PREPARE NOW. SURVIVE LATER

The Only Preparedness Guide You'll Ever Need

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Introduction

You Can Do It!

Get two cases of water bottles for each person in your household.

You have just taken the most important step in preparation for an emergency or natural disaster: an adequate supply of water for at least six days for each person.

This book is designed for you. The person who has concerns about whether they are adequately prepared for emergencies and disasters. It is written to help you easily prepare for and deal with a wide array of possible situations in a common-sense, step by step manner.

We are constantly being bombarded with images of people caught in both natural and unnatural emergencies and disasters. They appear on our television screen and we watch the

devastation, confusion and chaos with a combination of relief and fear. Relief because it's not us and fear because even though we bury the emotion, telling ourselves *that won't happen to us,* we know deep down that accidents, disasters and emergencies do not discriminate and can strike anyone, anywhere at anytime. You, and someone you love, will definitely face at least one of the topics covered in this book.

The key is to be prepared and this book will show you how to do it. It gives you step-by-step checklists that you can readily follow in order to be ready. It also allows you to prepare by levels, from mild to moderate to extreme.

The book is structured as follows:

First: The key phrase to remember: SURVIVAL.
Second: The five key elements for survival
Third: The Area Study & emergency and threat assessment
Fourth: the four places for which to plan
Fifth: The Grab-n-Go bags you need
Sixth: Specific environments and events for which to prepare
Appendixes: All checklists. All items mentioned with links. Links to APPs and web pages.

Between those topics and the sub-topics in each, along with all the checklists, you will be ready for any emergency and survival situation.

Why do you need this book?

80% of Americans live in a county that has been hit by a weather related disaster since 2007
60% of people have not practiced or prepared for what to do in an emergency
55% of people think they can rely on the "authorities" to rescue them
44% of people have no first aid kit
48% of people have no emergency supplies
53% of people do not have a three days supply of water
52% of families do not have an emergency rally point (ERP)
42% of people do not know the phone numbers of immediate family members

In the Green Berets, the most important thing that made us elite was our planning. We not only thoroughly planned our missions, we also *Emergency Planned* all the possible things we could imagine going wrong.

You Emergency Plan for 3 reasons:

To avoid the emergency.

To have a plan, equipment, training etc. in place in case the emergency strikes.

To give you peace of mind in day-to-day living so you don't constantly have to worry about potential emergencies because you are prepared for them. This allows you to experience a higher quality of life.

Three Levels of Emergencies.

I'm going to define three types of survival situations/emergencies and will use these definitions throughout the book. They are also the order of what is most likely to happen. Your immediate goal should be to be prepared for a mild emergency.

Mild: You experience some discomfort from your normal routine for no more than 48 hours, but it is not life threatening. Example: Your power goes off for a day or two.

Moderate: You experience a large change from your normal routine, either natural or man-made, which is not immediately life threatening but has the potential to become so if not dealt with, and/or it continues. Example: Your power goes off for five days or more. Your car slides off the road in a remote area and you are trapped inside. A powerful hurricane is approaching. A 5.0 or greater earthquake strikes.

Extreme: A catastrophic natural or man-made event that immediately threatens your life and the lives of all around you, and if it continues, will be a constant threat. Example: A tsunami hits your coastal town. A tornado destroys your home. Nuclear, biological and chemical warfare/terrorist attack. A 7.0 or greater earthquake. The collapse of civilization. A pandemic with a high transmission and kill rate. Assume the worst until the situation stabilizes.

Three levels of Emergencies

Mild
Moderate
Extreme

This book is organized to get your ready in that order: first for the most common, a mild emergency. Then for moderate. And then extreme. Each layer builds on the other. The key is that you get started and have your base in place.

There are numerous checklists throughout this book. Here's a guide to how they are laid out and how to use them:

Check when done	Checklist
	Baseline: this is the minimum required
	Mild: what you need in order to prepare for a mild emergency
	Moderate: what more you need in order to prepare for a moderate emergency
	Extreme: what more you need in order to prepare for an extreme emergency
	Grab-n-Go bag: what is going in your Grab-n-Go bag
	Work: What you need at work
	Car: What you need in your car

An important aspect we also focus on is the days after an emergency. Since you have water in place now, the most important commodity, you're already ahead of the preparation curve! Think about when you watch the news in the aftermath of any emergency or natural disaster. The first thing being brought in is water.

You've already got your supply.

After all, when word of a pending emergency is announced (and often they come unannounced!), we see unprepared people panicking. That's when there are mobs in stores fighting over a bottle of water and bare shelves. You don't want to be caught up in that. You want to spend your time preparing inside your home, with the supplies needed already on hand.

Why listen to me?

If a disaster struck, who would you want at your side, helping you? A doctor? Lawyer? Policeman? Teacher? While they all have special skills, I submit that the overwhelming choice would be a Special Forces Green Beret. Someone trained in survival, medicine, weapons, tactics, communication, engineering, counter-terrorism, tactical and strategic intelligence and with the capability to be a force multiplier. This last one is key. Another way this book is unique is because your goal should be to plan for dealing with emergencies with a team/family, not a lonely individual holed up in a bunker deep in the hills.

This book is a step-by-step guide giving you the tactics and techniques Green Berets use to plan for and train to succeed under the toughest of circumstances; thus they will work in every situation you could find yourself. Don't feel that you have to be a Green Beret to use this book. I'm like most people. I'm not a prepper or a hard-core survivalist. I've been trained and have a lot of experience, but my day to day life is pretty normal. I've prepared just like you need to prepare, but prefer room service over sleeping on the side of a mountain. I'm passing on the key knowledge and experience I have acquired through the mindset of someone living in a non-emergency day-to-day lifestyle.

As I began to research the amount of information out there about survival, I was quickly overwhelmed despite having been extensively trained in this area. Between the books, the videos, the internet and the "reality" shows, the casual person will get swept under. I'm trying to keep this is as simple as possible and looking at it from the point of view of your "average" person living in an apartment or house who will have to face situations they are probably not prepared for right now. I prefer to start a fire with a lighter rather than making a bow, then a making a fireboard, then finding a stick, then using it to start a fire. Let's keep it simple until it gets hard!

We've seen glimpses of what's coming. The Indian Ocean tsunami; Katrina; 9-11; Haiti; the Japanese quake and subsequent tsunami, Hurricane Sandy, the Louisiana floods, and so on. But there are many, lesser, emergencies that are more likely, such as a power outage.

We've all experienced that.

A key tenet of success for the Green Beret is to act rather than react. When the disaster strikes, it's too late. The clock is ticking. So let's get prepared!

Specific Environments and Events that will be Covered

Special Environments			
Cold Weather	Desert	Tropical	Water

Specific Events: Man-Made		
Transportation:		
Car	Plane/Helicopter	
Train Subway	Boat/Ferry	Tall building
Safety and Security		
Power Outage	Fire	Burglary
Robbery	Carjacking	Civil Unrest/Riots
Terrorist Attack	Active Shooter	Weapons
NBC		
Nuclear Plants, Nuclear Weapons	Infectious Diseases and Biological and Chemical Weapons and Accidents	

Specific Events: Natural Disasters		
Tornado	Hurricane	Heat Wave/Drought
Wildfire	Blizzard	Earthquake
Tsunami	Volcano	Mud/Landslide
Dam	Flood	

This book is all about preparation. Actual implementation is in the companion book, ***Survive Now-Thrive Later***. For example, in this book under First Aid, we'll cover what supplies, Apps, and training you need to be ready. To actually do First Aid is in the companion book. I broke these books apart because putting it all in one book gets confusing. There is naturally overlap, and you should read both books through, but I want to keep this straightforward.

I discuss quite a few items in this book and there are a number of checklists.

Appendix A: All checklists.

Appendix B: Any specific item I mention with a link to show you what it is and a way to get it.

Appendix C: A summary of links to all Apps and web sites mentioned.

So let's get ready!

The Rule of Three

You can survive three minutes without air.
You can survive three hours without a regulated body temperature.
You can survive three days, depending on environment, without water.
You can survive three weeks without food.

The Key Phrase to Remember: SURVIVAL

The most important tool for survival is having the right mindset. All the training, preparation, information, tools, etcetera, are useless without the will to survive. This will is birthed from having the right mindset.

Don't be intimidated. The will to survive is in every person. Luckily, for most of us, we haven't had to tap into it. But when you have to, *you will*. Human beings are amazingly adaptable. I've talked to people who say: If it's that bad, I don't want to survive. But my experience says you'll react differently. And when you do, this book will have you ready.

Here are some tools to help you:

The word ***Survival*** provides you with the first letters of the keys you need.
S - Size up the situation, your surroundings, yourself, and your equipment.
U - Use All Your Senses & Undue Haste Makes Waste
R - Remember Where You Are
V - Vanquish Fear and Panic
I - Improvise
V - Value Living
A - Act Like the Natives
L - Live by Your Wits

S: Size up the situation, your surroundings, yourself, and your equipment

There are two ways to do this: one is in preparation and the other is in the actual situation. For preparation, you size up your potential situations by doing an Area Study, which will we go through in detail later in the book.

Size up your situation: Focus on what exactly is the threat in order of priority? This might seem obvious, but consider the situation in Japan in 2011. The initial event was the earthquake. That, however, wasn't the primary threat. The resulting tsunami caused much more devastation. And following that, the problems at the nuclear plants presented immense issues that are still having an effect.

Size up your surroundings: When in a situation, tune in to the environment. Wherever you are, you are part of a system. This is key to survival. You don't want to fight your environment; you want to work with it. There is a pattern to nature. In an urban environment there are also patterns. Make note of the patterns and also focus on any time the pattern is disturbed.

One thing that always struck me was that no matter where my A-Team went in the world, no matter how hard we tried to hide, no matter how far from civilization we were, the locals

always knew we were there. Because our presence was abnormal. They sensed it. Do the same with your environment.

Size up yourself: Have you, or someone on your team, been hurt or wounded? Often, in the initial rush of a trauma, we miss potentially lethal injuries. We'll discuss emergency first aid later, but you must take the time to assess everyone's physical condition. For example, with gunshot wounds, the exit wound can often be more dangerous than the entrance wound, but often people don't look for it.

Keep yourself healthy. Dehydration, which we'll cover under water, is a major problem that can easily be avoided. Notice how this is emphasized in *The Hunger Games*. The first piece of advice the mentor gives to the two candidates from his district is to find water. We can survive quite a while without food, but water is critical. Cold and wet are also enemies that you have to monitor and deal with.

Size up your equipment: What do you have? What can you get? What condition is your equipment in? This will be covered in more detail later on, but some situations might require field expediency. What do you have that is necessary and what can you do without? People have been killed in natural disasters by trying to carry too much stuff with them. During the tsunami in Japan many people died while they tried to pick up what they felt were irreplaceable items. Some people even went back to their houses after initially evacuating and died. The most important things are people, not memorabilia or jewels or money.

Nothing is more valuable than life.

U - Use All Your Senses, Undue Haste Makes Waste

Use all your senses. A key trait, which mystifies many people, is called 6th sense. Great point men in the army are valued for this trait. They'll be leading a patrol along a trail and suddenly stop. Something has alerted them, but they can't pinpoint it right away. We all have 6th sense, but many of us don't pay attention to it. 6th sense is one or more of your other 5 senses picking up something real and alerting your subconscious. You actually saw or smelled or felt something, but didn't consciously register it. Trust that feeling. Focus and shift whatever it is to your conscious mind. Listen, smell, taste, touch, see. All are critical.

Undue haste makes waste: Unless you are in imminent danger, slow down and think things through. Panic is a killer. If you don't think and plan, you could do the wrong thing and in some cases cause a "no do-over" action, which is usually fatal. Don't take an action or move just for the sake of doing something. Every action and movement must have a purpose.

The good news is that once you finish this book and have done the checklists you will be so much more ready and will have anticipated many potential problems and be prepared for them.

R - Remember Where You Are

Know your location at all times. Also, know where the people on your team are. Stay oriented. Often you can use significant terrain features for that, whether it be a coastline, a mountain range, a river. They can also give you boundaries.

We'll go over traditional map reading later in this book because we have become overly reliant on GPS. We'll discuss maps, how to get them for free, how to use them, and field expedient direction finding techniques. It's a lot easier than you think it is.

Make sure everyone in the group is oriented. Make sure you know who has the map and compass. The map is inside a waterproof case. The map and compass are tied off to your body with a 'dummy' cord. Never rely on others to know where you're located. If you are moving,

make note of key terrain features and water sources. Remember, water sources are where game congregates and usually have fish in them, so they are also food sources.

During my training at the International Mountain Climbing School, an experienced mountaineer told us a key to his surviving situations where others had perished: while going up the mountain, he repeatedly looked *back*. He wanted to see what it would look like when he was coming down the mountain. More people get lost and killed coming down the mountain than going up. We'll cover emergency rally points later, but once your team/family goes there on a visit, it will be easy for them to find it in an emergency.

V - Vanquish Fear and Panic

Courage is acting in the face of fear. We are all capable of being heroes. And it's easier to be a hero when you're prepared, which you will be.

Don't let your imagination run too far in a fatalistic direction, much like the one soldier in *Aliens* who kept screaming "We're all going to die." You don't want someone like that on your team.

Think about times in your life when you were in a crisis. How did you react? How did those people you want on your team react in a crisis? How someone reacts in a crisis gives you a very good idea of someone's core personality type in a survival situation.

Panic and fear also drain your energy. You're not focused on what needs to be done; you're focused on what could possibly go wrong. One way to help lower fear and panic is to be prepared, have a plan, and practice aspects of survival training so you build your confidence.

I - Improvise

Look at the things around you with a different mindset in a survival situation. What might have one particular use in civilization can have a very different use in a survival situation.

No matter how well prepared you are, in an extended emergency, some of your gear will wear out. How can you use other objects around you? We'll cover some readily available objects and how they can be turned into other useful tools. I cover scavenging in *Survive Now-Thrive Later* because it's mostly over-looked, yet is a key phase during extreme emergencies.

V - Value Living

This harkens back to the opening of this book. The will to survive. You have it; tap into it.

Two men with similar, survivable wounds. One lived and one died. What was the difference? The one who lived wanted to with every atom of his being. The one who died succumbed to his fear and pain. He didn't value his life enough.

We tend to be creatures of comfort. Civilization has advanced to the point where few people have the day to day survival skills that many people had just a few generations ago. We buy our food prepared and pre-packaged. Our water comes from a tap. Electricity is taken as a given, rather than a precarious luxury. However, don't let that make you think you can't handle a survival situation.

One thing I have seen is that when people value living, they adapt surprisingly quickly. Most of our life consists of habits. When we are forced to change our habits, we rapidly adopt new ones.

No matter how hard it gets, never quit.

A - Act Like the Natives

If you are out of your natural environment, then observe those around you, both human and animal. Those that are native to the area have adapted to it. What do they eat? Where do they get their food and water? Are there places they avoid? What are their customs and habits? Remember, even customs that seem very strange, often have a very practical root.

Watching animals is key. They also need water, food and shelter. Animals can also be an alert for the presence of other humans. And they can alert others to your presence.

If you are a stranger, develop rapport with the locals. In order to get respect, you have to show respect first.

L - Live by Your Wits, But for Now, Learn Basic Skills

There are skills you need to practice, actions you need to rehearse before having to use them in an emergency. I will highlight these skills as we go through the book. Again, preparation is the key to success, both in terms of equipment and training.

Additional traits survivors have:

Above all a *determination to survive*. All else is secondary. Even if things look hopeless, you can't ever give up.

You're capable of what is unimaginable to you right now.

In Special Forces we found a *sense of humor* could make the most difficult situation look a little brighter. In my team Standing Operating Procedures, under my commander's policy letter, the last thing listed was to "keep your sense of humor, you're going to need it." Laughter can be a pressure release. When we take ourselves too seriously, we lose track of the purpose of surviving.

As part of that, you also need to be able to *let it go*. Don't dwell on bad luck, past mistakes, or losses. Negative thinking drains energy. Look to the future. Deal with the present, prepare for the future and accept you can't change the past.

