provides 84,268 calories and 4,169 grams of protein. In Summer 2019, this food purchase would cost approximately \$140. While it may not be the most exciting of food plans, it will provide adequate nutrition to allow the average person to function normally.

Using a Spreadsheet

I have created a spreadsheet to help you develop a food preparedness program. It will show you not only how much food to buy but what we would expect it to cost, along with the expected “best by” dates. (You can download this spreadsheet at www.paultmartin.com under the “Ready Citizen” section.)

You may not like every food on the list. Remove the ones you don’t and then increase the amounts of the other foods you’ll purchase. Feel free to add foods that are not on this list, bearing in mind the two formulas discussed earlier. **At the end of the day, you need enough calories and protein to sustain you.**

Also note this particular food storage list has a lot more protein than you would likely need in a month. Given that, if you were planning for two people for a month, you might add foods to this list that are not as high in protein such as canned fruits and vegetables, along with carbohydrates. Individual needs and tastes vary; plan accordingly.

Adjuncts and Tools for Your Food Plan

To provide variety and aid in the preparation of the food plan, you may consider adding a few extras to your storage plan, such as:

- Additional manual can openers
- olive oil
- salt, pepper and sugar
- honey
- seasonings
- Tabasco sauce
- chocolate chips
- egg powder
- Table Cream, also called *Media Crema*, sold by Nestle.
- powdered butter
- dried berries and fruits
- coconut oil
- baking soda
- canned butter
- coffee/cafeinated beverages/sodas

- fiber supplements
- cookbooks focusing on grid down meal preparedness. I highly recommend *The Storm Gourmet - A Guide to Creating Extraordinary Meals Without Electricity* by Daphne Nikolopoulos and *Apocalypse Chow – How to Eat Well When the Power Goes Out* by Jon Robertson.

Grow Your Own?

What about growing your own food instead? That's a great plan if you can start doing it immediately. But for most people, growing your own food requires a long time to become proficient. To meet the goal of getting you prepared as quickly as possible, growing your own food isn't an option at this point in your preparedness plans.

There is one notable exception. Growing your own sprouts can be a great way to supplement your food storage program with fresh, healthy foods rich in nutrients. You can grow sprouts on your kitchen counter with minimal equipment. The best resource book on this is Ann Wigmore's *The Sprouting Book: How to Grow and Use Sprouts to Maximize Your Health and Vitality*, which is available on Amazon in paperback.⁷ No need to wait until an emergency to start growing your own sprouts. It's a very inexpensive way to add nutrients to your diet right now!

What To Do With The Food We Don't Eat Before Its "Best By" Date

It's important to note many foods are still useable and nutritious beyond the "best by" date given to it by the manufacturer. There are many online articles from the USDA and other reputable sources. I encourage you to do your own research to determine the best course of action when eating expired foods.

For food you don't consume but don't want to waste, I recommend you keep all of your receipts for your food storage plan. If you aren't able to rotate all of your food before the end of its shelf life, donate it to your local food pantry. Get a tax donation receipt from the food pantry for your contribution and use the purchase receipt you kept as evidence of the value of your contribution. Use your donation as a tax write off, knowing that you're helping someone else in the process.

Your subsequent tax savings will help finance your purchase of replacement food for your storage plan.

Food pantries have gotten very good at using foods beyond their "best by" dates. Don't hesitate to give it to them; they report many foods are palatable and nutritious well beyond the dates set by the food manufacturer.

Where To Buy All Of This Food?

This plan allows you to purchase all of our recommendations at your local grocery store. Other big box discount retailers, such as Costco and Sam's Club, offer bulk purchase options for those larger purchases. Sam's Club will even allow you to order all of your larger bulk purchases on line and have it ready for you to pick up at the store.

In addition to traditional grocery stores and discount stores, a number of businesses cater to preparedness minded consumers. I regularly use Emergency Essentials (www.beprepared.com) for their quality products and excellent customer service. They sell a number of bulk items listed in this chapter, as well as an assortment of freeze dried foods as well.

Preparedness Food Plan for Pets

Don't forget about your pets! Fortunately, preparing for pets can be rather easy. If they are eating the same kind of food, day in and day out, then simply stock up on that particular brand. Store their food in a rodent and bug proof container, with the purchase date and month written on the bag. Rotate the food to ensure freshness.

Where and How to Store Food

So you went to Costco and bought lots of bulk food items...now where are you going to put it?

You may need to get creative with your storage locations. Inside closets, underneath beds, in cabinets – these are all good locations. I encourage people to use this as an opportunity to de-clutter. Sell or donate things in your closets and cabinets that you're not using anymore to help free up space for your food supplies. Selling your items may even help subsidize your food purchases.

Make sure you're storing these foods at room temperature, away from extreme heat or humidity. This will help ensure a longer shelf life.

Things NOT To Do When Formulating and Managing a Food Storage Plan

- Storing your food supplies in the garage, exposing it to high temperatures and vermin.
- Failing to rotate your food purchases. Accountants often refer to FIFO – First In, First Out. This simply means to use the oldest food supplies up first.

- Not scheduling regular service for your home by a pest control company. Bugs and mice can wreak havoc on your food storage plans. Make sure you have regular service to treat the house to prevent them from moving in with you.
- If you elect to buy pre-packaged “30 day” or “6 month” food supplies, failing to check the nutritional and caloric content. Just because the label says it’s a 30 day supply does not guarantee it has sufficient calories for 30 days.
- Failing to do taste tests to ensure your family will actually eat what you’ve stored.

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WATER STORAGE AND PURIFICATION

Water is easy. Water is also hard.

Water is easy because unlike food, we're generally not concerned about its nutrient content. There aren't gluten-free or non-GMO options to consider. It flows freely and easily into and out of our homes and businesses. Stored properly, water can be kept safely for very long periods of time. Water is inexpensive. Water is not complicated to understand. Water is healthy.

Water is hard because it's heavy: eight pounds per gallon, to be exact. It takes up considerable space. We need it daily, and there are no good substitutes. Water must be clean to be consumed. And while water itself is inexpensive, the purification and storage methods to make it useable can have a significant cost.

In addition to water being a life necessity, it can also be a form of currency during an extended emergency. Clean water can be bartered for other goods and services.

FEMA's "Are You Ready" program recommends:

Store at least one gallon of water per person per day for three days, for drinking and sanitation. A normally active person needs about three quarters of a gallon of fluid daily, from water and other beverages. However, individual needs vary, depending on age, health, physical condition, activity, diet and climate.⁸

For longer emergencies, citizens need a more robust supply and purification method than a few gallons of water sitting in their pantry. We need to focus on collection, storage and purification.

Collection and Storage

When the grid is up and functioning, collecting water for an emergency is pretty simple: turn on the faucet, fill up the container, and turn the faucet off. Ideally, a family would calculate their water needs for the period of time they might expect to be on their own, purchase a water tank capable of holding that much water, and keep it filled up at their home.

And how much water would that be? For hydration, cooking and sanitation, an absolute minimum for an extended period of time is two gallons per person, per day. Ideally, storing three or more gallons per person per day will provide more flexibility to address the various challenges that come during an emergency.

For a family of four wishing to have a robust 30 day plan, storing 360 gallons of water would be a good goal. That would be the equivalent of 6.5 blue water barrels, with each barrel holding 55 gallons of water. That's roughly 48 cubic feet of water, weighing 2,880 pounds. For a six month emergency plan, we're looking at 2,160 gallons of water. Water is heavy and takes up a lot of space!

PRO TIP: Using Google Earth, local maps and just walking around the neighborhood, identify potential sources of water around your home. Who has a swimming pool? Where is the nearest creek or river? Then think about how you would collect water from those locations and get it to your home. Your neighbor with a pool may be willing to exchange pool water for something they need. Remember: water is heavy!

For those people who have a back yard and can set aside some space for a water storage tank, much of this problem can be solved without a lot of effort. While the blue water barrels seem like an attractive option, there are other plastic water tank options that are less expensive. Do an internet search on “plastic water tanks for sale” and find a vendor near you that sells water storage tanks. Bear in mind: the larger the tank, the less per gallon cost of the tank.

To prepare a water plan quickly for a possible emergency:

1. *Find a way to store as much water as you can now.*

Storage options will be a function of your housing situation and budget. If you own your home and have a place to put a storage tank in your back yard, this is a great solution. Those who cannot store large amounts of water will need to focus on finding ways to replenish and purify water more often than a homeowner might have to. Renters and apartment dwellers should look at keeping some water stored at home and have locations where they know they can get additional water.

2. *Identify potential sources of water from which to collect.*

Some options here include:

- a. Rainwater collection. This is becoming easier to do, and some cities provide rebates for people who set up rainwater collection systems at their homes. Many home improvement stores sell basic rain water collection kits that can be used to supplement your water storage.
- b. Gathering from ponds, creeks, rivers or swimming pools. While this water may not always be the cleanest, there are ways to purify it. Some inexpensive buckets with lids from home improvement stores can be invaluable for this.
- c. Exchanging collected water by neighbors for water you've purified. If you have invested in supplies enabling you to purify water, you may wish to have your neighbors do the collecting for you. You might consider establishing an exchange rate (two gallons of relatively clean but unpurified water in exchange for a gallon of purified water) so that people bring you water which you can purify for you and your family.

Purification

Water must be made safe to drink.

Purifying water means we are treating the 3 Cs of water contamination:

- Cooties – pathogens
- Crud – mud, sand and silt
- Chemicals – pesticides and other chemicals

There are several books devoted to the subject of water purification. But since our goal is to get you prepared quickly, we're going to focus on one proven method that is easy to do.

PRO TIP: Once you're developed your own water purification protocol, create your own checklist and list of formulas and keep it with your water purification supplies. You may even opt to laminate it to keep it protected. This will enable you to purify water much more quickly when you have a cheat sheet handy.

We recommend you purchase three things to meet your water purification needs:

1. **A pre-filtering system.** This is something you can easily make with things you likely have in your home. Before putting cloudy water or water with solid objects into your main filtration system (discussed below), remove as much sediment from it as you can.

You can do this by:

- Letting water sit for a period of time, allowing the sediment to settle.
- Running the water through an old t-shirt, bandana, pillow case, coffee filter or similar material to filter out the larger particles. One of the best options is a "Millbank Bag," which is a canvas bag designed to filter out the heavy sediment. You may also consider using a filter bag designed for biodiesel manufacturing. Do a search for "1 micron filter bag" on Amazon or internet search engine.
- Making a rudimentary pre-treatment filter using one of the many examples found online.

The goal is not to make the water perfectly clean in the pre-filtering stage. It's to clean it up to make it easier to treat in the following steps.

2. **Household bleach or pool shock.** Once the water has been pre-filtered, treating it with chlorine will kill the pathogens in the water. Use one of the two methods below.

Household Bleach Method

According to the U.S. Environmental Protection Agency (EPA), 8 drops of unscented bleach will purify a gallon of water.⁹ In fact, the EPA provides the following guidance on how to purify water with bleach:

- Locate a fresh liquid chlorine bleach or liquid chlorine bleach that is stored at room temperature for less than one year.
- Use the table below as a guide to decide the amount of bleach you should add to the water, for example, 8 drops of 6% bleach, or 6 drops of 8.25% bleach, to each gallon of water. Double the amount of bleach if the water is cloudy, colored, or very cold.
- Stir and let stand for 30 minutes. The water should have a slight chlorine odor. If it doesn't, repeat the dosage and let stand for another 15 minutes before use.
- If the chlorine taste is too strong, pour the water from one clean container to another and let it stand for a few hours before use.
- The following guidance for water purification comes from the Environmental Protection Agency¹⁰ (EPA):

Water	6% Bleach to Add*	8.25% Bleach to Add*
1 quart/liter	2 drops	2 drops
1 gallon	8 drops	6 drops
2 gallons	16 drops (1/4 tsp)	12 drops (1/8 tsp)
4 gallons	1/3 teaspoon	1/4 teaspoon
8 gallons	2/3 teaspoon	1/2 teaspoon

*Bleach may contain 6 or 8.25% sodium hypochlorite, the active ingredient in bleach

Bleach has a lot of utility in an extended emergency. It can be used to purify water and as a disinfectant of clothes and surfaces. Given the relatively inexpensive cost, stocking up on several gallons of bleach will enable you to purify substantial amounts of water and to help keep your home sanitary when the grid is not fully functional.

Bleach does have a limited shelf life; according to Clorox, bleach has a shelf life of about a year if stored at room temperature.¹¹ You can determine when a jug of bleach was manufactured by reading the Julian calendar stamp on the side of the jug. How it is

printed varies by vendor, but you will usually see a reference to a year and a three digit number between 1 and 366, indicating what day of the year the bleach was manufactured.

Pool Shock Method

“Pool Shock,” also known as calcium hypochlorite, can also be used to purify water. It comes in a powder form and can be purchased online or at a pool supply store. Unlike household bleach, which generally has a twelve month shelf life, pool shock can be stored safely for longer periods of time. It is more potent than household bleach and should be stored in a non-corrosive container. Many homeowners with swimming pools will have buckets of it (and depending on whether they do their own pool maintenance, they may not even know they have it.) It’s also relatively inexpensive.

The American Chemistry Council provides technical guidance on how to use calcium hypochlorite to purify water.¹² I’ve broken their recommended steps down here:

- Put a heaping teaspoon of pool shock into 2 gallons of clean water. These two gallons are now your “water purification solution.” You may want to take a Sharpie and write “water purification solution” on the jugs so people will know what’s in it.
- Mix this water purification solution at a ratio of 1:100 with the water you’re trying to purify.
- Example #1: If you’re trying to purify 5 gallons of water, you’d pour 0.05 gallon of your water purification solution into the 5 gallons of water you’re trying to purify. (that would be 6.4 fluid ounces – a little more than $\frac{3}{4}$ of a cup) into the 5 gallons of water.
- Example #2: If you need to purify a gallon of water, you’d pour 0.01 gallon of your water purification solution into the one gallon of water you want to purify. This would mean you’d pour 1.28 fluid ounces of water purification solution into the gallon of water – about 2.5 tablespoons.
- Example #3: The American Chemistry Council’s example is to combine 1 pint (16 fluid ounces) of water purification solution with 12.5 gallons of water to be purified.

- Remember the EPA's guidance from above: "Stir and let stand for 30 minutes. The water should have a slight chlorine odor. If it doesn't, repeat the dosage and let stand for another 15 minutes before use." If the water contains a lot of algae, you may have to use larger amounts of the water purification solution to get the desired result.

So, which should you use: household bleach or pool shock? Much of that depends on your preference. A garden variety gallon of unscented household bleach (6%) will purify over 9,000 gallons of water and cost about three dollars. A one pound bag of pool shock will cost about \$7 and can purify 12,800 gallons of water. Household bleach has a shelf life of about a year; pool shock has a shelf life of 5 years. A gallon of household bleach takes up the same space as a gallon of milk; a pound of pool shock takes up a small fraction of that same storage space. Household bleach is easy to use; pool shock requires some pre-mixing to create a purification solution.

Review your personal situation and then decide which is the best chlorine storage method for you.

3. A final filtration system capable of removing harmful chemicals and pathogens.

See the "Updates In This Version" note on page 2. When a suitable filtration system is identified, this manual will be updated.

These three steps: using a homemade pre-filter system, chlorinating the water and then filtering it will ensure your water is safe to drink. If you're drinking tap water you stored in barrels, you will likely not need to do any of these steps, which makes the workload even easier.

The Power of Blue

One common mistake those new to preparedness make is to store water in the plastic water jugs you see at the grocery store – the same kinds of jugs that milk comes in. These are fine for short term storage, but for a robust water storage plan, you need something more durable.