But you also can't control everything in the future either. You have to face it with a positive attitude but also accept that the *future is uncertain*. This entire book is based on that fact. It would be great if your current situation continues and you never face an emergency or survival situation or accident or disaster, but you have no guarantees. One symptom of disaster situations is that there will be considerable confusion and disinformation initially. Both because it won't be clear what's going on, but also factor in people spreading false information to further their own ends or sprouting from their fear and panic. You have to sort through it all and make the best possible decisions.

We're in this together.

In conclusion, you will find the traits of the survivor are also the traits, in everyday, normal living, make a person successful. So you can use this book not only to prepare, but also to learn traits that will make your current environment more fruitful and positive.

SURVIVAL	
S	Size up the situation, your surroundings, yourself, and your equipment
U	Use All Your Senses & Undue Haste Makes Waste
R	Remember Where You Are
V	Vanquish Fear and Panic
I	Improvise
V	Value Living
A	Act Like the Natives
L	Live by Your Wits

The Five Key Elements For Survival

We take most of these for granted, and one of them we rarely think about, but consider how important the following five elements are:

The Five Key Elements of Survival
Water
Food
First Aid
Shelter
Fire

WATER

Check when done	Water Checklist	Expiration Date
	Baseline: A gallon a day (8 regular water bottles) per person	Indefinite, check every six months
	Mild: six gallons/two cases per person	Indefinite, check every six months
	Moderate: 15 gallons per person/five cases per person	Indefinite, check every six months
	Extreme: 30 gallons/ten cases	Indefinite, check every six months
	Extreme: water filter	
	Extreme: know location of a water source	
	Extreme: 55 gallon drums (HDPE#2)	Refill every six months
	Grab-n-Go bag: a gallon/ eight water bottles	Indefinite, check every six months
	Grab-n-Go bag: Survival straw	Check expiration date
	Grab-n-Go bag: bottle of water purifying pills	
	Work: half gallon/ four water bottles	Indefinite, check every six months
	Car: 3 gallons/ a case of water	Indefinite, check every six months
	ERP, Emergency Rally Point: two cases	Indefinite, check every six months
	ERP, Emergency Rally Point: access to water source	

Note that there are variables to the above that you will factor in once we do your Area Study such as temperature, shelter, level of activity, etc.

Here are immediate keys:

You already have an adequate supply of emergency water in your home based on the very first thing in this book you did: get enough water for mild preparation.

Let's talk about water a little more, why it's so important, and what else you need to prepare about it.

In our normal lives acquiring water is relatively easy. We're used to turning on the tap to get drinkable water. While many people focus on the power going out, of more essence to survival is the loss of potable water. Your water depends on a source, power and pipes, all of which can be disrupted by a wide array of emergencies. How much drinkable water do you have on hand without relying on the tap?

Another huge factor for water availability is when your normal water source gets contaminated. This is becoming more and more common. Flint, Michigan is an example of long term contamination. But one of the by-products of floods is that the water supply quickly gets contaminated as contaminants in the ground and in various storage facilities are mixed together with the flooding waters. If you watch disaster relief, the first thing that is brought in is potable water.

Separate from the normal sources of water in civilization, do you know how to acquire safe, drinkable, water? Do you have a source of water within reasonable distance of where you live? Is the water drinkable? Can you make it drinkable? You have to assume that any water that is not marked as potable (drinkable) is contaminated. Even in the deepest forest, there is a chance the water is tainted. Always stay on the safe side, because contracting giardia is no fun at all and cholera can be fatal.

Water

On average, we can survive three days without water versus three weeks without food.

Over three-quarters of your body is composed of fluid. Perspiration is not the only way you lose water. We actually lose more water just by breathing. And you can't stop *that* loss. We lose around 2 to 4 cups of water a day by exhaling (16 cups equal one gallon). We lose about 2 cups via perspiration. We lose ½ to a cup just from the soles of our feet. We lose six cups via urination. When you add that up (and it wasn't easy converting all that) you lose a more than half a gallon of water a day just existing; more depending on the weather and your activity level.

Water is critical for functioning. A 5% drop in body fluid will cause a 25% drop in energy level. A 15% drop will cause death. Even in normal day-to-day living, it is estimated that 80% of people are fatigued simply because they are chronically dehydrated.

In your home, you need to be prepared for at least 3 days for mild emergencies, but I recommend doubling that. Your average water bottle is 500 milliliter. Here's the math to make it easy: 7.5 bottles equal a gallon. Your average case of water has 24 bottles, so let's round up to three gallons. That will last a person 3 days. A case of water per person in the household will last three days. However, if you are in a very hot environment, double that. I recommend storing at the very least *two cases of water per person in the household*. The FDA considers bottled water to have no expiration date as long as the lid is sealed. Expiration dates printed on bottles are voluntary and reflect concern over taste and color; not safety.

Depending on the possibilities of emergencies in your area, more is better. FEMA recommends having at least a two-week supply for moderate emergencies. I recommend a month at a gallon per person, per day for extreme emergencies.

This is you number one priority: Get the water.

In your home, you can add another half gallon of water per person for things such as cleaning, brushing teeth, etc. This isn't essential, but useful for mild situations. Do not use drinking water for these reasons if you're in a moderate or extreme emergency.

Your water in your house is ultimately dependent on electricity. While you may have had running water during the last local blackout, a major blackout will shut down the water processing and pumping stations. If you have a well, the pump runs off electricity. Can you get water out of your well without power?

Do you have pets? Add in water for them, but in moderate or extreme emergencies, let them forage for water.

Quite a bit of the food you will have stored will require water to prepare. That's why you might think the recommended gallon a day seems high. We're factoring that in.

We have water already stored in houses in places we might not automatically think of:

Our hot water heater contains a considerable amount. There is a drain at the bottom. Make sure you have something to collect the water in, open the drain, then open a faucet to complete the water circuit. (Make sure, if not already off, that you turn off the gas/power to the heater before working on it. If the power/gas is already off and comes on, make sure you immediately refill the heater or else it can overheat.)

The water pipes in your house can be drained of the water in them.

Our toilet tank (not the toilet bowl) contains fresh water. Get over it and use it.

A swimming pool or hot tub contains non-potable water which you can make potable.

If you have adequate warning, you should fill every available container with potable water. Also fill all tubs and sinks.

Long term storage of a large supply of water:

Using milk containers or other thin plastic is not recommended for storing water as thin plastic degrades and will leak. You can use plastic soda or juice bottles with thicker plastic. Glass is fine, except it is heavy and subject to breakage.

To re-use such containers, thoroughly clean them out with soap and water, then rinse completely, insuring there is no residual soap.

Sanitize these bottles by adding one teaspoon of un-scented chlorine bleach to every quart (note that bleach also has a shelf-life of six months, so make sure it is fresh). Shake the container, with the lid on, thoroughly sanitizing it. Empty, wash out with clean water. Then finally fill it and add two drops non-scented bleach and tightly seal the top.

Date the outside of the container with a permanent marker.

Store in a dry, cool place.

Rotate every six months.

If you're going with smaller sized containers like this, stagger filling them so that they all don't come due to be refilled at the same time, which is usually about the time you'll need the water. However, if necessary, consider this water potable in an emergency if it is your only option. The rotation is to err on the side of caution.

There are larger size water containers for sale. There are fixed sided containers and collapsible bladders. If you want to store of large quantities of potable water, 55 gallon drums work well. Make sure they are food grade (HDPE #2).

Check stored water every two months and refill at a minimum of every six months. Remember, once you fill this barrel, you won't be able to move it because a gallon of water weighs 8.34 pounds. This is also something to factor in when considering how much water you can carry.

We'll cover this in more detail later, but you should carry water in your car. Store at least a case of water somewhere inside your vehicle. Have two bottles within arms reach of the drivers seat in case you are trapped.

Learn your local area (we'll cover this in detail in the Area Study). Do you have a natural source of drinkable water within walking distance? Is there one near your ERP? Once more, you must consider any water in nature to be contaminated.

There are items that can be used to purify water and some of these will become part of your Grab-n-Go bags. These are:

Survival straw

Survival filter

Water purification tablets

Suggestions and links to these items are at the end of the book and covered in more details in the section on the Grab-n-Go bag.

There are items in your house that can be used to purify water:

Chlorine Bleach. Standard bleach is 5% chlorine. If the strength is not known go with ten drops per quart or liter for clear water, double that for murky water.

	DISINFECTING WATER	
Available Chlorine Concentrate	Drops per Quart/Gallon of Clear Water (a drop is 1/8th teaspoon)	Drops per Liter of Clear Water
1.00% to 2.00% Chlorine Concentrate	10 per quart, 40 per gallon	10 per liter
Regular to Ultra Strength 5.25% to 6.00%	2 per quart, 8 per gallon	2 per liter
	Drops per Quart/Gallon of Cloudy Water	Drops per Quart/Gallon of Cloudy Water
1.00% to 2.00% Chlorine Concentrate	20 per quart, 80 per gallon	20 per liter
Regular to Ultra Strength 5.25% to 6.00%	4 per quart, 16 per gallon	4 per liter
Stir the mixture well	Let it stand for 30 minutes	
	BOILING WATER	
Filter to remove impurities	Use coffee filter, towel, etc.	
Bring to boil	Continue for one minute	
Bring to boil for one minute and	Add 1 minute at boil for every 1,000 feet of altitude	

Tincture of iodine. Standard iodine you have in your house is usually 2%. Add five drops per quart or liter for clear water, double that for murky.

Boiling (requires a heat source and pot to boil in)

Field expedient means for disinfecting water are covered in *Survive Now-Thrive Later*.

Food

Check when done	Food Checklist
	Baseline: FEMA says a 3 day supply of non-perishable food
	Baseline: 2,400 calories per day per person
	Baseline: non-electric can opener
	Mild: 3 day supply of non-perishable food equaling 2,400 calories per day
	Moderate and Extreme: A mean of cooking food without power
	Moderate: A week's worth of non-perishable food equaling 2,400 calories per day
	Extreme: A month's worth plus the means to self-sustain through hunting, farming, gathering
	Grab-n-Go bag: 3 day supply of non-perishable food equaling 2,400 calories per day
	Work: Enough to get you to home or ERP
	Car: 3 day supply of non-perishable food equaling 2,400 calories per day
	ERP, Emergency Rally Point: A week's worth of non-perishable food equaling 2,400 calories per day
	ERP, Emergency Rally Point: A mean of cooking food without power (fire starter)

Note that there are variables to the above that you will factor in once we do your Area Study such as temperature, shelter, level of activity, a person's size and weight, allergies, etc.

Here are immediate keys:

Every time I go into the grocery store, I'm amazed at the amount and variety of food. I'm also aware of how quickly it will go bad and rot within a few days with no power. Most people have several days to a week's worth of food on hand in the refrigerator and pantry. If the power goes off, start on the food in the freezer then refrigerator first, as those will be good for only about three days.

In most situations after water, our next most urgent requirement is food. Actually, most people's minds turn to food before they think of water, even though the latter is more critical.

How much food do you have stored in your house?

What is the shelf life?

Emergency food should be outside the normal rotation of food you use daily, except as you need to rotate the stored food to keep from spoilage. This emergency food should be stored in a different location than your normal food supply. Keep track of expiration dates on a calendar.

The easiest way to decide what food to get is to store the non-perishable food you normally eat, keeping in mind expiration dates. This requires you to have a rotation plan. Do not put your rotation plan on your iCal or other electronic device. It must be a manual plan. In fact, back up all information you will need in a survival situation that is currently on an electronic platform on a manual platform. Such as this book. While reading this as an eBook is useful for preparation, you want a print copy for the actual emergency. All checklists in this book are available at the end of the book.

If you don't want to invest a lot of time into this, there are numerous companies that make and sell bulk packets of long-lasting food supplies (25 years in many cases). These sites even have survival food spreadsheets where you can calculate what you need. While this might not

be the “hard-core” survivalist way, it’s a smart way. The upfront investment is worth the long-term comfort of mind.

This is an important area. I believe you can do things the hard way or the easy way. Survival is hard. Preparing for it doesn’t need to be. Experts have done much of the preparation for you; you just have to use them.

At the end of this manual, in Appendix C, I link to pre-packaged meals and supplies you can get.

What kind of food?

There is, of course, more to food than just calories, and not all calories are created equal. You know this by the way you feel after eating different meals. Some give quick, readily accessible energy, while others make you feel slowed down and lethargic.

Most of us have a high intake of carbohydrates that give us a nonstop stream of energy. That intake flow is rarely interrupted for long periods of time. Thus, for us to have ketones to break down our fat, usually requires almost a week of having that carbohydrate flow interrupted.

Macronutrients are the keys to food and we focus essentially on carbohydrates, proteins and fats. Technically, water is one of these, but we’ve already covered that.

Getting more particular, the breakdown of our food should be:

Carbohydrates: 45% to 65% for everyone

Proteins: 10-35% for adults; 10 to 30% for children; 5-20% for infants

Fats: 20-35% for adults; 10-30% for children; 5-20% for infants

You must also factor in what it takes to prepare the food. For mild emergencies, you need food that doesn’t require cooking.

Things to consider for food:

Shelf life?

How hard is it to prepare?

Weight to calorie ratio?

Percentages of macronutrients?

At this point you’re tearing your hair out at the thought of doing all the research. You could, but here are three basic suggestions. (Links are in Appendix C).

Energy and protein bars. Any off the shelf brand will do for mild and moderate emergencies. If you want to fine tune things, go for ones that don’t have too much salt and sugar, because those two ingredients will make you thirsty.

Mountain House Freeze Dried Meals. This is the same company that made the LRRP meals we loved in Special Operations. They don’t take much water, but they do require cooking. Unless you’re really hard core.

GORP or trail mix. This is a ready made mixture, with a base of raisins and peanuts. There are many variations beyond that including items such as banana chips, oats, granola, etc. For high calorie situations such as winter warfare training, we added peanut M&Ms in the mixture.

Besides the food in your house, have a cache of food in a location away from your house. The reason for this is covered later under the Emergency Rally Point (ERP).

Carry food in your car. An interesting tidbit you might want to consider. Canadian Arctic rescue teams advise people to keep several cans of dog food in their cars. The reason? People tend to dive into their emergency stash too soon (remember how long you can go without

food?); if their emergency food is dog food, they'll wait before eating it. If you're going with this plan, make sure its very high quality dog food as most have a lot of filler.

Specific caloric needs:

If you want to get into the specifics of how much food you need, here are some formulas the more mathematically inclined can play with, otherwise go with the 2,500 calories a day per person as a solid guideline with some buffer built in.

BMR is Basic Metabolic Rate. That's what the body consumes at rest in order to survive. BMR varies by height, weight, activity level and gender. Men tend to consume more calories than women on average.

Male BMR= 66 + (6.23 x weight in pounds) + (12.7 x height in inches) – (6.8 x age in years)

Female BMR= 655 + (4.35 x weight in pounds) + (4.7 x height in inches) – (6.8 x age in years)

Notice that the older you are, the less calories you need.

Then we can factor in you activity with the Harris Benedict Formula:

Sedentary: calories needed = BMR x 1.2

Lightly active: BMR x 1.375

Moderately active: BMR x 1.55

Very active: BMR x 1.725

Extra active (running from zombies active): BMR x 1.9

Extreme emergency food considerations:

I noted that a person can go several weeks without food. That, however, is stretching it. I've gone eight days without food; interestingly I stopped feeling hungry after a few days. However, the ability to function begins to degrade.

When our output exceeds our caloric intake these are the symptoms:

-physical weakness

-confusion, poor judgment, and disorientation

-weakened immune system

-inability to maintain body temperature which can lead to hypothermia, heat exhaustion/stroke

The Coast Guard has determined that with fresh water people can survive in a life raft 8 to 18 days without any food. The Coast Guard also believes you need a bare minimum of 800 calories a day for survival; but that's sitting in a life raft, not being very active and just focused on pure survival.

If you want to figure out exactly how much caloric intake you need, you can use the BMR formula above, then apply it to the projected emergency.

Food expiration dates:

There are some terms to understand about this.

First, there are several terms stamped on the food. This is what they mean:

SELL BY: How long a store should display the product for sale. This is a guide for the store. It is optimum quality date, but food is still edible for a while after.

BEST IF USED BY OR BEFORE DATE: This is only about quality, not safety.

GUARANTEED FRESH DATE: This usually refers to bakery items. They will still be edible after that date.

USE BY DATE: This is the last recommended day to use the product at peak quality. It is still edible after this.

PACK DATE: This is on canned and packaged goods. This actually might not be clear as sometimes its in code. It can be done by month-day-year as MMDDYY. Or it could be Julian calendar for the year, which means January is 001-0031. December would be 334-365.

Foods not to eat past their expiration date?

Eggs. Deli meat. Mixed greens. Alfalfa sprouts. Oysters. Shrimp. Raw ground beef. Berries. Soft cheese. Chicken.

So how long is food usually good for?

Milk: a week after Sell By.

Eggs: Three to five weeks after you buy them. Double-grade A will go down a grade in a week, but are still edible.

Poultry and seafood: Cook or freeze within a day.

Beef and pork: Cook or freeze within three to four days.

Canned good: High acid foods such as tomato sauce can last to 18 months. Low acid such as canned green beans can last for five years. However, do not store these in a hot space. A dry, cool place, is best.

One of th

Hunting, gathering and scavenging is covered in *Survive Now-Thrive Later*.

First Aid

Get a first aid kit for your house right now. Get at least one Quickclot bandage right now.

Triage priorities:
Breathing.
Bleeding.
Broken.

We check injured people in that order, so this it give us our priority in terms of preparation.

It's the order in which a person dies. However, like everything else, there are exceptions. Arterial bleeding (spurting blood) can kill as quickly as lack of oxygen.

If injured, First Aid can quickly become the number one priority over food and water.

Check when done	First Aid Checklist	Expiration Date
	Baseline: A first aid kit in your house	Note expiration on any medications
	Baseline: Choking and CPR APP downloaded	
	Baseline: Red Cross first aid APP downloaded	
	Baseline: Medical alert badges	
	Baseline: Yearly physical	
	Baseline: extra pair of glasses	
	Baseline: iTriage APP downloaded	
	Mild: A first aid kit	Note expiration on any medications
	Mild: 1 week supply of medications	Note expiration on any medications
	Mild: Quickclot bandage	
	Moderate: Mild plus take online first aid course.	Note expiration on any medications
	Moderate: Mild plus 1 month supply of medications	
	Extreme: Mild and Moderate plus:	
	Extreme: take an in person first aid course.	Refresh training every six months
	Extreme: 1 month supply medications.	Note expiration on any medications
	Extreme: knowing what homeopathic substitutes are available in nature for your medications	
	Grab-n-Go bag: A first aid kit	Note expiration on any medications
	Grab-n-Go bag: QuickClot bandage	
	Work: A first aid kit	Note expiration on any medications
	Work: QuickClot bandage	
	Car: A first aid kit	Note expiration on any medications
	Car: QuickClot bandage	
	ERP, Emergency Rally Point: A first aid kit	Note expiration on any medications
	ERP, Emergency Rally Point: QuickClot bandage	

Spend money on well-stocked first aid kits. Also get at least one Quickclot bandage, a very effective way to stop bleeding. You also will have a first aid kit at your work, in your car, in your Grab-n-Go bag and cached at your ERP.

While it's better to actually do the training, a baseline is to have the information at your fingertips.

First Aid Apps:

Download the following free APPs to your phone:

First Aid Apps

Red Cross First Aid (Apple):
https://itunes.apple.com/us/app/first-aid-by-american-red/id529160691?mt=8
Red Cross First Aid (Android):
https://play.google.com/store/apps/details?id=com.cube.arc.fa&hl=en
iTriage (Apple): https://itunes.apple.com/us/app/itriage-symptom-checker/id304696939
iTriage (Android) : https://play.google.com/store/apps/details?id=com.healthagen.iTriage
CPR and Choking (Apple): https://itunes.apple.com/app/cpr-choking/id314907949
CPR and Choking (Android):

https://play.google.com/store/apps/details?id=org.learncpr.videoapp

First Aid (Red Cross):

Accidents happen. The official American Red Cross First Aid app puts expert advice for everyday emergencies in your hand. Get the app and be prepared for what life brings. With videos, interactive quizzes and simple step-by-step advice it's never been easier to know first aid. Features:

- Easy to use Spanish language toggle to switch translation directly inside the app.
- Simple step-by-step instructions guide you through everyday first aid scenarios.
- Fully integrated with 9-1-1 so you can call EMS from the app at any time.
- Videos and animations make learning first aid fun and easy.
- Preloaded content means you have instant access to all safety information at anytime, even without reception or an Internet connection.

iTriage. iTriage is a free app that puts you at the center of your healthcare—anywhere, anytime. Search for health answers with iTriage Health, Doctor, Symptom & Healthcare Search app. Find medications, diseases, and medical locations.

CPR and Choking. Has video demonstration and audio instructions that you can quickly access. The first screen is two large buttons where you pick either CPR or Choking. Then you get the choice of adult/child/infant. Once you hit that, the video begins to play.

The two types of supplies that are going to be in great demand in an extreme emergency are weapons/ammunition and medical supplies. You need at least a week's supply of whatever medications you take. If it appears that the extreme emergency will be of lasting duration, getting more of that medication is a priority along with learning what homeopathic substitutes are available in nature and how to prepare them.

Drug Expiration dates:

While many states now control medications tightly, something to understand is what the expiration date on various medication mean.

By law, an expiration date means the manufacturer guarantees full potency to at least 90% by that date, given proper storage. That doesn't mean the medication suddenly goes bad. Companies are not required by law to test beyond that date for potency.

Drugs that should never be used past their expiration date:

Anticonvulsants - narrow therapeutic index
Dilantin, phenobarbital - very quickly lose potency
Nitroglycerin - very quickly lose potency
Warfarin - narrow therapeutic index
Procan SR - sustained release procainamide
Theophylline - very quickly lose potency
Digoxin - narrow therapeutic index
Thyroid preparations
Paraldehyde
Oral contraceptives

Epinephrine - very quickly lose potency
Insulin - very quickly lose potency
Eye drops - eyes are particularly sensitive to any bacteria that might grow in a solution once a preservative degrades.

The reality is a drug starts to lose potency from the moment its manufactured. However, it doesn't suddenly go bad at the expiration date. Even though your meds might have past the expiration date, they can still be useful in an emergency situation. Research indicates that most drugs, properly stored, retain 90% of their effectiveness for at least five years after the expiration date, sometimes longer.

The most stable are tablets and capsules. Those that are in a solution or a reconstituted suspension might not last as long. The Department of Defense actually studied this under a program called the Shelf Life Extension Program (SLEP). It found that 88% of 122 different drugs stored under ideal conditions should have their expiration dates extended more than 1 year, with an average extension of 66 months, and a maximum extension of 278 months.

Even more astounding was research where eight medications that had expired 28 to 40 years ago were tested. Their 15 active ingredients were: aspirin, amphetamine, phenacetin, methaqualone, codeine, butalbital, caffeine, phenobarbital, meprobamate, pentobarbital, secobarbital, hydrocodone, chlorpheniramine, and acetaminophen. Eleven of the fourteen drug compounds were always present in concentrations of at least 90% of the amount indicated on the drug label, which is generally recognized as the minimum acceptable potency.

The only report I could find of human toxicity from an expired drug was tetracycline, but it has since been changed to deal with that. Be aware that this is not a well researched field as it isn't in the pharmaceutical companies interest. I am NOT recommending you take expired meds. I am saying it makes sense to properly store expired meds and use only as a last resort.

Drugs in liquid form are not as stable. Drugs requiring the addition of a solvent before taking or administering aren't as stable. They are also susceptible to freezing.

In the case of liquids for things like contacts or eye drops, the danger is microbial growth. Injectable drug that have become cloudy or discolored or indicate precipitation should not be used.

In *Appendix C*, I list several pre-packaged first aid kits with links, along with Quickclot bandages.

Keys to first aid:

Train, train, train. CPR, stopping bleeding, stabilizing broken limbs. All are priorities. Learn how to recognize and deal with hypothermia and dehydration.

Stay up to date on physical exams.

A critical part of first aid that many people ignore in survival situations is personal hygiene. Preventing illness is more important than treating it.

Prepare, prepare, prepare. Antibiotics are critical. So are bandages. Splints. Medicine.

As part of your Area Study (coming soon) you will be familiar with health threats in your locale. Be prepared for them. This includes not just flora and fauna threats, but environmental ones.

If you wear glasses, have a back up pair. Even using old prescription glasses is better than nothing. Don't throw those glasses away, store them.

Those who need them should have medical alert badges on at all times.

When building your team, a person with medical training should be a high priority.

Every member of your team should receive basic first aid training. This goes beyond the local CPR course. The chances that you will have to perform CPR are higher in day-to-day living then in a survival situation, as other types of injuries will be more prevalent. A few hours spent going over first aid basics can yield great results.

The Red Cross offers on line First Aid courses you can take at your own pace.

Red Cross on line First Aid Courses: http://www.redcross.org/take-a-class/first-aid/first-aid-training/first-aid-online

More on how to actually do First Aid *in Survive Now-Thrive Later*. A great help to being able to conduct first aid, though, is to have the proper supplies in place beforehand.

Shelter

Check when done	Shelter Checklist	Expiration Date
	Baseline: Preparing your home.	
	Mild: Home prepared to mild levels for water, food and first aid.	
	Mild: Proper clothing for environment	
	Mild: Have a safe room inside of the home	
	Moderate: Mild plus an emergency sleeping bag	
	Extreme: mild and moderate plus tent	Air out every six months
	Extreme: mild and moderate plus additional proper clothing for environment	
	Grab-n-Go bag: emergency sleeping bag	Air out every six months
	Grab-n-Go bag: poncho	
	Grab-n-Go bag: Proper clothing	
	Work: walking shoes/boots and sock	Air out every six months
	Work: poncho/rain jacket	
	Car: walking shoes/boots and socks	Air out every six months
	Car: rain suit/poncho	
	Car: emergency sleeping bag	
	Car: Blankets	
	ERP, Emergency Rally Point: Poncho	Check every six months
	ERP, Emergency Rally Point: Tent	
	ERP, Emergency Rally Point: additional proper clothing	
	ERP, Emergency Rally Point: walking shoes/boots and socks	

Optimally our home will be our shelter. The keys I list below will apply largely to that. I'm not going to list things that would normally be in a home such as blankets, pots, pans, etc. I'll

also be more specific about your home in the next section and what emergency supplies you should have.

Think of the actual word: Shelter. The dictionary defines it as "a place giving temporary protection from bad weather or danger." It protects us from cold, the sun, enemies, wind, rain and snow. While shelter is normally third on the list of priorities, in extreme environments or weather, it can easily become the number one priority, because, as the Rule of Threes notes: we can survive only 3 hours with an unregulated body temperature.

Do not underestimate the importance of shelter to morale. Lack of shelter can lead to fatigue and exhaustion. It can also make a person feel lost and anchor-less. People without shelter can quickly gain the thousand-yard-stare of passive helplessness and lose the will to survive.

Clothing:

This is an area that is over-looked in most of the emergency material I surveyed, yet it one of the most critical. We often don't think of our clothes as shelter, but they are the most important aspect of protecting ourselves from the environment. We have to make the shift from thinking of clothes in terms of fashion, to that of functionality and protection.

What do you normally wear? How effective would be it be in an emergency? Would you be able to walk a mile in adverse weather in the clothes and footwear you normally wear?

Footwear and socks:

A priority is to make sure you have a good pair of broken in walking shoes/boots at work and in your car. A few years ago, during a bad ice storm in Atlanta, many people tried walking home from work, or their abandoned car, in the shoes they wear at work and direly wished they had been better prepared. Ever since learning of this, I've had a pair of broken in boots along with several pairs of socks stuffed in them, in my Jeep.

Having served in the Infantry and then Special Forces, the importance of proper footwear cannot be over-emphasized. At the very least have some kind of workout shoes that you've broken in. Optimally, you would want something, that provides some ankle support and some degree of waterproofing. Footwear is so much a matter of personal opinion, the main thing to consider is how far can you walk in it?

While running and hiking shoes are popular, I'm a fan of boots for survival. For warm and moderate climates, I use the old standby of Army jungle boots. For colder environments I have a pair of Gore-Tex boots. For extreme cold, you might consider vapor boots or Micky Mouse boots as we called them in the army. These are large, rubber boots with air pumped into them. The air acts as insulation. They are warm, but you will sweat profusely in them, so make sure you have plenty of socks. Remember, as clothing and socks get dirty, even though you might dry them out, they are not as effective.

Whatever parts of your boot are leather must be treated to both make them waterproof and soft. I use mink oil. Actually, I use mink oil on any leather product I have. Rubbing it in will eventually make the leather water resistant and more supple.

Break your boots in. The extreme emergency is not the first time to put your boots on and start walking. Have a broken in pair at your hide site.

For most environments, in conjunction with long pants and boots, I use boot bands. These are stretchable bands. You roll the bottom of you pant leg inward with the boot band inside.

This fixes the pants to the boots. This will prevent little critters like ticks from getting up inside your pants.

Do not go cheap on footwear. You'll regret it.

Remember, that between you and the footwear is another key piece of shelter: socks. Of all articles of clothing to consider putting in my rucksack for a deployment, the priority was an adequate number of socks. Your socks need to be dry, so your feet stay dry, thus a change is critical. And even dry socks, if they are dirty, are less effective. You want wool socks. There are also socks with different materials specifically designed for working out or hiking that also will do the job. If you are going to layer socks in extreme cold, make sure the footwear size will accept that.

An army travels on its feet. This lesson was drummed into me from my first day on the Plain at West Point. Any Infantry officer can tell you that taking care of his soldier's feet is one of the key components of his job. Your body travels on its feet. A breakdown there, and you're stuck. If you have not experienced an open blister, you have no idea how quickly such an apparently minor injury can stop you.

The primary rule of outdoor survival is to STAY DRY. Hypothermia is the #1 killer of people outdoors. It can happen very quickly, particularly if you get wet. I've seen highly trained soldiers succumb to this, especially if you combine this with being dehydrated.

Your clothing should keep you warm and also provide insulation when wet. For this reason, avoid cotton, since it loses all its insulating properties when wet. Remember this saying: 'Cotton is rotten.' This particularly applies when considering your underwear and t-shirts. Most jeans are made of cotton and are not a good choice despite their durability.

Wool is a much better choice, maintaining up to 80% of its warmth even when wet, although it is slow to dry. There are many fabrics that provide warmth, even when wet, and also dry quickly. A key is to keep your clothing from getting wet in the first place with an outer, water-proof layer.

How well would your clothing stand up to an emergency environment? The best way to shop for good emergency clothing is to go your local camping store and see what they sell to people who spend a lot of time outdoors.

The key to clothing is layering. You start with what's closest to your body. Even if you're not going to be in a cold environment, layering is still a key concept to understand. It is critical to keep not only warm, but dry, no matter where you are. Often, in the desert, while the day might be hot, the night can easily drop below freezing, depending on the time of year.

Layering works in threes:

Inner layer. Whatever is directly against your skin. The goal is to wick moisture away from your skin to the next two layers. Your body heat does the work, so the better the material for this, the less energy your body has to expend. This layer should have a snug fit around your body, as the body's heat is what wicks the moisture. The material used should absorb less than one percent of moisture. Common materials are polypropylene, silk, wool and polyester. I've taken to wearing Ex-Officio underwear, top and bottom all the time now. It's great not only for survival, but also for comfort and travel. Think of more than just underwear, though. In very cold environments, you want to have hoods, glove liners, and neck wraps.

Middle layer. This layer is your insulation. Its primary purpose is to keep your warm, while it also helps wick away the moisture to the outer layer. This middle layer must move the

moisture outward while keeping heat in. When you think middle layer, consider several garments instead of just one, so you can adjust as the temperature changes.

Outer layer. While the first two layers are focused on keeping warmth in and wicking moisture away, the primary purpose of the outer layer is to battle outside elements, primarily wind and moisture. It should also have the ability to wick away moisture from inside. If this layer only repels rain and wind, it's called a shell. Usually, though, this outer layer will have an insert that can be added or removed as needed. It should be breathable to allow moisture to wick out. Gore-Tex is the most commonly used outer material.