For longer term storage, look for containers that are made with food grade materials. Traditionally, water containers for long term storage are made of blue plastic to identify them as water jugs (as opposed to gasoline containers, which are usually red.)

Regardless of what size containers you choose, you may find it helpful to have some three to five gallon water containers available to hand out to friends and neighbors during an emergency. Being able to supply someone with water in their time of need is a great way to help them; having the appropriate jugs for doing so makes it that much easier.

Water containers of all shapes, colors and sizes can be purchased a number of places. Most cities have businesses that sell large water storage tanks, ranging from 55 gallons up to several thousand gallons. Do an internet search on “water tanks for sale” and shop around. Another good source for food grade water containers is Facebook Marketplace and Craig’s List.

Pumps, Siphons and Wrenches

Regardless of the type of containers you choose, it’s imperative you have a reliable way to get the water out of those containers. The 55 gallon blue water barrels you often see are a great way to store water, but most of them do not have a spigot installed on the bottom of them. You will need to siphon or pump the water out of those barrels into smaller containers for use.

One of the more highly rated pumps for this is the sold by Tera Pump. This is available from Amazon and other retailers on line. In addition, if you’re using those 55 gallon barrels, you will want to pick up a few bung wrenches to open and close the screw tops on them. These are inexpensive and are available from Amazon as well.

You may elect to use an old-fashioned method – siphoning by hose. This is a lost art, as may younger people have never siphoned gasoline out of a vehicle before. There are YouTube videos explaining how to do this. It’s a very easy skill to learn – it only requires a hose or tube long enough get into the water barrel and to fit into the container you’re filling. Take a few moments to learn this important and easy skill.

Water is easy, but it’s also hard. Taking some steps now can ensure your family has enough to drink in the event of an emergency. Even some small steps, such as buying 5 gallon water

bottles, will start to improve your water preparedness.

What about pool water?

There's much discussion among the preparedness community about the safety of using pool water in emergencies. Providing a meaningful answer to this question is challenging, as it's largely a function of how the water has been treated while in the pool.

Pool owners use an array of chemicals to treat the water. Chlorine is a very common pool chemical that's also used by municipal water supplies. As a general rule, chlorine concentrations at or below four parts per million (PPM) are safe for human consumption. Most pool owners keep their chlorine levels below that limit.

Other chemicals used in pool water treatment present additional challenges when trying to use the water for drinking purposes. These include:

- Bromide
- Cyanuric Acid
- Salt
- pH stabilizers

As a general rule, a Berkey or similar water filtration system will remove all of these chemicals with the exception of salt. If you have a pool or access to pool water, find out what chemicals are regularly used to treat that water and then determine whether your filtration method will remove those chemicals.

Another question discussed among prepared citizens is whether it's safe to use pool water in homes on septic systems for sanitation uses, such as washing dishes, bathing or flushing toilets. Citizens concerned about this should consult their septic tank service company to determine the best practices on how to do this without damaging the septic system.

Things NOT To Do When Formulating and Managing a Water Storage Plan

- Not having water stored for immediate use after a disaster.
- Using milk jug grade water containers for long term storage.
- Underestimating your family's water consumption for the time frame for which you are preparing.
- Not having a sufficient system to filter and purify water you collect.

CASH

Here's some good news: when it comes to making cash a part of your emergency plan, it doesn't cost you a thing.

Many in the preparedness movement remain concerned about the prospects of a financial crisis in which our currency becomes worthless. While that remains a remote possibility for the moment, the more likely scenario is an emergency in which cash remains a very desirable commodity.

In a long-term power outage, banks will be closed and ATMs will not be functional. Stores that are able to function may not be able to process credit card or debit card transactions. Only people with cash would be able to buy needed items.

We have seen this play out in areas affected by large hurricanes. Without power for days, residents cannot buy things unless they have cash. This leads to considerable stress for consumers and businesses who need cash flow to stay functional.

Cash is a tool that can be used to fix a lot of problems. To be prepared for the next disaster, have some cash on hand reserved for that purpose.

How Much?

This will largely depend on the size of your family and your budget. A single person will need less cash than a large family. A family of modest means may not be able to have as much cash on hand as a family that is better off. Regardless of one's financial situation, it's well within most people's ability to have an emergency fund of cash kept outside of a bank for use during extended emergencies.

If you're planning on a month-long disaster, ask yourself how much cash you would need to buy items that don't have on hand now? For example, calculate how much money would you need for a month's worth of:

- Gasoline
- Medications
- Water
- Food

The more of these items you're able to store, of course, the less cash you will need. I think at a minimum a good rule of thumb for those in metro areas is \$100 per person, per week of disaster. Citizens in rural areas may be able to get by on less. So for a family of four planning on a month long emergency, that would be \$1,600.

Many people push back on the notion of having an emergency fund of cash at home is expensive. But think about it this way: the cash is still money you have. It's not an expense. You're not having to buy anything with it (hopefully). It's just a fund in case the grid goes down and you need money to buy gas, medicine or food for your family until the grid is restored.

Cash or Coins? And What Denominations?

Smaller denominations are best. Your fund should be denominated in largely small bills (\$1, \$5 and \$10) in large part because vendors may not be able to make change. Smaller bills provide flexibility to do that.

Coins are also a good resource to keep. Many people have a "coin jar" or piggy bank in which they keep loose change already. For most people, whatever is in that jar or piggy bank is sufficient coinage.

What's the best way to store cash at home?

Cash should be kept out of sight, preferably in a fireproof safe. The fireproof lockboxes made by Sentry and Honeywell can be purchased online or at many large stores are an excellent choice. The price of these lockboxes can vary significantly depending on the level of fire rating it has (30 minutes to 60 minutes). As a general rule, a 60 minute fire rating is better than a 30 minute fire rating, and a 30 minute fire rated lockbox is better than one that's not fire rated at all.

It's also a good idea to be careful about who you tell about your store of cash. No one needs to know about it except you and your spouse, and any other responsible people in your home.

What NOT To Do in Your Emergency Cash Planning and Storage

- Advertise that you have emergency cash at home. Only you and your spouse need to know.
- Put your money in a place that it is susceptible to theft, fire or water damage.
- Put your cash in a safe deposit box at the bank. If the bank is closed because of a power outage or "bank holiday" during a financial crisis, you won't be able to access it.
- Concentrate your emergency cash holdings in large denominations. Smaller denominations are easier to use in transactions.

HEALTH AND SANITATION

This topic receives far less attention in preparedness circles than it should. While many spend a lot of time purchasing guns and ammo to prevent being killed during an extended emergency, the reality is that disease and injuries from post-disaster accidents take a far greater toll than violence.

When the grid malfunctions and clean water isn't available for sanitation, experts report we should expect an increase in diseases like E.coli, cholera and dysentery. Injuries from working with power tools or from moving debris add additional stress to the health care system which, in a grid malfunction, will likely be overwhelmed to start.

We will cover this topic from four angles: prevention, training, sanitation and medication.

Prevention

- *Get vaccinated ASAP.* We realize some people do not consider vaccines a healthy choice. If you're not one of those people, and you and your family haven't been vaccinated lately, start working on it now.

Visit with your health care professional to discuss what vaccination options are best for you. Most medical first responders (EMTs and Paramedics) will normally have active vaccinations for things like:

- Measles, Mumps and Rubella (MMR)
- Tetanus, Diphtheria, and Pertussis (Tdap)
- Chickenpox
- Flu
- Hepatitis

Many health insurance plans pay for these vaccinations.

- *Get a check up from your physician, dentist and optometrist.* Figure out what needs to be fixed. Don't delay dental work that can make you a liability in the event of a lengthy emergency. Get the eyeglass and contact prescription you need. Find out what medications you should be taking. Start working now to get healthier. Again, much of this is covered by health insurance.
- *Start exercising.* This may not seem like a preparedness task, but in an extended emergency, we will all be doing more physical labor. Focusing on strength, endurance and flexibility will help increase your capacity to do work and decrease your risk of

injury.