Keep in mind that sweating in a cold weather environment can be a killer as you are covering your body with moisture. When we were at 14,000 feet altitude, in eight feet of snow, and getting ready to move out on our skies, with our large rucksacks, I gave time warnings, starting at five minutes from move out. The purpose of this was to give my men time to strip down. As we got closer, we'd take off our outer layer, storing it in the ruck. Then just before move out, we'd usually take off our middle layer. It was very cold and uncomfortable to do this, but a few minutes after tossing our rucks on our backs and moving out on skis, we were working up a lot of heat. If we were still wearing those other layers, we'd be sweating profusely. The moment we stopped, that sweat would either freeze or be trapped against our body.

Avoiding sweating even extends to equipment. Our weapons never went into our snow caves or trenches in a sub-freezing environment. Doing so would cause any moisture on them to "sweat" out. Then once they were brought back into the cold, they would freeze, making the weapon unusable. In the same manner water had to be carried next to the body to prevent freezing and our next meal was also carried close, usually in an inner thigh pocket to thaw it.

Most of your body heat is lost through your head. A watch cap is indispensable in a cold environment. I carry a couple, to allow me to dry the unused one out next to my body.

For hot and/or jungle/desert environments, I prefer to wear long sleeves and pants, instead of shorts and short-sleeve shirts. This is for protection from the sun and the environment. A light material, with a light color. Remember, black absorbs the sun's rays. There are pants and shirts now where the lower leg and arm parts can be removed so you can have the best of both worlds.

Without a regulated body temperature, a person can survive only three hours.

Home:

Our home is our primary shelter. Given you've already covered the two prior areas, it should be well stocked with food and water and have a source of fire.

Inside of our home, we should have a "safe" room. We'll cover this shortly.

Your home can also be a trap. In an extreme emergencies, lawlessness will rear its ugly head quickly. Your house could also be damaged and be temporarily or permanently unlivable by an extreme catastrophe such as flood, hurricane, earthquake, etc.

Have an alternate place of shelter pre-determined—the Emergency Rally Point (ERP). This is covered in the next section of the book.

When I watch reality shows about survival on TV, the people who have built their homes into bunkers and stored up a year's worth of supplies make me shake my head. First, the fact they're advertising this on TV is, well, dumb. But the other factor is this: if I were the truly

lazy survivalist, and a sociopath, I would target known survivalists in my area, let them do all the preparation work, then ambush them and take their house and supplies. I have no doubt this will occur in extreme situations. Desperate people are dangerous people. In fact, one of the largest flaws I see in many survival guides is the focus on preparing a static survival base, which, in extreme emergencies, is simply building an attractive target.

Shelter on the move:

There are items that will go in your Grab-n-Go bags for shelter. These are a tent or at the very least a poncho. An emergency sleeping bag. Extra clothing. Hat. Gloves. Etc. All of these are listed in that section.

How to build field expedient shelters is in the companion book, *Survive Now-Thrive Later*.

With all shelter, including clothing, consider two extremes. First, that you want to be seen by rescuers. The second option is that you don't want to be seen by others. This would probably be the norm in an extended, extreme emergency, where law and order has broken down.

Your gear should naturally lean toward the second choice, while you have specific equipment—VS-17 panel, signal mirror, etc.—that allows you to signal rescuers. Thus your bag for Grab-n-Go, your clothing, your tent, etc. should be subdued or camouflage colored for your environment.

The IRP and the ERP:

These are two places you need to pick.

IRP stands for Immediate Rally Point. This is a point outside of your home, where your family can gather if they have to evacuate the house for some reason. The most likely reason for that would be if there was a fire. It needs to be a place that's easily identifiable and not far from the house.

It's also the place where your family/team will rendezvous if they can't go into the house for whatever reason, but need to assemble from other locations, such as school and/or work.

A street intersection near the home works well.

ERP stands for Emergency Rally Point. This is where your family/team will rendezvous if they have to evacuate the house during a moderate or extreme emergency and have to stay for at least a day or more, with the possibility of not returning.

I will discuss the parameters for the ERP later in this book.

Fire

Check When Done	Fire Checklist	Expiration Date
	Baseline: A means of cooking meals and maintaining body warmth in the given environment	
	Baseline: Fire extinguisher in kitchen; near all fireplaces	check monthly
	Baseline: a fire extinguisher per floor of the house	check monthly
	Mild: Can eat food for 3 days that requires no cooking; uses blankets & clothing for warmth	
	Moderate: A portable stove with fuel; access to a way to build fire	check every 6 months
	Extreme: Starting and maintaining a fire in nature	
	Grab-n-Go Bag: storm proof lighter	check every 6 months
	Grab-n-Go Bag: fire starter magnesium	
	Work: storm proof lighter	check every 6 months
	Car: storm proof lighter	check every 6 months
	Car: fire extinguisher	check monthly
	ERP: Emergency Rally Point: storm proof lighters,magnesium fire starter	check every 6 months

In our normal civilized world, fire is almost considered a luxury for those who have a fireplace in their house, but you have to realize that fire actually affects a lot of your day-to-day life. Fire is usually how our water and home is heated and a lot of our food prepared.

Even in our house, in a mild to moderate emergency, there is a very good chance we will need fire, whether it is to purify water, cook food or to keep warm.

The immediate keys to fire preparation:

Do you have a way to cook food if your gas/power is turned off? Without the microwave or stove, how will you prepare a meal? You can invest in a small camping stove with disposable tanks for not much money (much of this gear is listed at the end of the book with links, including a small camping stove that is easy to use). But consider how much fuel you will need proportionate to the emergency food supply you have. Test cook meals until you use up one tank.

Do you have a way to provide or conserve warmth in your house if your power/gas is turned off? This does not necessarily have to be a fire. Blankets and clothing can make do in most cases.

Do you have a fireplace in your house? If its wood burning, how much wood do you have on hand? Have you stored it so that it's dry? Do you have kindling or fire starter?

Is your fireplace gas? Can it be converted to wood? If it is gas or propane, can you start it with the power off without blowing up the house? Check the owner's manual.

Does your propane heat work even if the power is off? Do you know how to manually start it?

Do you have an outdoor means of fire? A barbecue? Fire pit? Make sure you have enough fuel for this fire.

Do you have a way to start a fire? I carry a half dozen lighters with me in the field, along with field expedient fire-starters.

Consider that fire is a beacon, both through light at night and smoke in the day and smell around the clock. This can be useful in a rescue situation. In an extreme survival situation, be aware you might be signaling to the wrong people.

In the Grab-n-Go bag section, I discuss the various fire starters you should have.

How to start a field expedient fire is discussed in the companion book *Survive Now-Thrive Later*. In order to do that, you need to be prepared with the equipment listed above.

Number of home fires your household can expect in an average lifetime	5
Chances your household will have a reported home fire in an average lifetime	1 in 4
Chances someone in your household will suffer a fire injury in an average lifetime	1 in 10
Chances someone in your household will suffer a reported injury in a fire in an average lifetime	1 in 89

Fire Prevention

You not only have to be prepared to start a fire, but you need to be prepared to put out a fire.

You need a fire extinguisher in your kitchen. It should be a chemical-based extinguisher, not a water-based one. In the event of a grease or electrical fire, a water-based on causes more problems.

It's also recommended you have an extinguisher for every floor of your house. Make sure everyone knows where they are and how to use them.

You should also carry a fire extinguished in your car.

In a typical home fire, you often only have a few minutes to escape. Since smoke can be contained by doors and levels, you must have several places throughout your house. It is recommended that you have:

A minimum of one smoke alarm per floor.

A smoke alarm in every bedroom.

A smoke alarm outside every sleeping area.

The type recommended are a mixture of ionization and photoelectric alarms. Ionization may detect invisible particles associated with fast burning fires while photoelectric detect visible particles associated with moldering fires.

Alarms are either battery powered or hard-wired into the house. In the case of the latter, it should have a battery backup in case the power goes out.

A CO2 alarm is recommended for every floor. Remember that CO2 is present with all fires, but also can be present without a fire.

Heat alarms are useful, especially in the kitchen since there might often be smoke from cooking that will cause a smoke alarm to go off. However, they are not a substitute for smoke alarms as they do not react to smoke. Heat alarms are useful in attics, furnace rooms and garages.

Test all alarms monthly. Pick a specific day, perhaps the first Saturday of every month, and test. Replace batteries every six months, regardless of whether its indicated or not. All alarms should be replaced every ten years.

How to react in a fire is covered in ***Survive Now. Thrive Later***.

The Area Study & Emergency and Threat Assessment

In Special Forces, prior to deploying to an Area of Operations, we conducted an Area Study of that location. You must conduct an Area Study of your Area of Operations (AO). Both your home, your work, school, and any other locales where you spend a significant amount of time. When taking a trip, you should conduct a travel area study, examining the route you will take, your destination, and your route back.

There are so many cases where a thoughtful Area Study followed up by the appropriate preparations would have saved lives. Preparation is so much better than reacting.

Which is what we're doing now.

Think about it. You live in a tsunami zone. Have you actually driven your evacuation route? How long does it take? Have you figured out the quickest escape route on foot, when an accident caused by terrified people blocks the road or everyone in your neighborhood flees at the same time on the same route creating a traffic jam? You work on the 40th floor of a skyscraper. Do you ever look around and ask yourself: how do I get out of here if the normal means of egress are blocked?

How close are you to the nearest military base? Nearest police station? Firehouse? Hospital? Even in day-to-day living, do you know where the closest emergency room is? How

long it will take to get there? How quickly can an ambulance respond to your location?

You want to examine your environment for a lot of things. What can harm you? What can help you? What can hide you? What are your enabling factors? What are your disabling factors? What effect does your environment have on you? What effect will you have on it? In essence, an Area Study requires you to invest the time and energy on research and to look at your surroundings from a different perspective.

The Area Study: When my A-Team traveled, my engineers would always be looking at things they saw with a different perspective than most people. When they saw a bridge, they were mentally calculating how to blow it up. When they saw a stream, they were thinking how to dam it and provide a water supply to villagers. My weapons men would look at terrain for fields of fire for direct and indirect fire weapons. As a survivor, you have to look at your environment in terms of what you can use and what can be a threat, what can be scavenged and more, which requires you to assume a different mindset for a while.

We live in a variety of geographic environments. There are also a wide range of human environments from urban, to remote rural. Thus one size doesn't fit all.

Doing an Area Study and emergency and threat assessment is critical so you can tailor your preparation for your specific situation. Some threats are going to be of much more importance for you to prepare for than others. For instance, if you live in Oklahoma, the threat of hurricane is nonexistent, but tornados and earthquakes are likely.

The first step in conducting an Area Study is to have maps. Actual, physical maps. We are a society that is overly reliant on technology in many ways. Cell phones for communication are one. GPS is another. GPS stands for Global Positioning System. I'm not going to get into how the entire system works, but suffice it to say you need the satellites in the system to be transmitting and your receiver to be receiving a sufficient number of signals to function (three for latitude and longitude and four for altitude—there are 30 in geosynchronous orbit that are presently transmitting). Most people no longer even carry paper maps in their car. Many people don't know how to read a map, never mind a topographical one.

When I was a brand new butter-bar second lieutenant in the First Cavalry Division, I was told succinctly that a platoon had to at least do two things well: Maintain communications on the radio and navigate. Failing either of those two and your time as leader was limited and your career in the Army over.

In a survival situation, especially moderate to extreme, it is highly likely you will have to move from point A to point B. It also possible you won't have a GPS to do that with.

So let's walk through basic land navigation before briefly touching on tracking and evasion.

Maps

Reading a map correctly can be a matter of life and death.

Have a road map as a backup. I keep a Rand McNally binder with maps of North America inside my Jeep.

While Rand McNally is great for your car, get topographic maps of your locale. The scale you want for local area is 1:24,000. You can download and print out maps at this scale for free the sites below. For the National Geographic maps it's pretty cool because you can download the maps in sets of five where the first is an overview of the quadrant, then the other four are printer sized. Print out in color.

You can also get maps from USGS. These maps allow you to pick the details you want. Also, you can get different scales. 7.5 minute is 1:24,000. Which means one inch on the map equals 24,000 inches on the ground or 2000 feet. 15 minutes is 1:63,360.

Downloadable Maps To Print Out

National Geographic Maps: http://www.natgeomaps.com/trail-maps/pdf-quads
USGS Maps: http://nationalmap.gov/ustopo/

The maps should include your immediate area and the area around your hide site. If you believe you are going to have to evacuate, get maps covering the route. Then get a waterproof map case. Then get a dummy cord (a piece of 550 cord works fine) to tie the map off to you.

You can order laminated, waterproofed maps, but they are more difficult to carry because of limited folding. This is a judgment call on your part. I prefer the paper map inside of a waterproof map case.

I recommend going to a local outdoor store to get your sets of maps. You can also order topographic maps by states. I keep a set in my Jeep to back up my road map.

When you look at a topo map, you immediately see that it's different than your road map. Features on it include:

Roads, buildings, boundaries, railways, power transmission lines. Etc. In Germany, the maps were so accurate that they actually had fence lines around fields on them.

Water: lakes, rivers, streams, swamps, rapids, kraken, etc.

Relief: mountains, valleys, slopes, depressions, ridges, knolls, gnomes, etc.

Vegetation: forested or clear areas, orchards, vineyards, Ents, etc.

Toponymy: a fancy word for the names of the various things on the map.

Use the map legend to learn how to use the symbols, colors and lines on the map.

Scale is the relationship between size on the map and in the real world. One thing I've noted on many GPS systems is that they don't indicate scale since they give directions and distance. This can be disorienting. Everything always looks a lot closer on a map than when you're walking.

Legend

It gives you a guide to the various symbols on the map. The types of roads will be defined in the Legend.

Contour lines

This gives you an idea if elevation. If you trace a contour line on the map, you are tracing a line of equal elevation. If you walked that line, you will not go up or down. Check the legend for the contour interval—this is critical. There's a big difference between a 10 meter contour interval and a 50 meter one. As you go from one contour line to the next, that is the contour interval difference. Usually contour interval is based on the terrain the map covers. Relatively flat terrain will have very short interval, while mountainous terrain might have intervals as great as 100 meters. Every fifth contour line is an index and labeled with a number.

The closer lines are, the steeper the terrain. When they're piled on top of each other, that means a cliff. Do not walk off it. If they are very far apart, that equals relatively smooth terrain. Notice how counter lines always dive in toward streams and rivers.

Spend some time out in nature with your map.

The key to using a map is orienting it to the terrain. While there are many field-expedient ways of doing this, the easiest is to orient using a compass. Next easiest is to use roads or easily identifiable terrain features around you.

Depending on where you live, you might have useable boundaries that can keep you oriented. For example, in Boulder, CO it is easy to tell which way is west: just look for the big mountains. On Hilton Head Island, the Atlantic is east, the Intracoastal is west.

You've probably used Google maps on line or on your cell phone or tablet. Compare the image to the topo map. Also, realize that Google maps and Bing Maps give a slightly different picture.

Get these apps:

Road ID eCrumb for Apple and Android. This is one I use when off by myself running, biking or hiking. It's a way of alerting people if something happens to me and I stop moving past a certain period of time. The all new Road ID App is a great tool for runners, cyclists, hikers, walkers and basically anyone not glued to their couch. With amazing features like eCrumb Tracking, a Stationary Alert, and a custom Lock Screen creator, the Road ID App is your perfect training partner. With the ability to track your workouts in real time, your friends and family can stay better connected whenever you head outdoors...delivering peace of mind like never before.

Compass. Your iPhone should already have a compass app on it. An interesting tidbit for Apple Compass: it has a second page that is essentially a level and gives you accurate readings on inclines.

Google Earth

MAP Apps

Road ID eCrumb: https://www.roadid.com/ecrumbs
Compass (Android):
https://play.google.com/store/apps/details?id=com.gn.android.compass&hl=en
Google Earth (Apple): https://itunes.apple.com/us/app/google-earth/id293622097
Google Earth (Android): https://play.google.com/store/apps/details?id=com.google.earth

The following is a general guideline so you look at the world around you with a little different eye. A little time spent doing this now will yield huge benefits in emergencies and catastrophes.

Here is the template:

AREA STUDY & EMERGENCY AND THREAT ASSESSMENT

Purpose. Delineate the area being studied—this applies to your home, your work, and any other locations you will likely be.

Home Facts: http://www.homefacts.com/

Go to HomeFacts and enter your zip code. You will get a listing of the following which will help with the following section: crime rate, environmental hazards, crime stats, drug labs, air quality, radon, UV index, brownfields, registered polluters, tanks and spills, average monthly temperatures, probability of earthquakes-hail-hurricanes and tornadoes; closest airports-FCC towers-fire stations-hospitals and police stations.

Overall geographic considerations

Climate: Note variations from the norm and the months in which they occur. Note any extremes in climate.

Temperature: Know the extremes and norms. If you've lived somewhere for several years, you probably have a good feel for this. However, if you are new to an area, take some time to study up.

Rainfall and snow: This is a good news, bad news area. The good news is rainfall and snow provide water. The bad news is they can make shelter difficult. They can also lead to hypothermia.

Light Data: Include begin morning nautical twilight (BMNT), end of evening nautical twilight (EENT), sunrise, sunset, moonrise, and moonset. BMNT and EENT is the time between dawn and sunrise and sunset and night, where the atmosphere is neither completely lit nor completely dark. The sun has not risen, or it has just set, so it is no longer visible. In the military BMNT is the time to Stand To, as it is the best time to attack. It, along with EENT, are the most dangerous times to drive.

Seasonal effect of weather: There are places where weather can change drastically in just a day. When I lived in Colorado there was a saying: If you don't like the weather, just wait. It will be different in a couple of days. It's not just seasonal, also consider altitude. It's a rule of thumb that you lose six degrees Celsius (3.5 F) every thousand feet in elevation you ascend. Every year several hikers die on Mount Washington in the summer because they start out in short and t-shirts with no cold weather gear and freeze to death before they reach the summit after getting caught in a storm that also reduces visibility to almost nothing and they lose the trail. What are the seasonal extremes where you live? Are you prepared for them?

Terrain: General direction of mountain ranges or ridgelines. If you are traveling, have an idea of the terrain you are going through, especially if it is different from what you are used to. General degree of slope. Considering your physical condition, and that of members of your

team, what can you climb and descend?

Characteristics of valleys and plains. What directions do the valleys run?

Natural routes for and natural obstacles to cross-country movement. When I lived on Whidbey Island, it fascinated me how isolated the city of Seattle is by land. There are only a handful of roads into the Seattle area, particularly from the east through the Cascades. And even to the south, coming up from Oregon, your routes are limited. The same is true for Los Angeles and San Diego, where the San Andreas fault is to the east and could easily isolate those areas by land. Look at where you live and check your area for your choke points.

Overall region: mountainous, prairie, mountains, coastal, swamp, etc: If you live in a forested area, have you ever tried moving cross-country in it? After doing survival training in the deep woods of Maine, one can easily understand why Stephen King writes horror. It is almost impossible to travel through some forests in Maine. A woman recently died after getting off the Appalachian Trail to go to the bathroom in Maine and was unable to find the trail again. The same is true of the Pacific Northwest. The first time you try moving through nature shouldn't be the survival situation. Get off the path and see how tough the going is in the land around you.

Rivers and streams

Bridges, other crossing points

Main rivers and direction of flow. What is downstream?

Main rivers, direction of flow. Gravity rules. Remember that when dealing with water. Rivers can be a route of transportation or an obstacle. During one training mission in Alaska we had to cross the Tazlina River. We knew the water would be just above freezing so we carried a dry suit with us so the lead scout could swim a line across the river so we could build a rope bridge. When we got to the river we saw a large moose swept away by the current. Change in plans. We ended up crossing the river by using the girders underneath the bridge at night with security on high ground using night vision goggles to watch for traffic. What rivers and streams are in your area? If you have to cross them, how will you? Remember, bridges are choke points. In extreme emergencies expect unsavory elements to use this to their advantage.

Characteristics of rivers and streams, including widths, currents, banks, depths, kinds of bottoms, and obstacles. Note seasonal variations, such as dry beds, flash floods. A creek can turn into a raging torrent in the spring when the snow pack melts.

If on a river, what is downstream? Upstream?

Lakes, ponds, swamps: Large lakes or areas with many ponds or swamps. These kinds of areas can be very difficult to move through. However, that also makes them a great area to hide in. Think of what Francis Marion, the "Swamp Fox" was able to achieve during the Revolutionary War in the low country of South Carolina.

Flood zones: Do you live in one? Are you prepared? Where is your hundred year flood line?

Coastline: Tides and waves. Include winds and current. We'll cover this in more detail in special environments, but many people have lost their lives not understanding the local tides and the power of tidal surge during a storm.

Beach footing and covered exit routes.

Quiet coves and shallow inlets or estuaries. So you can become a smuggler in the second re-incarnation of our country.

Tidal surge. Water is extraordinarily powerful. You cannot defeat it. Hurricane Sandy caused so much devastation because it was a combination of the storm and the tide. When I

lived on the Intracoastal Waterway in South Carolina it was amazing to see the difference between a high-high tide and a low-low tide. When a storm hits in concert with high tide, that's a worst-case scenario.

Primary Roads: What are the primary roads in your area? Assume these will be clogged in a moderate or extreme emergency.

Secondary Roads: Are there ways to get out of the area using backroads?

Natural routes on foot: If you have to bug out, what direction will you take?

Water sources: Note ground, surface, seasonal, and potable. Find the closest natural source of water to your home, work and hide site. Assume it needs to be purified. Does it flow year round?

Food sources: Seasonal or year-round.

Cultivated. Include vegetables, grains, fruits, and nuts. What farms are in your area? What crops do they raise?

Natural. Include berries, fruits, nuts, and herbs. What is edible in your environment?

Domesticated animals in the area. Aka, a food source.

Wildlife. Include animals, fish, and fowl.

POTENTIAL NATURAL DISASTERS

Earthquake What is your potential?

Tsunami What is your potential? What is your evacuation route?

Hurricane What is your potential? What is your evacuation route?

Tornado What is your potential?

Flood What is your potential?

Tidal surge What is your potential?

Wildfire What is your potential?

Drought What is your potential?

Mud slide What is your potential?

Blizzard What is your potential?

MAN-MADE EMERGENCIES

Power Outage

What is the likelihood? Are your power lines buried?

Local Power Company Contact # _____

Fire

Closest Fire station _____

Closest Fire station Contact # _____

Industrial Accident

What major industries are located near you? Are you downwind, downstream from any? What toxic materials, fluids and gases could be emitted in an accident?

Nuclear Where is the closest nuclear power plant? Are you downwind of it in prevailing winds?

Proximity to a high priority nuclear target. For terrorism, the focus would be on port cities with a weapon inside a cargo container. For nuclear war, the focus would be on military and political targets.

Biological Are there labs in your area that work with dangerous biological agents? A university with a research lab?

Chemical What industries are in your area? What potentially dangerous chemical could be release.

Dam breaking Do you live downstream of a dam? What is the dam rated? You can check the National Inventory of Dams.

National Inventory of Dams: http://nid.usace.army.mil/cm_apex/f?p=838:12

Where to scavenge?

Scavenging is covered in the companion manual, *Survive Now*, but you should start looking at the area around you with an eye for what could be useful in a time of extreme emergency.

Many of us don't have important phone numbers memorized, instead relying on our cell phone memories. We need to have this information on hand in case we don't have our cell phones, service is interrupted and for a host of other reasons.

So we need to fill out the tables below. The family/team member lists is also the way an alert should be sent, from 1 through 10, if everyone isn't gathered together.

The out of area emergency point of contact is someone that each family/team member can contact to let them know their status. This gives you a single point of contact not in the likely area of the emergency/catastrophe.

The location of the rally points should actually be memorized and then erased, so no one else can find your ERP.

Key Information Everyone Must Know

Family/Team Contact Information and Alert Flow

Team/family members	Phone number
Team member #1	
Team member #2	
Team member #3	
Team member #4	
Team member #5	
Team member #6	
Team member #7	
Team member #8	
Team member #9	
Team member #10	
Out of area emergency point of contact:	

Rally Points

IRP:	
ERP:	

Location and phone number of closest emergency room	
Home:	
Work:	
School:	
Location and phone number of next closest emergency room	
Home:	
Work:	
School:	
Location and phone number of closest police station	
Home:	
Work:	
School:	
Location and phone number of closest fire station	
Home:	
Work:	
School:	
Location and phone number of closest military base	
Home:	
Work:	
School:	

Feeling a bit overwhelmed? Here's the easy way to do it. Start from your house. Then work outwards. Do the same with your work. And your Emergency Rally Point. A lot of the information will overlap. I'm covering those areas in more detail in the next section.

Check one thing at a time. Write down your observations. You'll be surprised at the amount of information you'll end up with and how much wiser and mentally prepared you will be than you were. Make sure you "disseminate the information" to your family/team. Actually, what's best is if you break down the Area Study and have different members of the team do different parts. Then brief each other.

Once you have the Area Study and Emergency and Threat Assessment done, adjust your planning and preparedness to fit the order of likelihood of emergencies and disasters.

KEY APPS FOR AREA STUDY & EMERGENCY AND THREAT ASSESSMENT

National Geographic 1:24,000 maps: http://www.natgeomaps.com/trail-maps/pdf-quads
USGS maps: http://nationalmap.gov/ustopo/
Road ID eCrumb: https://www.roadid.com/ecrumbs
Compass Android:
https://play.google.com/store/apps/details?id=com.gn.android.compass&hl=en
Google Earth Apple: https://itunes.apple.com/us/app/google-earth/id293622097
Google Earth Android: https://play.google.com/store/apps/details?id=com.google.earth
Home facts: http://www.homefacts.com/
Dams: http://nid.usace.army.mil/cm_apex/f?p=838:12

Four Places for Which to Plan

Home

You've already prepared your water and food to at least the mild level. That's puts you far ahead of everyone else.

Now you've completed your Area Study and emergency and threat assessment. You need to prepare your home in the order of the probability of events that could occur based on that and also the likelihood of emergencies.

Stay informed about current and pending conditions. In some cases, such as hurricanes, you will have days of warning. The other day, people in Hawaii evacuated in the middle of the night from tsunami zones because of an earthquake off the coast of British Columbia. So stay tuned in. Everyone in your survival team should contact each other the second anyone hears about a potential emergency in your area.

Find out if your community has a disaster plan and warning systems. This is part of your area study, but it's smart to double-check.

Make sure everyone knows the IRP and ERP. More on those later in this section.

Make sure your out of town contact is up to speed on your plans. If you have to evacuate, they're ready for you to show up?

Make sure your insurance is up to date. It's worthwhile to go through your house and video everything in it and then store that recording in several places in case you need to make a claim. When you do this video, make sure all your drawers and doors are open so contents can be seen. Store the video somewhere outside of the house. Digitize it and put it in the cloud and also on thumb drives.

Have all your key documents and records in a fireproof, secure place, that is mobile. You can buy small lockboxes that do this. Have your passport ready.

Earlier I described all the water sources in your house. If you have time, stock up on water in every possible holder, including bathtubs.

Have a physical calendar in your house, perhaps on the fridge, but somewhere you can see it every day. On it list the things that need to be checked on a routine basis. Cross them off as they get checked. Do not count on an electronic calendar.

Key Apps to download

Family locator Android:
https://play.google.com/store/apps/details?id=com.life360.android.safetymapd
Emergency Alert System for Apple: https://itunes.apple.com/us/app/silent-beacon-emergency-alert/id933730960?mt=8
Red Cross hurricane app (Apple): https://itunes.apple.com/us/app/hurricane-by-american-red/id545689128?mt=8
Red Cross hurricane app (Android):
https://play.google.com/store/apps/details?id=com.cube.arc.hfa&hl=en
Earthquake alert (Android):
https://play.google.com/store/apps/details?id=com.joshclemm.android.quake&hl=en
Quake Alert (Apple):
https://itunes.apple.com/us/app/quakefeed-earthquake-map-alerts/id403037266?mt=8
Weatherbug (Apple): https://itunes.apple.com/app/weatherbug-forecasts-radar/id281940292
Weatherbug (Android): https://play.google.com/store/apps/details?id=com.aws.android
Disaster Alert (Apple):
https://itunes.apple.com/us/app/disaster-alert-pacific-disaster/id381289235
Disaster Alert (Android): https://play.google.com/store/apps/details?id=disasterAlert.PDC
FEMA (Apple): https://itunes.apple.com/us/app/fema/id474807486
FEMA (Android): https://play.google.com/store/apps/details?id=gov.fema.mobile.android
Flashlight (Apple): https://itunes.apple.com/us/app/flashlight-o/id381471023
Flashlight (Android):
https://play.google.com/store/apps/details?id=com.ihandysoft.ledflashlight.mini

Family Locator Android: GPS Tracker for Android. Family Locator simplifies life in the digital world by making it easy to stay connected to the people who matter most. With Life360 you can create your own groups, called "Circles," of loved ones, friends, teammates -- whoever matters most and chat with them in Family Locator for FREE. View the real-time location of Circle Members on a private family map that's only visible on Family Locator. Receive real-time alerts when Circle Members arrive at or leave destinations (Eliminate disruptive "Where are you?" texts) Track stolen phones or lost phones.

Emergency Alert System for Apple: Alert, track and notify loved ones as well as 911 in an emergency situation. Silent Beacon provides you with the peace of mind that comes from knowing that you and your loved ones are able to instantly connect. The emergency alert system for the digital age.

Red Cross Hurricane App. Be ready for severe weather with Hurricane by American Red Cross. Monitor conditions in your area or throughout the storm track, prepare your family and home, find help and let others know you are safe – a must have for anyone who lives in an area where a hurricane may strike or has loved ones who do.

Earthquake Alert Android: See Magnitude 1.0+ from the U.S. and Magnitude 4.5+ earthquakes from all over the World.

Quake Free for Apple: QuakeFeed is the #1 Earthquake App for iOS. Quick and very easy to use. Nearby Alerts for earthquakes near you.

Weatherbug: Get real-time weather conditions, forecasts, and accurate & animated weather maps for all the locations you care about. Plus, get the fastest alerts to severe weather including all NWS and NOAA watches and warnings.

Disaster Alert is a free download providing mobile access to multi-hazard monitoring of and early warning for "Active Hazards" around the globe. Additional information and reports about hazards can be viewed and shared.

FEMA: The FEMA app is your one-stop-shop with tools and tips to keep you safe before, during, and after disasters. Stay updated with weather-related alerts from the U.S. National Weather Service. Upload and share your disaster photos to help out emergency managers. Save a custom list of the items in your family's emergency kit, as well as the places you will meet in case of an emergency. Get tips on what to do before, during, and after over 20 types of disasters. And locate open shelters and where to talk to FEMA in person at Disaster Recovery Centers.

Flashlight.

Download them NOW.

Supplies

The following items should be in your house and you should know where they are. Some of these you've already gotten in earlier sections of the book, but this list is to allow you to focus on your home. Some of these are redundant to what's in your Grab-n-Go bag, but you need redundancy. The Grab-n-Go bag is for use on the move. You only go into it in your home if you have no other choice.

Home Supplies	
Check when done	Item
	Two cases of water per person
	Three days worth of food per person
	Manual can opener
	Flashlight
	Extra batteries
	Crank powered emergency radio
	First aid kit
	Weeks worth of medications
	Cash
	Baby supplies as needed
	Pet supplies as needed

Take a look out of all your windows. Can you get out and down safely? My wife looked out the master bedroom in one house we were renting and while it was on the main floor from the front, it was three stories up from the rear. We bought an emergency three-story ladder.

If you have to evacuate upward in your house because of flooding, make sure you can get out of your attic through the roof. People died, trapped in their attics during Katrina. Do you have an axe or chainsaw stored there that you can use to chop through the roof?

Chainsaw. I recommend having one at your house. After a storm, hurricane, tornado, flood, tsunami, etc. the sound you will hear during the recovery phase is the nonstop hum of chainsaws cutting away fallen trees.

Every room should have two egress points. This leads us to preparing for:

Fire

Make sure your smoke and carbon monoxide alarms are functioning. Have an SOP on your calendar for testing them every month. Check them NOW.