- *Store and use good quality sunscreen and bug spray.* Burns and bites are painful and can lead to medical emergencies. Mosquito and tick bites in particular are problematic as they can lead to a number of infections. We're likely to be outside more during an extended crisis. What brand and type of sunscreen and bug spray you use is a matter of personal preference; do your research to ensure you're buying effective supplies. And get outside to test their effectiveness!
- *Starting a regular exterminator service at your home.* Bugs and rodents can bring diseases and injury to your home, as well as ruin your food storage plan. Find a quality exterminator in your community and have them make regular visits to your home.

Training

- *Take a CPR class.* Know how to do CPR and use an automated external defibrillator (AED). Learn how to save someone from choking. These are all covered in the CPR class.
- *Take a Stop the Bleed Class.* The number one reason for preventable death after an accident is bleeding. Take a free Stop The Bleed class and learn this valuable skill. Post-disaster work with chainsaws and power tools leads to an increase in injuries; be ready to deal with that in a crisis environment.
- *Take a first aid course.* There are many high-quality first aid courses available now. For those inclined to invest some time and money, consider obtaining your EMT-Basic certification, much of which can be done online.

Sanitation

This is likely the most overlooked topic within the preparedness community, despite the fact it's one the most important ones. **Given the increased risk of disease during an extended emergency, citizens are well advised to take meaningful steps to improve their ability to maintain good sanitation practices.**

Consider stocking up on various sanitation supplies, such as:

- Toilet paper
- Feminine hygiene products
- Soap (a generic baby shampoo is inexpensive and can be used as shampoo, hand and body wash)
- Unscented bleach (diluted in a 10:1 ratio with water, this makes an effective household disinfectant)
- Rubbing alcohol
- Clorox wipes or similar sanitizing product
- Non-latex gloves
- Heavy duty trash bags, including large “contractor grade” trash bags
- Paper towels
- N95 masks or greater

In addition, having a low-tech way to do laundry is essential as well. This does not need to be fancy – a deep laundry sink or large plastic bucket to put clothes in to soak and to be agitated with detergent and water will suffice.

How much of these items do you need? That will depend on the number of people you’re preparing with, along with the time frame you’re preparing for. Your toilet paper and feminine product consumption rate won’t likely increase in a crisis. However, your use of the other items on that list likely will. The good news is that the items on that list are very inexpensive to buy in quantity and make for good items to use in trade.

Another problem that should be a top priority for citizens to address is the need to dispose of household waste (i.e., trash) and human waste (i.e., bodily secretions.)

Household waste, if left uncollected by municipalities or private waste contractors, will begin to pile up and attract scavenging animals. It may also begin to attract people desperately looking for food. Fresh household waste, filled with empty containers of food you had the foresight to store up, may be a sign to those less prepared that you have supplies they may take for themselves. Thus, trash management is not only a sanitation matter, but a security matter as well.

If trash cannot be disposed of away from your home, residents will need to plan on either storing it out of sight and out of reach of vermin, or destroying it by burning it. Burning trash is not the most environmentally friendly solution, but human history tells us in times of extended crisis, this is a common method of disposal. Burning trash also increases the risk of burn injuries and potentially upsetting your neighbors; plan accordingly.

To the extent trash can be repurposed – food scraps used for composting or feeding pets, while paper could be used to start fires to keep warm – it's incumbent to do so.

Human waste presents extra problems due to the risk of disease associated with it. Those homes on a septic system should still be able to dispose of human waste as they normally do. Citizens on a municipal sewer system may have to make other arrangements.

There are a number of camping products that are good alternatives to toilets. In addition, you can find several articles online about how to easily make an emergency toilet with a plastic five gallon bucket. To dispose of the waste, for most families the best bet is to bury it. This isn't a pleasant thing to think about, but it behooves families to think about how they would manage their waste problems. Each family's situation will be different (number of people, tolerance for using alternative toilet arrangements, whether they have a yard, etc.)

Given the challenges here, hand washing in such situations is a top priority. With clean running water in our bathrooms, keeping our hands relatively clean after using the toilet is a fairly easy task. When the water is not running, however, this becomes quite challenging.

CNN reported that days after Hurricane Harvey hit Houston, high levels of E.coli were present in flood waters.¹³ Exposure to flood waters can result in tainted water entering cuts on the skin or eventually getting into a person's mouth.

The need for planning and equipping for adequate sanitation cannot be overstated.

Medications and Medical Supplies

The Mayo Clinic has a thorough list of recommended medical supplies everyone should have, irrespective of whether they are preparing for an extended emergency; check out the link in the end notes for their full list of recommendations.¹⁴ Given the fact everyone's situation is unique to them, I fully encourage you to consult with the Mayo Clinic's suggestions and pick and choose what supplies to purchase from that list. All of these are available at large grocery stores and pharmacies.

Acquiring an extra supply of prescription medications should be a top priority for you. This can be challenging. However, if you explain to your physician you are working on your personal preparedness (or perhaps you want to keep an extra supply of your medications at your weekend home or at an out of town family member's home), most physicians will provide you with the necessary prescriptions. Your health insurance may not be willing to pay for extra medications. Citizens are well advised to discuss options with their medical providers and pharmacies.

Certain medical issues, such as Type 1 diabetes, require a special approach for medication management. Johns Hopkins University has done extensive research on insulin management

during extended disasters.¹⁵ For those who are insulin dependent, it is imperative to create an insulin management plan in the event of an extended emergency. Now is the time to develop this; doing so during the emergency will put you at a significant disadvantage.

One option is to purchase a small refrigerator which runs off of a car battery. The Knox Electric Cooler is a solid, inexpensive choice for such use and can be bought on Amazon. A larger, more robust (and more expensive choice) is the ICECO VL45 available on Amazon as well. If you're planning to have access to a generator or other alternative power source, a small AC-powered refrigerator used in college dorms is a good option.

What NOT To Do In Your Health and Sanitations Efforts

- Fail to make health and sanitation a priority.
- Fail to take quality first aid training.
- Fail to stock up on consumables such as bleach, paper towels, trash bags, etc. in quantity.

ENERGY AND LIGHTING

In the United States, we are blessed with reliable and affordable power. We are not accustomed to long term blackouts or shortages seen in under developed countries. While many residents in poor countries have learned to adapt to such shortages, it would be a hard reality for the average American.

Recent events in many parts of the country, however, are challenging the notion we will always have power, water and internet in the event of a disaster. Citizens should consider temporary alternatives to providing power, water and internet connectivity during times of crisis.

While we may feel we “need” a lot of electricity for our various devices, in reality we need far less than we think to survive. Power to keep our freezers and refrigerators functioning a few hours a day will go a long way in keeping us supplied with food. Power to keep some small efficient LED lights running at night will go a long way to lift our spirits and make us feel safer. Power to run a small radio to provide news and information will make us feel more connected to each other. Devices to help keep us warmer or cooler during temperature extremes will improve our welfare as well.

For the citizen working to improve their readiness quickly, there are a few items they need to acquire. Many people have these already.

Energy and tools for cooking

A propane stove – one that runs on a propane tank, not one tied to the gas lines in the neighborhood – will be a great resource in these situations. Have some extra propane tanks to provide the necessary fuel to run the grill for an extended emergency.

People without a propane grill should consider purchasing a camp stove designed to connect to a 15 to 20 pound propane tank, such as the “Blue Rhino” tanks available at many locations. Camp stoves are well suited for emergency cooking, as many of the meals with the foods described earlier in this guide will be prepared with a stove rather than an oven or grill.

An empty 20 pound tank will run about \$30; a fill up for it will run about that much as well. If you choose not to purchase your own tanks and instead utilize the Blue Rhino option which are pre-filled with propane. If you go this route, expect to spend \$50 for a full 15 pound tank. If you opt to purchase a tank, note the tank will have to be re-certified after the date stamped on the side of it in order to be refilled. Propane has a very long storage life, and a small burner stove that connects to a 15 to 20 pound propane tank will provide hours of reliable cooking.

A highly rated and reliable cooking burner option is the Camp Chef Ranger II Blind Stove, which is available on Amazon for about \$100. These stoves will easily connect to the larger propane tanks, such as the Blue Rhino option.

There are even adapters for the small camping stoves that will allow you to connect directly to a 15 to 20 pound propane tank. Coleman makes a “propane hose with adapter” available on Amazon for about \$20. This enables you to run your small camping stove on a larger propane tank rather than the small, green one pound propane cylinders.

Solar ovens and solar stoves are another option, but for those people trying to prepare quickly, a propane cook stove and some 20 pound propane tanks are the easiest to acquire and to use. Plus, they do not depend on the sun’s availability.

Energy and tools for lighting

Before we broach the subject of energy for lights, let’s make sure we are using the most efficient lighting systems. LED lights have become quite popular, and for good reason – they last longer and require less electricity. To the extent you are planning to purchase emergency lighting equipment, such as flashlights, headlamps and battery powered lanterns, make sure you purchase ones with LED technology.

Fire Departments discourage the use of candles for emergency lighting. While these are an inexpensive option, they create a fire hazard. As LED lighting options have become more affordable and more efficient, they represent a safer option than candles.

Every member of your household should have a reliable LED flashlight. There are dozens of options available on Amazon. You do not necessarily need the most tactical one or the one with the most features. Buy a highly rated one for each member of your family, and perhaps a few more for visitors or in case one of yours breaks. As you acquire these, make sure a few of them are the headlamp variety – these are really helpful when you need to work with your hands in the dark.

In addition, a LED lantern should be part of your emergency gear. The ones made by GoalZero are the gold standard of emergency lighting, but there are others that are great as well. Look for highly rated ones on Amazon. Again, we urge you buy quality; but don’t feel compelled to buy the most tactical version they sell. You should be able to get a nice one for less than \$50.

Batteries

As lighting technology changes, so does battery technology. We now have more battery options on the market than before.

There are countless articles on the internet about batteries – how they work, the best types, the best brands, the best sizes. Since we’re interested in getting prepared quickly, we’re going to focus on two rules of thumb for batteries:

- Make sure you have enough batteries for the timeframe for which you are preparing.

- Make sure you have the right size batteries for your items.

Let's break this down into two categories of batteries: alkaline/lithium and rechargeable.

Alkaline/Lithium

As a general rule, lithium batteries are better than alkaline batteries, especially for items you will be running for long periods of time. Lithium batteries are also more expensive.

A few years ago, Consumer Reports did a test of various types and brands of AA batteries. Their top seven recommendations at the time put lithium batteries over alkaline batteries. Interestingly the highest rated battery (Energizer Ultimate Lithium) received a score of 89...while the Costco house brand batteries received a score of 80. Thus, you can buy a large quantity of Costco batteries for what you'd pay for Energizer Ultimate Lithium batteries and still get decent performance.

Rechargeable

Rechargeable batteries are predictably more expensive (around four times as expensive for a top line rechargeable over a name brand alkaline), but over time they can save money when powering devices frequently used. As the name implies, to get additional uses out of these batteries, you need power from some source to recharge them. Assuming you have an alternative energy method of recharging them (solar power, generator, etc.), this can be a very attractive and money saving option.

Some of the higher rated brands of rechargeable batteries include Amazon Basics Rechargeable, Energizer Recharge Batteries, and Panasonic Eneloop Batteries.

Should you buy alkaline/lithium or rechargeable batteries? If you:

- are looking for the lowest cost initial investment: alkaline/lithium
- have a reliable alternative energy source: rechargeable

Determine what items in your home you want to keep functioning after a long power outage, and then begin to stock up on the batteries those devices need.

USB Rechargers

The ubiquitous USB power stick – which comes in all sorts of shapes, sizes, colors and capacities – can be a tremendous asset in an extended emergency. Capable of recharging cell phones, these devices can sometimes double the effective phone battery life. They are relatively inexpensive, and GoalZero makes solar panels designed to recharge them.

Being able to hand out some of these to your neighbors and having the ability to recharge them when they run out of power can make you a very popular person in your neighborhood in an emergency.

The Anker PowerCore 10000 remains a highly rated device on Amazon for this purpose and costs about \$25.

Power Stations

In addition to the typical batteries we're accustomed to, there are now larger batteries incorporated into "power station" devices that have built in AC inverters. Do an internet search for "portable rechargeable battery pack inverters" and you will see there are a number of options. These allow you to run small appliances in addition to recharging your smaller batteries.

Power stations are generally left plugged in, so that they are constantly recharged. The amount of power they provide is dependent on the size of the unit. They can be a good alternative to someone who doesn't want to use a traditional gas or propane generator. Of course, when the grid is down, the power station will need to be recharged through alternative methods.

GoalZero makes a number of these devices; they even make special solar panels that can be used to recharge them. If you elect to purchase a power station, put some thought into how you would recharge it.

Examine whether a power station is a good option for your situation. For many people, just having an ample supply of alkaline batteries will suffice. But for those who need more power for larger applications or medical devices, this may be a good solution.

Generators

Generators have significant limitations. They can be expensive and must be fed with fuel to keep them functioning. Storing the fuel for them can be a challenge.

If you have the resources to install a whole house generator, you might consider doing so. These can be rather expensive for both the purchase price and the installation costs. One way to rationalize the expense is to look at your homeowner's insurance deductible. If having a generator saves you from incurring a deductible (e.g., the generator keeps the heat on in your home during a winter storm, helping to prevent your pipes from bursting), the generator could help pay for itself. It can also allow you to be a resource to your neighborhood if you have the ability to provide electricity for critical functions and to recharge devices for others.

Of course, being able to do so can create a downside – many will want you to provide them with recharges for various items and seek to avail themselves of your “free power.” You will need to determine how you will handle those conversations.

Generators can also create a security risk. After a large disaster, it’s apparent who has a generator: the house with the lights on at night when everyone else’s house is in the dark. This can make you a target for criminals.

Having said all of this, if you need power, there is no better substitute than a reliable generator.

For citizens looking to get prepared quickly, consider the dual fuel powered portable generators made by Champion. Home Depot sells these at various price points. The most inexpensive ones cost around \$400 for a 3,500 watt model. This can provide ample power for recharging devices, running small power tools and even a small freezer or refrigerator. Seeing how you don’t have to run a freezer 24 hours a day to keep things in it frozen, running a generator three to four hours a day to keep a freezer’s contents from spoiling can be a good strategy.

The dual fuel option is critical – these will run on gasoline or propane. Propane is a good choice, as it’s easy to store safely for long periods of time.

You should determine what size generator you need before purchasing. Research “generator sizing tool” on line for a number of calculators that can quickly help you determine what size is best for you.

Storing gasoline for vehicles, generators and power tools

Citizens should check their local laws about storing gasoline at their homes.

During emergencies, gasoline supplies can become disrupted. After a hurricane, gasoline supplies became tight in large part because people began purchasing extra supplies based upon news reports of a shortage. It can become a self-fulfilling prophesy.

Having fuel for your vehicles during an extended crisis can give you options. You’ll be able to take someone to the hospital or doctor, deliver supplies to friends or relatives, or do a volunteer shift at an emergency relief station. It can also give you the ability to evacuate to an area of greater safety if need be.

Some general rules about gasoline management:

- One of the best things you can do is to get in the habit of keeping your vehicle filled up all the time. In a perfect world, we should be able to drive our vehicles this evening to a town two hours away and back without the need to stop to get gas. Many vehicles today can do that with a full tank, and several can do a six hour round trip with a full tank.

- Gasoline with ethanol stores poorly, and most gasoline contains ethanol. Download the Pure Gas app to locate vendors near you that sell ethanol free fuel.
- In addition, a gas treatment fluid to help store it is helpful as well. Sta-bil is a good additive choice; it can be purchased at any auto parts store or online.
- Rotate your stored fuel every few months. This will help keep you stocked in fresh gasoline.
- For two stroke engines, make sure you use ethanol free fuel or purchase pre-mixed two stroke fuel. Ethanol fuel can wreak havoc on your chain saw's fuel system. Using a fuel designed to be stored will help.
- Make sure you are storing fuel in containers designed for that purpose.
- Deciding how much fuel to store is a function of how much you can do legally and safely. It's also a function of how much you think you will need.
- One of the best – albeit rather expensive – jerry cans for gasoline are the Wavian brand jerry cans. These are very robust gas cans.