Have several fire extinguishers in your house. Definitely one in the kitchen. Understand the different types of fire. This is a common occurrence and many people handle it incorrectly, worsening the situation:

If your oven is smoking and you turn it off and it continues to smoke, call the fire department. The fire might have moved outward into adjacent cabinets or the wall.

If there is a fire in a pan, turn off the burner, use a pot holder or mitt to put the top on it, move it off the burner. The lack of oxygen should put out the fire. This is preferable to spraying it with the extinguisher right away. If the lid doesn't work or you don't have it, use the extinguisher. Aim it at the base of the flames, the source, rather than the flames.

If you have a fire in the microwave, keep the door close and turn it off. Do not open the door. Once more, the lack of oxygen should kill the flames. Once more, if smoke continues to come out of it, call the fire department.

This one is key: never use water on a grease fire. All you're doing is spreading the fire. **U**se the extinguisher. Throw baking soda on it if handy. DO NOT use flour, which makes it worse and can even explode.

Don't do what they show on TV shows all the time: swatting at a fire with clothing, a towel, etc. All you're doing is fanning the flames. The exception to this is if the fire is small enough that you can smother is completely with a wet towel or cloth. Smother is different than fanning.

If none of this works, evacuate to the IRP and call 911. Make sure you get accountability at the IRP for all personnel and pets.

More on Food

While you already have an emergency food supply, here are some more considerations.

While you can get bulk supplies, in an extreme and extended emergency, a little variety is nice. While I do have bulk supplies of emergency food, I offset that with soups, noodles, and other long-lasting food stuffs. Many extreme survivalists go with staples such as wheat (do you have allergies, by the way, or any of your team?). We grow weary of eating the same food day after day. Even the Army mixes up their rations. Consider storing some spices. My team-members would carry various spices and sauces with them to "spice up" their bland rations in the field.

Stock up on vitamins, especially for children. Multi-vitamins work well and vitamin C is essential.

Consider "goodies". These are key for keeping morale up. While we can live on gruel for a long time, it might not be fun living. While our mindset in an emergency is survival, as time goes on, there is a need to pick up spirits. Consider hard candies. While I was in 10th Special Forces we experimented with GORP (good old raisins and peanuts), aka trail mix. A mixture of peanuts, dried fruits such as bananas and raisins. We also tended to add in chocolate in the form of M&Ms. We carried a supply in our ruck and usually a ziplock bag in our outer shells for easy access while on the move. You can buy this at your local supermarket.

Be careful of your use of containers. Air locked containers are best to avoid spoilage. You do not want your food supply contaminated with water. Do not use trash can liners as they are

sometimes treated with pesticides. In an earthquake zone don't store your food on high racks. They can topple and break the container.

Test and use your emergency food while replenishing. It's too late to learn how to cook and figure out how much you like your emergency food supply to do it during the emergency. Set aside time to try some of the meals. Learn how long it takes to cook. Also, use your emergency stove to cook. See how people react to the various items. Restock with these factors in mind.

Defense and the Safe Room

If you consider your home is your castle, then think about what the term castle means. It's a place of safety. Of defense.

Let me state up front I believe that the best defense is to not to have to defend yourself. Hiding works well. Retreating is also a good option.

When you use the term 'safe room' remember that it means two different things. FEMA looks at a safe room as a place where you can survive extreme weather. Security experts view a safe room as a place where you can outlast a home invasion. One is natural, the other man-made. FEMA P-320 describes their parameters for a safe room.

FEMA safe room guidelines web site: https://www.fema.gov/residential-safe-rooms

I won't go into it here because you can go to the source document. Also, it requires engineering most likely beyond the capabilities of most do-it-yourselfers.

Your "safe room" can vary depending on the threat. Under hurricanes and tornadoes, I list where the best places to go are.

To guard against home invasion, consider this: the more you secure your house from someone getting in, the more you imprison yourself. If the fear of looters and criminals is so great during an emergency, retreat to your ERP, link up with your team and wait it out.

Have you looked at your home in terms of defensibility? If you don't have a military background, this might be a difficult thing to accomplish. Do you understand fields of fire, obstacles, cover, concealment? Again, discretion is the better part of valor.

I've looked at safe rooms in houses and to me, they look like prisons, unless it was a natural disaster such as a tornado. An issue to consider even for weather safe rooms: what if everything collapses down around you? How will you get out? Will rescuers know you are in that room? I think a weather safe room is a good idea, but think past the weather to rescue. Do you have a plan? In a way, if you think it through, you're caught in a Catch-22 here: if people know about your safe room in order to rescue you, then people know about your safe room. If you follow.

Again, as I keep pointing out in this book, one size does not fit all. For me, I prefer freedom of movement. But if I lived in a tornado zone, I would definitely have a weather safe room. Having lived in a hurricane zone, evacuation is the option to be taken over a safe room.

There are other reasons for safe rooms: terrorist attacks, especially with biological or chemical weapons.

Here are some guidelines for safe rooms:

A room with no windows.

Preferably a room with running water and a toilet. Or else you will need a chemical toilet. Remember, though, the running water, and electricity, can be cut off externally.

A landline phone.

Have heavy plastic and duct tape handy to seal any cracks if need be.

Since it's the most secure place in your house, this should be where your valuables are stored.

Don't call it a "panic room" as that could make people panic.

Consider it a point of retreat until the threat goes away or help comes.

Do not leave the safe room until the threat is gone.

When you go to your safe room, take your G&G bag with you.

Home Safety: Gas, Propane and Water During many emergencies that threaten your home, it is wise to shut off your gas/propane. This greatly reduces the chance of fire, especially following earthquakes, tornadoes, hurricanes and floods.

To shut off the natural gas, turn the valve one-quarter (90 degrees) in either direction, if it's a valve. Have you checked your shut off? Does it turn? Often they might have become lodged in place. Make sure it turns and keep a wrench nearby just in case.

To shut off propane, turn the valve on the tank to the right all the way until it stops (righty-tighty).

If you smell rotten eggs or hear hissing, shut off the gas.

If you have a buried propane tank, do you know where it is and where the lines run?

To shut off water at the house, find the main valve into the house. This could be key to keeping what water there is in the house, in it. If water mains break, and you're still connected to the water system, water will drain out of your house. Make sure you know where this shut off in the house is. While you might shut off the water by the meter, this is much more difficult and requires tools. Do you know where your water meter is?

Work/School

The key to preparedness at work/school is to have your work Grab-n-Go bag on hand.

In an emergency your priority is to stay safe. Then to link up with your family/team either at home, the IRP, or the ERP. A critical factor is who goes where and that has to be decided beforehand.

Sit down with your family/team and discuss the possibilities of what happens if there is an emergency and cell phones don't work, yet everyone is in different places. What are the variables? How will you meet? Will you have time limits?

For example:

We meet at the home as long as it is viable given the emergency. If the home is abandoned, a note will be left in a waterproof container (an empty, closed water bottle will do), in a hidden location near the IRP, indicating whether the next step is the ERP or some other location. Always consider time limits and locations.

It is instinctual for parents to head toward the school to get their children during an emergency. Do you know what the school's emergency plans are? Do you have the contact number for the school in order to be able to check? For the school district? Do your children know what to do if they have to leave the school? If you go to pick them up while they are coming, do they know what to do if you aren't there?

Think of various scenarios and how your family/team would deal with them if your cell phones don't work.

What are your work place's emergency plans?
Most likely they have some, but they might be limited to evacuating the building.
What if you're trapped there?
Besides your own personal Grab-n-Go bag, your work place should have:

Work Place Items for Emergencies	
Check when done	Item
	Battery operated radio or TV
	Non-perishable 3 day food supply for employees
	At least one gallon of drinking water per employee for at least 3 days
	Blankets, pillows, cots
	First aid kits
	First aid manual
	Flashlights, batteries, light-sticks
	Toolkit
	Camera for recording damage
	Whistle, flare to signal for help
	Access to roof and VS-17 type panel to signal for help
	A designated IRP outside the building
	Tarps, plastic bags, duct tape
	Everyone knows building evacuation routes

Are there special considerations for your workplace and what its business is?
If you work in a very tall building do you know your options for getting out? Your escape route via stairwells down (never use the elevator)? Can you get to the roof if need be? Remember that helicopters might have problems getting close to the building if there is a fire. There are companies that are now making extended range escape possible using escape chutes, long range abseils (rappels). Consider even the possibility of base jumping. It might sound outrageous, but the lowest base jump ever recorded was only a little over 100 feet, which is roughly 10 stories. Many people work on a floor higher than 10 feet.
The most important thing for work is to have your work Grab-n-Go bag ready.

Car/Traveling

Most people spend a considerable amount of time in their car. Whether it's a road trip or a daily commute.
Here are some sobering numbers:
In 2005 there were 6,420,000 auto accidents. When you consider most are multi-car and multi-people, that means there is a very good chance of it happening. To you. Remember, you

might be the greatest driver in the world, but that guy over there might be drunk. Or high. Or texting.

2.9 million people were injured in those accidents.

42,636 people were killed. In essence over a hundred people die every day in car accidents. About one every fifteen minutes.

Car crashes are the leading cause of death for people between the ages of 3 and 34.

So what do you need to do and what do you need to know?

The first thing is preparation and that starts with getting the right car. A safe car. While we might fret over gas mileage or looks or sound system, the priority, given the odds of accidents, is to buy a car that has an excellent crash rating. The government has a web site where you can find car safety ratings.

Car safety ratings: https://www.safercar.gov/Vehicle-Shoppers

Every year, cars gain more and more safety features. We started with seatbelts. By the way, seat belts don't work if you don't use them.

There are also blind spot warning systems, lane departure warnings, collision warning/avoidance, etc. If your car doesn't have automatic running lights, turn on parking lights and leave them on while driving. Do it automatically. I turn on my Jeep fog and parking lights as soon as I turn on the ignition.

Top rules for safe driving:

Don't speed.

Don't drive drunk or high or on medication that says not to operate heavy machinery.

Avoid distractions. That means no texting. No talking on the cell phone. And by the way, just because you have a headset or speaker, you're still distracted because you're engaging your brain in two active tasks at the same time. And even consider not having that in depth conversation with the person in the passenger seat. I've seen drivers gesturing with both hands at the passenger. Hmm.

Wear your seatbelt. It keeps you in the car. The car is your best protection in an accident.

Don't drive sleepy. Our body operates in rhythms. When taking long trips, there are going to be times of day when you are less alert than others. Pull off in a safe place and close your eyes for 30 minutes. It can save your life.

Weather rules.

Drive within your vision. If fog or darkness or rain reduces visibility don't go faster than your cone of stopping. If you are in bad visibility and pull off to the side of the road to wait it out, either turn on your flashers or turn off your lights. But if you sit there with your lights on, other drivers will think you are in a lane and will smash into you from behind.

Keep a safe distance. Can't you just feel it when someone in a rush pulls up right behind, anxious to gain those extra seconds, even it means killing you and them? You've got your whole life ahead of you, a few seconds aren't going to change that.

Assume everyone else is a bad driver. And if they're going to do something stupid, they will. Just because he has his right turn signal on, don't assume that car is turning and pull out. Check your rear view mirrors. I always want to know who is behind and alongside me. I always want to know if I can swerve if I have to switch lanes in a hurry. I watch other drivers

to see what they're watching. It amazes me the number of people who never look in the rearview mirrors.

Don't assume the Clampetts have secured everything on their truck. Don't follow behind a vehicles with things tied to the roof or in the bed of a pickup truck, or a maintenance vehicle with lots of things attached, etc.

Avoid road rage. Yes, they are idiots. Yes, they can kill you. But you can get so caught up in your reaction, you end up being more dangerous to yourself and others.

Buy good tires. Replace them before they reach safety limits. Replace all of them at the same time. Rotate tires as instructed if you have a full size spare. Make sure your tire pressure is correct. Tires keep you on the road.

Don't let your gas level fall below half a tank. Yes, I know some of you are daredevils. You want to see how far you can go with the needle at empty, like Kramer in Seinfeld. Don't. In the Army, when I was in mechanized Infantry, it was a court martial offense if one of your armored vehicles ran out of fuel. Just get in the habit of every time your gauge hits half, to top off. Do it for a month and it will be instinctual. And your significant other will never yell at you again for running out of gas. And you'll be damn happy to have that fuel as others wait in line after the hurricane. Because after Sandy, even though some people didn't really need the gas, there was a rush to get some, because in civilization we have these strange fears. Don't get caught up in that.

Keep your brakes maintained and check your brake and power steering fluid. If you don't know how to do this, take your car in to a mechanic every so often.

If there is water on the road ahead and you don't know how deep it is, don't attempt to drive through. At Fort Hood, Texas, the road would dip down into a dry gulch and there would be markers on the side of the culvert indicating the high point during flash flooding. It was often well over the roof of the car. Last year several soldiers died trying to cross one of those roads.

Hydroplaning: Did it, done it, won't ever drive fast on wet roads again. Roads are most dangerous just as it starts to rain as oil and other liquids already deposited on it rise. But in heavy rain, the road could be covered by more water than can be drained away. Hydroplaning occurs when there is more water on the road than your tires can push away. The tires are then literally lifted on a sheet of water, losing your traction. Ways to avoid it:

Slow down
Avoid standing water as much as possible
Slow down
Turn off cruise control
Slow down
Avoid hard and sudden braking
Slow down
Avoid sharp turns
Did I mention SLOW DOWN?

Unlike in the *Walking Dead*, gas has a shelf life. It begins to break down and is worthless after roughly three months. Gas with higher levels of ethanol breaks down more quickly.

You can add STA-BIL fuel stabilizer to gas you store or to gas power equipment you don't use often. The manufacturer claims it will keep gas usable up to two years.

Diesel lasts longer than gas, six months to a year.

Have a little hammer/cutter device that allows you to smash open your window and cut loose from your seat belt in case the car goes into the water. Place this device within easy arms reach of your seat. There are also spring loaded car window breakers. They're called LifeHammers.

Carrying a battery powered siphon device is a smart move, as well as saving you inhaling gas through a hose.

Besides your car Grab-nGo bag, here are some items you should have in your vehicle (some of which you've already put in there!):

Car Emergency Equipment	
	1 case of water
	Fire extinguisher
	Drivers license, proof of insurance, insurance company contact number
	Cell phone charger cable
	First aid kit
	Three reflective warning triangles
	Flashlight with red warning flasher
	Blankets
	Snow shovel
	LifeHammer
	Ice scraper
	Work gloves
	Tool kit
	Jumper cables
	GoTreads Emergency traction tool
	Tow straps
	Poncho
	Food as listed under Food
	Road side flares
	Flat tire inflation canister
	Spare fuses
	Road maps
	Walking shoes and socks
	Extra quart of oil
	Duct tape
	Battery powered siphon
	Multipurpose tool
	Emergency battery charger
	Battery powered radio

Do you know where your spare tire is? How to change it? Is it standard size or only a temporary spare good for emergency use? If that's the case, then don't drive as if you have regular tires and realize its good for perhaps fifty miles. Some cars have tire mobility kits instead of spares; this consists of an inflator and sealant. GoTreads look flimsy, but actually work and can get you out places when your tires are spinning.

When you are traveling, there are specifics for air, rail, ferry, sea travel that are covered later in this book. A key thing is to do a quick area study of where you are going. What are the possible emergencies and threats?

Are you going to an area with a more primitive standard of living? Do you need water purification tablets? First aid kit?

Here are some items to carry with you while traveling.

Emergency Travel Items	
	Passport and a copy of your passport. Scan your passport and upload it to the cloud
	Health insurance card
	Two credit cards, carried in two separate locations
	List of emergency contact numbers, written out (in case you lose your cell phone or its stolen)
	Prepaid long distance card
	A few blanks checks
	Adequate prescription medications plus 3 days extra
	Protein bars

Emergency Rally Point

We're now beginning to move from mild and the lower end of moderate emergencies into tactics, techniques and equipment for higher moderate and extreme emergencies. I've mentioned your ERP several times already. In this section, we'll discuss how to select, prepare, and equip your ERP site.

But, before we even discuss the ERP, we need to consider when you would use it.

There is a big difference between an evacuation and "bugging out".