Climate Control Strategies

We often experience power outages during weather extremes. Having the ability to remain warm in winter and cool in summer improves our health and safety.

Staying Warm

Spend some time planning a “warm room” for when the power goes out in frigid temperatures. A warm room is a heated space where your family can shelter to get out of the cold. A typical warm room has few windows to maximize the amount of insulation in the room. Covering windows with blankets or sheets will help prevent heat loss as well. Many report putting a tent on your bed or in your warm room, and covering the tent with blankets, will help create a warmer place to sleep.

One of the highest rated portable heaters available today is the Big Buddy Heater by Mr. Heater, which comes in different sizes. These heaters run on propane and are quite effective at warming a room. You will need to purchase a supply of propane (the same tanks referenced above for fueling generators are great for this as well), along with the necessary hoses and connectors to attach the heater to the propane tank.

In using these heaters, it's best to have at least one carbon monoxide (CO) detector in the warm room. There are a number of battery-powered CO detectors available on Amazon. It's important to not only read the product descriptions but also the user manuals (generally available on Amazon) to ensure it's a device that does not need to be plugged into an outlet to work.

Staying Cool

Hyperthermia – where the body's internal temperatures become too warm for normal bodily function – is a tragically common killer during significant heat waves. Being able to stay cool in excessive heat is critical for survival.

During a summertime power outage, citizens need to be prepared to mitigate the risk of hyperthermia by taking steps to have some means to keep cool. What works for you will largely be a function of where you live, the amount of shade around your home, and your ability to create a cross breeze in your home.

Some items to consider keeping on hand include:

- Battery powered fans. There are several inexpensive ones on Amazon.
- A one or two gallon garden sprayer. These are available online and at home improvement stores. Fill the garden sprayer with water, pump up the tank, and put the wand in front of the fan. On low humidity days, the misting water combined with the fan will provide noticeable cooling around the area of the fan.
- DIY Swamp Coolers made from 5 gallon plastic buckets. There are several videos on how to make these on YouTube.
- Battery powered AC units. These can be pricey (\$400-\$600) and can be hard to find, even online. If you have someone in your home sensitive to heat, this may be something to consider. There are some DIY options on YouTube that have proven to work as well.
- Frogg Toggs cooling towels. These are a staple in many golfer's bags. They are inexpensive and are very effective.
- A good quality tarp to create shade outside. A good sized tarp can be easily deployed to create a shady area if you find your home too stuffy during the day.

The challenge in hot weather emergencies often comes at night, where citizens try to balance keeping their windows open at night against the need to prevent intruders from taking advantage of the easier access. Given that risk, preparation for hot weather emergencies should include developing a robust home defense program as outlined later in this manual.

What NOT To Do In Your Energy and Lighting Plan

- Fail to rotate your batteries. Consider rotating them like you rotate your food stores using the FIFO method.
- Relying on candles for lighting.
- Not determining what your battery needs are for all of your flashlights, radios, LED lanterns and other devices.
- Failing to prepare for extended power outages occurring during temperature extremes.

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SECURITY

Security is often overlooked when making a preparedness plan. In an extended grid down scenario, first responder resources will be taxed. If people choose to take advantage of the emergency and participate in criminal activities, citizens should be ready to protect themselves and their families. In addition, fire department and EMS response times will be extended as well. Prepare to be your own first responder in times of crisis until the professional responders arrive.

Firearms

This can be a challenging topic, because:

- Most people don't like to think about themselves or family members being victims of crime.
- Many people are not inclined to arm themselves for this possibility.

It's also a challenging decision because some may struggle with the idea that a good person may have to use deadly force against another human being. This is a very personal decision, of course. For those who are debating this in their minds, a few thoughts to consider:

- You have an obligation to protect your family from harm. If evil shows up at your doorstep tonight and forces its way into your home, what are you going to do to protect your family from it?
- Self defense scenarios do not all end in the use of deadly force. Many incidents end peacefully, after the aggressor retreats when confronted by a citizen who is willing to use deadly force.
- The U.S. Supreme Court has consistently ruled law enforcement officers do not have a duty to protect individuals from harm, even if that harm is likely to happen.¹⁶

For those who are not inclined to arm themselves, I respect your decision. Firearm ownership and usage is a serious decision and requires a commitment to safety and training. If you are not comfortable owning a firearm, you should contemplate how you are going to improve your security plan to deal with the possible threats of violent encounters.

I cannot stress this point enough: **it is imperative that you obtain training on the safe and legal use and storage of a firearm if you haven't done so already.** Don't assume your training level and understanding of the law are sufficient unless you have recently taken a quality training

class from a reputable instructor. While many may see an extended emergency as a lawless situation, history tells us that many people who commit crimes during disasters (including using deadly force when it is not allowed) will be held to account by the legal system. **Deadly force is always the last option a citizen should choose to defend themselves.**

There are lots of opinions in the firearms community as to what kind of weapon or weapons one should own for personal protection. Much of these opinions are the result of successful marketing and less upon the soundness of the firearm in question. The following recommendations are generally agreed upon by top tier firearms trainers in the United States. If you feel you have the ability to use a firearm prudently and are seeking guidance on what kind of firearm to purchase to become prepared quickly, I suggest you choose one or more from the following list:

Handgun:

- Glock 17, 19 or 48 (all of these are 9mm)
- Smith and Wesson M&P (chambered in 9mm)

Shotgun (chambered in 12 gauge):

- Remington 870 or 1100
- Mossberg 500 or 590A1

Rifle:

- AR-15, from any American manufacturer, chambered in 5.56mm or .223 caliber
- Marlin 336 lever action rifle, in .30-30 caliber
- Marlin 1894 SBL lever action rifle, chambered in 44 Magnum
- Ruger 10/22, in .22 caliber

In addition, you will need to store sufficient ammunition for any gun(s) you have. Look for ammunition that is designed specifically for self defense purposes. It is slightly more expensive than target ammunition but also more effective and reliable.

Safe storage for your firearms should also be a priority for your family. There are a number of ways to store firearms safely and in compliance with state law to fit every budget. The hallmark of a good firearm storage device is that it prevents unauthorized persons from making access to it. A simple fireproof lock box (like the ones made by Sentry, referenced above) is an inexpensive way to secure handguns. For those looking for a more robust storage method, I personally use and recommend the gun security products made by VLine.¹⁷

Motion sensors/driveway alarms

Motion sensors and driveway alarms are relatively inexpensive and very effective tools in alerting you to the presence of people. Dakota Alarms and the Toguard Solar Driveway Alarm are two good options to consider; both are available on Amazon.

Fire Extinguishers

A good way to prevent a small fire from turning into a large fire is by having a quality fire extinguisher handy. Stick with fire extinguishers that are ABC rated, which provides a viable way to combat a wide spectrum of fires. These are readily available at various retailers and home improvement stores. The First Alert Home1 model is a great choice.

Every so often, it's a good idea to take older fire extinguishers out of service by allowing your children or others not experienced with fire extinguishers to practice with them. Ideally, you'd create a fire about the size of a full-sized trash can and allow them to put the fire out. Study the PASS method of fire extinguisher usage.¹⁸ It's easy and effective.

Great places to keep fire extinguishers include your kitchen, your patio near the grill, your vehicle and garage.

Other Security Options

As you look to put together your home security plan, consider some inexpensive options, including:

- Signage indicating the presence of violent dogs or monitored alarm systems. Signs are inexpensive and can be purchased at many home improvement stores. Note well: Some law enforcement agencies now advises people NOT to use these signs. Their interviews with criminals suggests that burglars are targeting homes with such signs, thinking that people with security systems have something worth protecting inside.
- Motion sensor lights. These are also inexpensive. One option is to install a motion activated flood lights, and use a light socket to plug adapter (available on Amazon or other hardware stores) to plug in a radio or other noisemaking device. In the middle of the night, a light and loud radio coming on when you least expect it can startle a would-be intruder and help alert you to the danger. A great option is the Honwell Motion Sensor Light – a battery operated, easy to install LED motion light – available on Amazon.

- Security cameras. These are becoming more ubiquitous now, through various doorbell applications as well as standalone wireless camera systems. The presence of cameras can be a deterrent as well as a source of information in identifying criminals and suspicious persons.
- Upgraded door locks. There are a number of articles and videos online about how to do this. Putting in larger screws and updating your door locks can harden your home with minimal expense. The Sabre HS-DSB Adjustable 2-in-1 Home Bar is a very effective and inexpensive way to bolster the resilience of both regular and sliding glass doors.
- Identify a “safe room” in which to take shelter in the event of a home invasion. Where do you want your family to go in the event you have someone break into your home? For that room, consider installing a solid core door – one that is much heavier and thicker than the typical door inside of a home – with good locks and 4 inch screws to mount the hinges. This will help reduce the chances the intruder will kick in the door of the room.
- Alarm systems. Today’s homeowner has a number of options. Many homes have them already, but homeowners don’t utilize them. SimpliSafe offers an effective, easy way to add alarm systems to your home. There are other good options out there; you will likely need to do some research on line as well as by polling friends and neighbors about their recommendations.
- Pepper Spray. If you are not inclined to purchase or carry a firearm, consider OC spray, which can be an effective deterrent. Buy a few to keep in your vehicle, your every day carry and at work if your employer allows it. Make sure the OC concentration is between 0.7% and 2.0% and that the unit projects a “stream” pattern (as opposed to a fogger, foam or gel unit).

Also purchase one to practice with – know what you have to do to hit a target the size of a face at 10 feet.

Top brand recommendations include:

- Sabre Red MK-6
- Sabre Mk-3 Crossfire
- Defense Technologies MK-6
- POM Clear

Creating and Practicing Your Security Plan

As with much of the guidance in this manual, it's not enough to just buy the recommended items. You must develop plans to use them in emergencies and practice those plans. Consider developing plans for the following scenarios and practicing those plans from time to time:

- Kitchen fires
- Fires occurring in the middle of the night, requiring evacuation
- Medical emergencies involving first responders coming to your house at night
- Home invasion scenarios, both during the day and at night
- Maintaining home security during power outages
- Other scenarios unique to your situation

What NOT To Do In Creating Your Security Plan

- Fail to take a quality training course on the use of firearms and deadly force if you plan to utilize a firearm as part of your security plan.
- Fail to educate your family as to what to do in the event of a home invasion while you are at home.
- Fail to develop and practice plans for various scenarios.

COMMUNICATIONS

Many in the preparedness community spend significant time and money developing communications systems to be used during disasters. Much of this centers around ham radio applications. There is no doubt that ham radio is an incredible tool and is well suited for the disaster environment.

However, for the citizen who is trying to achieve a baseline level of preparedness in short order, ham radio has some drawbacks. Between the licensing requirement and the need to practice with the ham radio gear, it's not practical for the citizen who is just beginning to work on their preparedness.

There are some communication tools that can be valuable and are easier to use. Some of these include:

- *A small AM/FM transistor radio.* Never underestimate the value of these. An inexpensive AM/FM radio that runs on a couple of batteries can provide you with hours of news and information. You are likely to find that the local AM radio stations in your community will provide the most information in times of emergency.
- *“Secret” Facebook Groups.* You can create groups on Facebook that are secret, meaning no one other than the members of the group will even know of the existence of the group. These are great for families who are looking for a way to share information when they are spread out across the country. While the internet may not always be functioning, when it is, such secret groups are a great way for friends and family to share information about health and welfare with members of the group.
- *The Zello app.* Download the Zello app to your phone. It's a great way to communicate with a large number of people if cell service is still functioning. It essentially turns your phone into a walkie talkie. Many lives were saved in the aftermath of Hurricane Harvey when volunteers took to Zello to contact those in need of rescue.
- *First Responder Radio Scanner apps.* There are a number of these available which enable listeners to hear radio traffic between first responders in real time. Some law enforcement agencies block their radio traffic, but even in large cities you can often listen to fire department and EMS radio traffic. This raw intel can provide you with an early warning of what is to come and help you plan accordingly.
- *Walkie Talkies.* There are two basic types of walkie talkies. The Family Radio Service (FRS) radios are the ones you see for sale at outdoors stores. While you likely won't be able to communicate for miles despite what it may say on the outside of the packaging, these are good for communicating around the neighborhood when family members are

out and about during an emergency. A group of neighbors could also utilize these radios to stay in touch with one another as well. These are also available for sale on line and do not require any licensing. They are easy to use.

General Mobile Radio Service (GMRS) walkie talkies are for those wanting additional communication range. It does require a license from the Federal Communications Commission (FCC) that costs \$70 for 10 years, but it will allow you to transmit with radios designed to use more power. Many GMRS radios also have the FRS radio channels built into them as well.

There are a lot of manufacturers of these radios. Two brands – Midland and Motorola – tend to stand out in various reviews. FRS radios can be purchased at most any outdoor or sporting goods store. GMRS radios are available on Amazon and other online outlets.

What NOT To Do In Creating a Family Communication Plan

- Failing to ensure that all family members have key phone numbers committed to memory or recorded in writing, including those numbers of out of state family members.
- Assuming your cell phone is a sufficient tool for all communication needs in an extended crisis.

NEXT STEPS

Once you've achieved the base line level of preparedness described above, there are a few other tasks you should consider:

- Making an emergency kit for your vehicle. Depending on your situation, you may want to make it a “get home bag” to enable you to walk home from your work or school in the event roads are impassable. Severe weather, especially in the winter, often forces people to shelter in their vehicles for days. Think about what you would need for that. There are a number of good articles on the subject.¹⁹
- Ensure that your legal, financial and insurance situation is squared away. Complete an inventory of your home. Make sure you have adequate insurance for your home and vehicles. Get your will and estate planning documents completed to make things easier for your loved ones.
- Create a computer back up system – either through cloud computing or an external hard drive. Protect those documents and files on your computer that you need. Make sure you're using a good antivirus software that is up to date.
- Create checklists to help you prepare quickly for a coming emergency. I've done much of the hard work for you. Visit paultmartin.com, click on the Resources tab at the top and select Checklists from the dropdown menu. There are a number of sample checklists for various scenarios you can download and customize for you own situation.
- Have suitable work clothing appropriate for temperature extremes. Emergencies often require extensive manual labor in adverse weather conditions. Make sure your family has suitable work clothing for all seasons, including work and cold weather gloves, boots, and headware.

Preparing the Church and Civic Organizations for Extended Emergencies

In times of crisis, Americans have turned to their local houses of faith for help in weathering the storm and recovering from it. It is quite common for churches to become community resource centers after a disaster, hosting various aid agencies and organizations supporting those affected.

Churches are well suited for this kind of work. Many churches have various meeting spaces and classrooms, sufficient parking for mobile disaster units, and large kitchens for feeding people.

Preparing a church to meet the needs of a community after a disaster doesn't happen by accident. If a church feels called to ready itself to be a resource in times of crisis, it must take action well before the emergency hits the community.

In 2018, the United Methodist Insurance Company (UMI) published a seminal manual for churches looking to become better prepared to not only handle community emergencies but also how to be equipped to help others affected by them. *Emergency Preparedness for Natural Disasters and Extreme Weather – A Handbook for Churches* should be required reading for any faith-based institution looking to ready itself to be a leader in a crisis environment.²⁰

Churches and civic organizations feeling called to take such action need to focus on three areas to be effective in preparing to meet the needs of the community in an extended emergency.