An evacuation has the expectation that you would return to your home in the foreseeable future. In this case, it can be as simple as driving away and checking into a hotel outside of the danger area. However, if you live in an area where evacuations are likely, such as a hurricane zone, plan ahead. Have a location you know you can go to and get a room or people you can stay with already planned.

First, let's discuss reasons *not* to bug out:

You have your primary stockpile of supplies in your house.

You have a community around you who knows you and you know (this could be a good thing or a bad thing).

There is no immediate or foreseeable threat to you and your home, whether natural or man-made.

When to bug out:

The most obvious time would be if the home is unlivable along with the IRP. This would happen in the case of an extreme emergency that affects the entire area. Ultimately, the ERP will be the place for your team to meet up if all else fails.

However, making the decision to "bug out" is a very difficult one if your home is still livable. Because when you bug out, there is a good probability you will not be returning to your home, so we're talking extreme emergency on a large scale where the ERP is your best option, rather than your evacuation point.

There are several predictors on deciding to bug out.

Your home is no longer livable.

The emergency or disaster is something that is approaching you and can't be stopped. The primary example of this would be a pandemic.

The rule of law has completely broken down and now your home is a target and you cannot adequately defend it

Television stations go blank.

Local FM radio stations go off the air.

There are long lines of people trying to withdraw money from banks and ATMs.

Increased military presence, especially if its Federal forces, not National Guard. Federal military Army, Air Force and Marines can only be employed stateside in extreme emergencies. In your Area Study learn the difference and what National Guard units are nearby; what their unit patch is (on the left shoulder) and what unit designations would be marked on the bumpers of their military vehicles.

In cities, if garbage is piling up and not being picked up, eventually this will cause disease. It also indicates a slow breakdown of social order.

There is slim to no possibility of receiving aid. This latter is something people don't consider in mild or moderate emergencies. Localized emergencies always have the advantage of outside assistance coming in. If an emergency is on a national or international scale, this likelihood is drastically reduced. The United States has never experienced this.

A disturbing aspect of this is that while governments will call for evacuations, there really is no protocol for announcing that things have gone to s$%t. In fact, it is unlikely that such a thing will ever be announced. The desire to avoid panic will often override reality. Thus you must make this decision on your own.

Make sure you can listen in on the Emergency Broadcast Stations with your crank radio. Also, a smart move is to monitor emergency transmissions in your area. Here is a free app that will allow you to do that. Often the emergency services are better informed than the general public. You can also get an idea of the scope of the emergency or disaster not only from what is being said, but the tone of the emergency personnel:

Scanner App: (Apple):
https://itunes.apple.com/us/app/scanner-radio-deluxe/id498405045?mt=8
Scanner App: (Android):
https://play.google.com/store/apps/details?id=com.scannerradio&hl=en

Some other factors to consider:

The power grid is down and isn't likely to come back up. Most urban areas can last about five days without power before society begins to unravel. Probably less if its widespread.

Water treatment and delivery systems have failed completely.

Long haul freight trucks are no longer moving. Most urban areas have enough food to last no more than a week.

You're running out of stocked supplies to the point where you're considering breaking into your main Grab-n-Go bag. Don't. Use it to get to your ERP.

Once more: Law and order has completely broken down. If emergency personnel, such as police, fire and medical, are no longer reporting to work, things are getting very serious.

Emergency Rally Point

Your ERP is the alternative to your home.

It is where you plan to survive during a moderate to extreme emergency when your home is untenable. It is where your team gathers if unable to at home or the IRP.

There are no hard and fast rules when you should utilize the ERP. Every situation is going to be different. The key is to prepare the ERP. It cannot be prepared after the emergency has begun.

When thinking about an ERP, use the term BLISS.

BLISS considerations for the ERP

Blends in with surrounding
Low in silhouette
Irregular in shape
Small in size
Secluded

There are, of course, exception to this guideline. There might be a time when bunkering up in a high rise might be a good option. This is if a massive chemical/biological attack makes a top floor position desirable and traveling unadvisable.

The key to the ERP is to stay hidden. That's your best defense. It is where you rest, recover, and live. How long depends on the emergency.

A key to the hide site is a Catch-22: water. You need water, yet water will draw other people, including predators, both human and otherwise. Consider locating the site within a half hour walk of a water source. That allows you to draw water, but not be so close that casual passerby's will stumble across your site.

The ERP should have concealment first and cover second. The difference between the two is this: concealment means you are hidden from observation. Cover means the position has protection against direct and indirect fire weapons (remember, arrows are indirect fire, as Custer learned). The reason I prioritize concealment over cover is because the best defense is not to be found.

In the movie *Panic In The Year Zero*, a 1962 movie by Ray Milland, the family escapes a nuclear attack on Los Angeles towing their camper. When they get to a remote site where that had vacationed before, the father vetoes staying in the camper, over the protests of his family, and makes them move into a cave. A young couple takes over the camper, seeing it as an easy refuge. They are found shot to death within a few days. The lesson: don't take the easy location as your hide site.

The best hide site is a spot, within a half hour walk to water, that allows you to set up however many tents or build as many shelters your team will require. This keeps the hide site clear until you need it. It also allows you to move your camp when you need to.

How do you get to your ERP? If you drive to it, make sure to leave the vehicle far enough away, at least two miles, so that it doesn't point others toward your site. Disable the vehicles

by taking an engine part. Assume the vehicle will be looted, but perhaps you can use it if you return with the part. The easiest part to take is the main fuse. You can conceal the vehicle as much as possible, but if you drove it there, it's on a trail that takes vehicles which means others can drive there too.

Another thing to consider is putting your hide site behind a gate that can be locked. Many parks, logging roads, etc, have lockable gates. Cut the current lock on it, drive through, out of sight, and put your own lock on the gate (which means you have a lock at your ERP or in your vehicle). Still, keep at least a two mile distance between the vehicle and your hide site.

Consider that others will also be running away. In an extreme emergency there will be hordes of people escaping, scavenging, and panicking. You're already better prepared than them.

Consider chokepoints and bottlenecks to your ERP. For example, when I lived on the Tennessee River, there were only a few bridges across it within a reasonable distance that I could take to get to the Smoky Mountains, which were a tempting location in which to plan my ERP. Most of those bridges were in downtown Knoxville, which meant they could easily be crowded, difficult to cross, or even shut down. Plus, the Smokies are the most visited National Park in the country with only a few roads into them—popular with chokepoints. Many people would head that way in a panic.

I looked in the opposite direction, north. Oak Ridge contains vast swaths of Federal Land with no inhabitants. Not many people would think of going there (besides the glow in the dark factor). There were multiple routes to get there.

Stay away from the routes most people would naturally take, particularly Interstates. Stay away from nuclear power plants (an extended power grid down makes them unstable), military targets, and urban centers.

As soon as you are settled in your ERP, search out an escape route and a Rally Point and make sure everyone knows where it is. The Rally Point is where you will all meet if the ERP is attacked.

When getting water, don't use the same trail all the time. Mix it up.

Always maintain security. One person must be up and alert at all times.

Some considerations.

Urban environments:

If you are in an urban environment, I recommend your ERP be outside of it. That means the priority is to plan how to get to it, especially considering that in high moderate and extreme emergencies, everyone will be evacuating. Do you have a route planned? One that will not be blocked?

However, take a look around. In most urban environments, there are places less traveled. Most cities are crisscrossed with an underground maze.

Going back to the Area Study, what routes did you find that you think won't be choked with refugees? Have you traveled them?

What to have in your Emergency Rally Point:

Your ERP should be supplied beforehand if you want to prepare for high moderate or extreme emergencies. Otherwise the only supplies that you'll have there are the ones you bring with you in your Grab-n-Go bags.

The easiest, and smartest, supply to cache there is a duplicate main Grab-n-Go bag. This accomplishes two things:

First, you have more of the essentials in all areas.

Second, if for some reason you are not able to get to your main Grab-n-Go bag, you now have one.

You can cache more supplies than a Grab-n-Go bag there. Food and extra ammunition are good ideas. Never cache a weapon.

Cache: Here is what to do to put in an effective cache, either at your ERP, or any location:

Protect the supplies. There's no point putting in a cache if when you recover it, nothing is usable. Waterproof, waterproof, waterproof. Garbage bags are not effective waterproofing. The plastic is too thin. Thick plastic should be the innermost layer. Compression sacks that seal work well. Also look at what's sold for kayakers and other who need waterproof bags. Waterproof isn't enough, though. You must also make sure the waterproof bag is protected inside of a hard case. The most common people use are ammunition cans. Look online and you will find commercially available hard case, waterproof containers. Large PVC pipe sealed on either end also works well.

It also does you no good to put in a cache if someone else can find it and scavenge it. Consider these variables when trying to hide your cache:

Disguise it. Put it in something larger that looks worthless. Can someone with a metal detector find it? Then perhaps put it inside something larger that's metal, such as a derelict car? Not in the trunk, which is where a scavenger will look.

Conceal it. The most obvious is to bury it. There is an art, however to successfully burying a cache so that it remains viable. Also, will you be able to find it again? In Special Forces we spent a large block of instruction on putting in caches. Can you bury it and then conceal the spot? How will you, or members of your team, find it and recover it?

A very effective way to cache is to sink it. Of course, it must be thoroughly waterproofed, but scavengers are very unlikely to find it. Of course, it must be in a stable place that won't get further flooded. And you must be able to recover it.

You have to put your cache in a place where others can't see you putting it or recovering it.

Consider having several smaller caches, spread out. This way, everything isn't in one place for scavengers.

To learn more, here is a link where you can download TC 31-29, Special Forces Caching Techniques.

https://archive.org/details/milmanual-tc-31-29-special-forces---caching-techniques

Key Apps to download

Family locator Android:
https://play.google.com/store/apps/details?id=com.life360.android.safetymapd
Emergency Alert System for Apple: https://itunes.apple.com/us/app/silent-beacon-emergency-alert/id933730960?mt=8
Red Cross hurricane app (Apple): https://itunes.apple.com/us/app/hurricane-by-american-red/id545689128?mt=8
Red Cross hurricane app (Android):
https://play.google.com/store/apps/details?id=com.cube.arc.hfa&hl=en

Earthquake alert (Android):
https://play.google.com/store/apps/details?id=com.joshclemm.android.quake&hl=en
Quake Alert (Apple):
https://itunes.apple.com/us/app/quakefeed-earthquake-map-alerts/id403037266?mt=8
Weatherbug (Apple): https://itunes.apple.com/app/weatherbug-forecasts-radar/id281940292
Weatherbug (Android): https://play.google.com/store/apps/details?id=com.aws.android
Disaster Alert (Apple):
https://itunes.apple.com/us/app/disaster-alert-pacific-disaster/id381289235
Disaster Alert (Android): https://play.google.com/store/apps/details?id=disasterAlert.PDC
FEMA (Apple): https://itunes.apple.com/us/app/fema/id474807486
FEMA (Android): https://play.google.com/store/apps/details?id=gov.fema.mobile.android
Flashlight (Apple): https://itunes.apple.com/us/app/flashlight-o/id381471023
Flashlight (Android):
https://play.google.com/store/apps/details?id=com.ihandysoft.ledflashlight.mini
FEMA safe room guidelines web site: https://www.fema.gov/residential-safe-rooms

The Grab-n-Go Bag

Now that you know the five key elements of survival, have water and food in your house, car, work and ERP, the next priority are your Grab-N-Go bags. While some of the material in them duplicates what you've already prepared, the key to these bags is that they are mobile. They allow you to move out of range of a disaster or emergency if forced to.

During my time on an A-Team, I spent a great amount of time in Isolation prior to a mission packing and repacking my gear. There were several factors behind this:

-Weight. Since we carried everything, we looked at everything we took deciding between necessity and weight. How much can you and the members on your team carry?

-Size. How much room does it take? You can only fit so much into a backpack.

-Pack your bag so you can access the most needed items first. So you have to think reverse: first in is last needed.

Optimally, we'd want to take *everything* with us. But you can't. There is no one right bag. You have to configure your G&G bag to your situation and your surrounding environment based on the area study you've already done. Prioritize depending on what you envision your survival needs being, along with the likelihood of emergencies.

We need several G&G bags because we spend our time in several places and emergencies don't discriminate. Here they are in order of priority: Home, work/school, and car.

Again, like almost everything else, you can buy a pre-packed G&G bag on line. These are generic, and usually packed with cheaper items to keep the cost down. For a car, I think a pre-packed bag with specific equipment for a car is an alright idea. But for your other bags, I think you should do it yourself, making it specific to your needs.

When picking items, choose those that can have multiple uses instead of one. I have a hand crank survival radio that also has a built in flashlight and an adapter for charging my cell phone and has a solar charger. Three items in one with two non-electric power sources.

Use a bag that is at least water repellant, if not waterproof. If it isn't waterproof, pack your items in waterproof bags. A key lesson of life in nature is to keep things waterproofed.

Before we get to the bags, let's move outward from your clothing.

I always carry a Leatherman multi-tool on my belt. Your job/school might not allow this, but keep one close at hand; in your locker, in your desk or in your car. In the same nylon case on my belt is a small, single AAA battery, flashlight. You'll be amazed how often you use it for day-to-day activities and it can be a life-saver in a survival situation.

Always carry your cell phone. Throughout this books I reference Apps you can download and there will be a complete listing of them in Appendix C along with links. These can, literally be lifesavers.

Hanging next to my main Grab-n-Go bag, I have what I call the emergency vest. This is similar to what members of the military wear. It holds essential equipment that one always needs to have on hand, especially if the backpack has been left behind.

I use a Blackhawk Omega Crosssdraw Mag Vest, but you can also a fishing vest, or something similar. Whatever vest has a bunch of pockets in it.

Things to carry in it:

Quikclot bandage.
Lighter.
Zip ties
Survival knife
Ammunition for primary rifle and pistol
Compass (tied off)
Map

THE MAIN GRAB-N-GO BAG

This list is not an absolute. You must adjust based on your environment and your Area Study. More importantly, how much will fit and you can carry on foot? Items marked with an asterisk are optional based on environment and space/weight available. Also factor in what gear you can readily scavenge or make from field expediency. Your Area Study touches on what can be scavenged in your Area of Operations. In Survive Now, I go into details on scavenging.

The gear is broken down by areas. I explain the item, then a checklist follows. In Appendix C are links to specific items at Amazon. If you're uncertain what exactly the item is, you can click on the link and get an idea. Unless otherwise noted, I have every item linked in Appendix C among my own survival gear. Feel free to personalize, upgrade, whatever. This is a guideline.

The bag itself. This goes back to how much you can easily carry. Also, remember, the bigger the bag, the more obvious it is. And the more someone might want to steal it from you. If you have no experience with backpacks, go to your local sporting good store (REI always has knowledgeable personnel working) and ask.

Do you want just a regular backpack like kids take to school? An internal frame ruck? External frame? Built in hydrating system? The choices are limitless. What you should do is go down this list first, write out what exactly you want in the bag, get the stuff, then find a bag that fits the stuff. You might find you're trying to carry too much stuff. That's when you take out the items depending on importance. Also, consider the color of the bag. I'd go with, if not camouflage, something that is dark in color, or that matches your surrounding terrain.

WATER

4 full 500ml water bottles. This is your immediate emergency supply if you have no time to fill up your . . .

Water Containers. Either a built in water supply such as a Camelbak or pockets/clips for water carriers. Most packs have external loops on which you can secure canteens and water carriers. Remember, though, that water sloshing about and things on the outside of your bag banging about, violate noise discipline. Your first priority is to fill up this container with potable water or fill from your household water stash if bugging out. The four water bottles are to sustain you to get to that point. They also then become extra water containers.

Water Purification.

Lifestraw equivalent and two bottles purification tablets.
Water Filter
Water purifying tablets

Waterproof Sacks, inner bags, Ziploc bags. Everything inside your backpack that can get wet needs to be inside a waterproof sack/inner bag. Have a supply of assorted size Ziploc bags for smaller gear.

*Empty compressible water containers** 2 gallons capacity. For after establishing base camp

FIRE

Windproof lighters. 3 each.

Windproof matches with striker.

Magnesium fire starter. Make sure you practice with it before trying it for the first time in the midst of a downpour and hurricane force winds.