Prepare your organization to be spiritually ready for a disaster. Church denominations may have differing beliefs as to why disasters happen. Irrespective of those beliefs, churches should be ready to answer the spiritual needs of those hurting in the community with a well-developed message to share with those seeking help. They should also identify and train those who will have primary responsibility to provide counseling to those needing spiritual guidance.

Secular organizations may not make spiritual preparedness a priority, but they can make sure members have developed a servant heart and mindset to be ready to help others in times of crisis.

Develop a core leadership team and a trained group of volunteers to facilitate crisis operations. Organizations interested in playing a role in the community's recovery need to develop the necessary leadership skills and management skills of their crisis operations team (COT) to be ready to help. Each organization will go about this differently, but we would expect to see some similar actions at churches undertaking such preparations. These include:

- Identifying and developing those who will be primarily responsible for overseeing the crisis response operations of the church. Depending on the church or civic organization, this may be a mix of paid staff and volunteers.
- Strong encouragement of key staff and volunteers to have their personal preparations squared away at all times. Staff and volunteers who are not prepared personally – those

who haven't undertaken the steps outlined earlier – will likely not be able to help others in a crisis.

- Regular meetings and training exercises for COT members. Simply having a team isn't sufficient; an organization ready to meet the needs of the community after a disaster will regularly meet to discuss changes to the plans, new ideas and engage in training drills.

Determine what services the organization will offer the community in times of crisis. This will largely be a function of your resources and ingenuity. Your group may elect to partner with other churches and organizations to provide these services together. There are several ways churches can meet community needs at critical moments. Some ideas include:

- *Provide washing machines and dryers so people can do their laundry.* Tide Laundry Detergent has the “Tide Truck” which serves as a mobile laundromat that can be used in times of disaster.²¹ An organization may develop their own mobile laundromat or simply create a network of volunteers who make their own functioning washers and dryers available to those who need them. Clean clothes promote a sense of normalcy and improve hygiene.
- *Provide purified water.* Consider investing or even building their own large-scale water purification system to provide clean drinking water to the community. The MSR SE200 Community Chlorine Maker is designed to make chlorine from salt in low-resource situations.
- *Create a recharge station for batteries, laptops and cell phones.* An organization could purchase or build their own solar recharge station to allow people the ability to get their rechargeable batteries and devices recharged.
- *Provide shelter to those in need.* Churches have done this for ages. The best shelters are the ones which are well run by trained volunteers who have made plans on how best to use their allotted space.
- *Set up a mobile kitchen.* Various relief agencies and grocery stores have mobile kitchens which are deployed during disasters. Many people have mobile outdoor cooking equipment for “tailgating” and other outdoor activities. If volunteers who had such equipment could collaborate by setting up their mobile cooking equipment in the church parking lot, a church could create an effective mobile kitchen operation of their own.
- *Develop a mobile shower system to promote hygiene.* Some relief agencies have mobile shower units to allow people to bathe in disaster areas. An organization who can devise a

way to provide showers to the community in a crisis would be an immense asset.

- *Create a communications center to gather news and information during grid down operations.* Should the power grid or internet fail for an extended period of time, a team of volunteer ham radio operators and others with access to battery powered equipment could gather news reports to share with the community.
- *Develop a medical clinic to meet the health needs of the community in a disaster.* Nurses, physicians, paramedics and other health professionals could provide acute care for injuries and illnesses when access to hospitals and traditional clinics is hampered.
- *Create a short duration day care center for children, allowing parents to tend to disaster matters.* Child care is critical; having a safe place for parents to leave their kids while they meet with aid workers or volunteer in other roles at the church greatly enhances the parents' productivity.
- *Host a legal clinic in conjunction with the local bar association.* Disasters and crises create a plethora of legal issues for citizens. Hosting a regular legal clinic for the local bar association's pro bono project will provide another much needed service to the community.
- *Create a sanitation and safety supply warehouse.* As previously discussed, sanitation is an overlooked but critical piece of a disaster plan. Sanitation supplies, such as soap, bleach, N95 masks, hand sanitizers, rubber gloves, work gloves, eye protection and rubbing alcohol will be in short supply. Having a stockpile of these items – or the ability to get them in bulk quickly – can be a force multiplier in combating communicable diseases in the post-crisis environment.
- *Obtain a refrigeration system for people to store temperature sensitive medications.* Having a community refrigeration system (which may include a means to re-freeze “blue ice” packages) to help people keep medications like insulin would literally save lives. If the church had the ability to provide ice for emergency applications such as ice packs for injury or to keep in coolers at home to manage temperature sensitive medications, it would be providing wonderful benefits for the temporal needs of the community. A church could use a generator or solar power making device to run the refrigerators, or it could purchase a propane powered refrigerator found at many home improvement stores.
- *Provide a seasonal clothing during cold months to those in need.* Warm clothes during cold months are always in need after a disaster. Your organization could establish a

warehouse or some other donation center for people to donate cold weather attire.

- *Create a Quick Reaction Team of members with power tools and safety gear to deploy to neighborhoods affected by a storm.* Many churches and organizations report their membership and community need help removing debris quickly after a disaster. If your organization has members who have chainsaws and other tools helpful in such situations, you will be able to provide a great service to the community.

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Conclusions

At the beginning of this presentation, we acknowledged your decision to become better prepared was likely not an easy one to make. It can be difficult to fathom. It's also hard to fathom all of the things that need to be done to prepare yourself, your family and church to be ready for such an event.

If you're feeling overwhelmed right now, keep these things in mind:

- Accomplish one thing at a time. Start by building your food program. Once you've secured a month's worth of food, work on your water situation. Continue to work through the recommendations here. Once you're squared away for a month, consider making it two months or more.
- You now have some basic tools to get this done. Start working the problem. Getting prepared will help alleviate your fear.
- That which is made a priority gets accomplished. If you make preparedness a priority, you will get this done. It may mean you have to make some changes to your budget and/or lifestyle in order to purchase the necessary supplies and training courses. Is preparedness a priority to you?
- Begin seeking out like-minded people you can network with. You may find these people at your church. Start discussions at your church about what role it will play in the event of a large scale extended emergency.

You can do this!

End Notes

¹ <https://www.fema.gov/pdf/library/f&web.pdf>

² <https://health.gov/dietaryguidelines/2015/guidelines/appendix-2/>

³ Id.

⁴ Mayo Clinic Family Health Book, Fifth Edition (2018), pg. 251.

⁵ Id.

⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136577/>

⁷ <https://www.amazon.com/Sprouting-Book-Sprouts-Maximize-Vitality/dp/0895292467>

⁸ <https://www.ready.gov/water>

⁹ <https://www.epa.gov/ground-water-and-drinking-water/emergency-disinfection-drinking-water>

¹⁰ <https://www.epa.gov/ground-water-and-drinking-water/emergency-disinfection-drinking-water>

¹¹ <https://www.clorox.com/how-to/laundry-basics/product-usage-guides/shelf-life/>

¹² <https://chlorine.americanchemistry.com/Chlorine/Disinfection-of-Water/>

¹³ <https://www.cnn.com/2017/09/01/health/houston-flood-water-contamination/index.html>

¹⁴ <https://www.mayoclinic.org/first-aid/first-aid-kits/basics/art-20056673>

¹⁵

https://www.hopkinsguides.com/hopkins/view/Johns_Hopkins_Diabetes_Guide/547203/all/Disaster_Emergency_Preparedness_in_Diabetes11:45

¹⁶ Town of Castle Rock v. Gonzales, 545 U.S. 748 (2005).

¹⁷ www.vlineind.com

¹⁸ <https://www.bu.edu/ehs/ehs-topics/fire-safety/fire-extinguisher/the-pass-method-for-fire-extinguishers/>

¹⁹ <https://www.offgridweb.com/survival/hurricane-aftermath/>

²⁰ http://s3.amazonaws.com/Website_UMI/Resources/documents/UMI-disaster-e-book-2018_FINAL.pdf

²¹ <https://tide.com/en-us/about-tide/loads-of-hope>