Portable stove and fuel supply. You need a small stove with a fuel supply for at least a few days. Go with the stove for cooking initially instead of a fire because of smoke and light discipline.

FOOD

Minimum 3 days supply. Add in power bars, etc. Survival meals.
Pot to cook in, utensils, pot holder.

FIRST AID

Emergency first aid kit.
Medical mask.
Quikclot sponge. 2 each
Universal Splint, rolled. 1 each.
Extra medication (minimum one week's worth)
Extra glasses

SHELTER

Emergency, light weight sleeping bag. These are also called bivy sacks. They are a step up from the emergency blankets you see advertised and more effective.

Small tent or poncho. This depends on multiple factors: how many people, portability, weather, etc. As you'll see later, my recommendation for the hide site is to make it out of tents in a remote location. If you're hard-core, you eschew the tent in favor of a field expedient shelter that can be put up and taken down quickly, using a poncho and paracord.

Sleeping pad. Either a fixed pad or Thermarest self-inflating. Not just for comfort, but in cold environment, staying off the ground, saves you heat. In a hot, jungle environment, this can be swapped out for a hammock.

Insect repellent adequate for your environment

*Sleeping bag**. Your decision on a sleeping bag depends on your Area Study. Plus 20? Minus 20? A bivy sack is useful for both shelter and sleeping. You need something waterproof to insert the sleeping bag into.

TOOLS

Leatherman, Mutli-Tool (in addition, consider adding Leatherman, Crunch Multi-Tool)
Portable, hand crank, emergency radio.
Hand crank rechargeable flashlight.

Battery powered headlamp. Often, in the dark, doing survival activities, you'll need both hands, so this helps. Also, consider having a red lens cover or red option for the light so you can use it at night and not give out a large signature.

Chem lights.

Fixed blade survival knife. We used to argue about knives all the time in our team room. Which type was best, where to carry it, etc. etc. You don't need a Rambo type knife, in fact, it's too big and too heavy. I like a six to eight inch blade with a serrated edge on the back side for sawing. With sharpening stone.

Folding saw. These are very useful in cutting firewood, clearing paths and construction.

Paracord. 100 feet at least. Parachute cord or 550 cord as we called it in the army. This is very strong, very light and narrow cord that again, will have more uses than you can imagine.

Signal mirror

Signal panel, such as a VS-17. This is why everything else is muted or camouflaged. You keep this packed away until you actually want to signal someone.

Fishing Line, hooks, sinkers and some lures. These come in handy kits. I have the following, but there are better kits if you're an experienced fisherman.

Snare wire. Indispensable. You'll be amazed how many different uses you'll find for this beyond setting snares. Traps are a much more efficient way to catch game over hunting. Hunting with a gun also leaves a noise signature that might attract unwanted guests.

Sewing kit.

Electrical tape. 1 roll.

Duct tape. 1 roll.

*Candles**. Primarily in a winter environment for light, warmth, fire, glazing snow cave, etc.

*Survival axe**.

*Machete**. If applicable to your environment and zombie threat level.

*Snow shovel**. If applicable to your environment

*Pocket chainsaw**. Light weight, small, but can be very useful in a variety of situations. Such as amputating your own arm if its pinned to a canyon wall by a boulder. Joking. Not.

MISC.

Compass.

Zip ties. An assortment. Very useful. Larger ones can even be used as a tourniquet.

Map of the area. A physical, geographic map. 1:24,000 scale at least.

Waterproof Map case. Make sure there is a way to tie this off to you.

Pen, pencil and paper.

Identification. Driver's license, passport.

Weapons. Will be discussed elsewhere.

Optics. A small pair of binoculars or a small telescope could be very valuable. Some say night vision goggles but now you're crossing the line into the Apocalypse and Zombies. I don't see NVGs being in your G&G bag unless you live in Nome, Alaska where it's dark 24 hours a day and vampires can come and have a buffet as they did in *30 Days of Night*. Then get a set so you can at least see the vampire that kills you.

Cash. ATMs won't work if the power is out. Cash will be an initial barter material. Gold or other precious metals for barter. This will be the initial barter material until it gets real bad when food, first aid and weapons will take priority.

Apps: Load the Apps in Appendix C.

PERSONAL ITEMS

Toilet paper. Baby wipes are preferable.

Toothbrush with paste

Razor and blades

Camping soap

Camping towel (small, dries fast)

Feminine hygiene products as needed

CLOTHING

Pair of workout shoes or broken in boots, in case you have to bug out and don't have time to put on your proper bug out clothing

Extra socks. At least three pair.

Boot bands. Seems trivial, until things start crawling up your legs.

Wool watch cap. Most heat escapes through the head.

Boonie hat. Protection from the sun, absorbs sweat. Either this or the watch cap, depending on environment.

Gloves. For weather as appropriate but also for working. Something that gives you a good grip while also protecting your skin. When I was in the field, I wore thin gloves pretty much all the time. They allowed me to handle my weapon but also protected my hands. These gloves give some protection to your hands but allow almost full use of your fingers, including a touchscreen.

MAIN GRAB-N-GO BAG: WATER	
Check when done	**Item**
	4 full 500ml water bottles
	Water containers
	Lifestraw
	Water filter
	Water purifying tablets
	Waterproof sacks
	Compressible water containers*

MAIN GRAB-N-GO BAG: FIRE	
Check when done	**Item**
	Windproof lighters, 3 each
	Windproof matches with striker
	Magnesium fire starter
	Portable stove and fuel supply

MAIN GRAB-N-GO BAG: FOOD	
Check when done	**Item**
	3 day food supply
	Pot to cook in, utensils, pot holder

MAIN GRAB-N-GO BAG: FIRST AID	
Check when done	**Item**
	Emergency first aid kit
	Medical mask
	Quickclot bandage
	Universal splint, rolled
	Extra medication, one week's worth
	Extra glasses

MAIN GRAB-N-GO BAG: SHELTER	
Check when done	**Item**
	Emergency, lightweight sleeping bag
	Small tent or poncho
	Sleeping pad
	Insect repellant
	Sleeping bag*

MAIN GRAB-N-GO BAG: TOOLS	
Check when done	**Item**
	Leatherman multi-tool
	Portable handcrank emergency radio
	Handcrank flashlight
	Battery powered headlamp
	Chem lights
	Fixed blade survival knife
	Folding saw
	Paracord
	Signal mirror
	Signal panel
	Fishing kit
	Snare wire
	Sewing kit
	Electrical tape
	Duct tape

MAIN GRAB-N-GO BAG: TOOLS OPTIONAL*	
Check when done	**Item**
	Candles
	Survival axe
	Machete
	Snow shovel
	Pocket chainsaw

MAIN GRAB-N-GO BAG: MISC ITEMS	
Check when done	**Item**
	Compass
	Zip ties
	Map of the area
	Waterproof map case
	Pen, paper and pencil
	Identification (license, passport)
	Optics (binoculars or small telescope)
	CASH
	Apps (download from Appendix C)

MAIN GRAB-N-GO BAG: PERSONAL ITEMS	
Check when done	**Item**
	Toilet paper (baby wipes)
	Toothbrush and paste
	Razor and blades
	Camping soap
	Camping towel
	Feminine hygiene as needed

MAIN GRAB-N-GO BAG: CLOTHING	
Check when done	**Item**
	Workout shoes or boots
	Extra socks
	Boot bands
	Wool watch cap
	Boonie hat
	Gloves

As we've discussed, you need a smaller Grab-n-Go bag for your work/school. This can fit inside a regular backpack or bag.

WORK GRAB-N-GO BAG	
	Small first aid kit
	Emergency radio
	Flashlight
	Energy bars
	Emergency poncho
	Bottle of water
	Length of parachute cord
	Extra keys home & car
	Extra medication
	Extra set of glasses
	Boots or workout shoes

We've discussed some things you need in your car.

	CAR GRAB-N-GO BAG
Check when done	**Item**
	Water (recommend a case)
	Trickle charger or Emergency battery charger
	Week worth of non-perishable food
	Blankets
	Tri-fold shovel
	Road flares
	Emergency light with flashers
	Paper road maps
	Pair of comfortable shoes/boots with socks
	Pepper spray, mace, taser
	Tow line
	Jumper cables
	Fire extinguisher
	Spare tire and jack
	First aid kit
	Small backpack
	Glass breaker, seat belt cutter
	Rain jacket, rain pants.

Comments: I recommend an emergency battery charger over a trickle charger since you have to plug the latter in. These are getting very compact and can also recharge your phone, your laptop and other items.

In conclusion:

Lay out everything you want to put in your various G&G bags. Will it all fit? If not, prioritize what doesn't go.

When you pack the bag, pack it backwards: what is least important goes in first. What you might need right away is last in, or in outside pockets.

Can you carry it? Put it on. Go for a walk. A long walk. In your survival boots.

Get the various bags in place: home, car, and work/school.

Take a walk. Cross-country. See how it feels. How it contours to your body.

You now have three Grab-n-Go bags ready!

Specific Environments and Events for Which To Plan

Your Survival Team

For many of us, a 'team' is a no-brainer'. Our family is our survival team. For others, though, this is a decision. Whether to try to make it on their own or join forces with others. There are advantages and disadvantages to a team, which also change depending on whether you have a mild, moderate or extreme emergency. Here are some for you to consider:

Advantages

The whole is greater than the sum of its parts. You can't be an expert on everything. Having an array of people who bring different, needed skills, is important.

Some people just can't handle being alone. Can you?

A sense of purpose. In combat, soldiers fight for each other, not for a cause. Being a member of a team can increase your motivation to get out of yourself and fight for the survival of those who you care about and are with you.

In an extreme emergency, long term survival will eventually depend on team building. In this scenario you often won't have much of a choice who you will ally with. Groups will form with different agendas. You have to evaluate your goals, and also whether you will be an asset to the team. What do you bring to the table?

Disadvantages

You make a larger target. It is indeed better to run away rather than fight. Your running away is limited by your slowest member. The only soldier I had to remove my A-Team couldn't keep up with us in the field, carrying our extremely heavy combat load. You are also more likely to be discovered in an extreme survival situation as part of a team.

You are letting others in on your survival plan. Remember when I mentioned earlier that the lazy survivalist simply lets others prepare, then comes in and plunders?

Will the other members of the team be prepared? If its your family, its your responsibility to get them ready since you're reading this.

Will the members of the team actually pull their weight? To wait until a survival situation to evaluate team-members is foolhardy. Security gets looser, the more people on the team. I call it the trust ripple effect. How many people do you trust? Trust with your life? How many people do they trust? In the move *Contagion*, as soon as the CDC character tells his wife about the outbreak and to get out of town, warning her to 'TELL NO ONE', what does she immediately do? Tell someone. As Ben Franklin said: "Three may keep a secret, if two of them

are dead." In covert operations we tended to be very paranoid, but you're not paranoid if they are out to get you.

Where to find survival team members?

Most likely it will be your family.

Think about last Thanksgiving. Do you really want to huddle in a hide site with those people?

Joking.

Not.

In mild to moderate emergencies, you will want to gather your family and friends as quickly as possible.

Other places to find potential survival buddies:

Your church. Ask the Mormons. They have this down to a science. Actually, a religion.

Hunting and garden clubs. Two extremes here, but each brings something to the table.

Those attending self-defense classes or survival workshops.

From your job. Actually, you should quietly evaluate your co-workers anyway, because the percentage of time you spend at work is the percentage chance an emergency or natural disaster will strike while you are among them.

I'm not a fan of picking strangers to be on your survival team. The level of trust needed, especially in an extreme emergency, is very, very high.

Team Building

The whole can be greater than the sum of the parts. Think what this means for survival. Honesty is the cornerstone of strong teamwork because it builds trust and respect. How many strangers would you trust? How many people that you know would you trust with your life? And remember, the worse the emergency, the more people will lie, cheat and steal, and eventually, kill, placing their survival ahead of yours. There will also be those who won't. There are those who would give you the shirt off their back and those who would steal the shirt off your back.

Let's briefly discuss a team that already exists and is the perfect combination for a survival situation: the Special Forces A-Team. Reviewing the specialties on an A-Team can give you a good idea of the ideal survival team. While bearing in mind that the A-Team is built for war, an extreme situation will involve war-like conditions.

The A-Team

The A-Team is the operational element of Special Forces. It is designed to conduct operations completely on its own, unlike the rest of the army, which has a hierarchy of tactical and strategic operations. In a survival situation, your team must be able to operate on its own, without any external support.

An A-Team consists of twelve people as follows (note the array of essential skills):

Team Leader

A captain who exercises command of the detachment. Your survival team must have a designated leader who can make decisions while under great stress and experiencing uncertainty. This ability to make decisions trumps all other traits.

Team Sergeant

Officially known as the Operations Sergeant and the senior enlisted member of the detachment. He advises the team leader on operations and training matters. He provides tactical and technical guidance and professional support to detachment members.

For your team, while the team leader looks to the outside world, the team sergeant looks to the welfare of the people on the team. Combining two people who can work together, one focusing outward and one focusing inward, and you can have an extremely effective team.

Executive Officer

Officially known as the detachment technician. Serves as second in command and ensures that the detachment commander's decisions and concepts are implemented. He prepares the administrative and logistical portions of area studies, briefbacks and OPLANs.

This is the person who replaces the team leader as needed. Also, if you have to split your team up, the XO commands the second part.

The Assistant Operations and Intelligence Sergeant

Plans, coordinates and directs the detachment's intelligence collections, analysis, production and dissemination. He also assists the Operations Sergeant and replaces him when needed. This is the person who should be most up to speed on the area study and focuses on the current situation and projects out possibilities.

Two Weapons Sergeants

Employ conventional and Unconventional Warfare (UW) tactics as tactical mission leaders. They train detachments members and indigenous personnel in the use of individual small arms, light crew-served weapons and anti-air and anti-armor weapons.

Who are your weapon experts? Both conventional and expedient? Can they train other team members to proficiency if need be? Do you have people experienced in hunting on your team?

Two Engineer Sergeants

Supervise, lead, plan, perform and instruct all aspects of combat engineering and light construction engineering. They construct and employ improvised munitions. They plan and perform sabotage operations.

Who are your handy-men/women? These are the personnel who should be most proficient at survival skills. Also, consider those who are gardeners and know how to grow food. These people are indispensable in an extreme emergency.

Two Medical Sergeants

Provide emergency, routine, and long-term medical care for detachment members and associated allied or indigenous personnel. They establish medical facilities to support detachment operations.

Some of the most valuable people in a survival situation are medical personnel. Recruiting someone with medical training should be a high priority. Think outside the norm here. EMTs, veterinarians, midwives, witches, former military medics, etc.

Two Communications Sergeants

Install, operate, and maintain FM, AM, HF, VHF, UHF and SHF radio communications in voice, CW, and burst radio nets. Who is going to be in charge of your link to the rest of the world? Who will maintain and monitor communications? Who's the geek on the team?

I think you're seeing a pattern here. Find what training, experience, hobbies, etc. people have. Success in survival isn't necessarily equal to success in civilization. The ability to sew during the Andes incident was a life-saver.

Who Do You Want On A Team?

Often this won't be a choice. You're going with your family/loved ones.

However there are those who want to build a team and/or train their family members/loved ones in the necessary skills for a survival team.

Using the A-Team above, let's discuss who you'd want to have on your team and what skills they should have before an emergency. These are also the choices you might have to make while in an or after an extreme emergency/catastrophe.

The first person many think of is someone who is ex-military. I even point out that you'd most likely want a Green Beret as your #1 choice, but remember, those are Special Forces; not your run of the mill military person. The majority of veterans, while they have some basic training, were support personnel, so you have to consider what their MOS- military occupation specialty—was.

Then there is the "prepper". Unfortunately, too many people confuse owning a bunch of guns and stockpiling ammunition and food as 'preparing'. As you can see from this manual, I give little mention to this topic. First, if firing guns comes into play, you are in, or just escalated into, an extreme emergency. The odds of a mild or moderate emergency are much, much higher and need to be prepared for first.

Simply owning guns, doesn't mean a person knows how to use it. Even hunters who use long guns may be great shots, but it's a big difference when we're talking Close Quarters Battle.

The other issue with guns is you can only carry a couple. Unless you're a "shooter", someone whose full time job is training on weapons, you can only be proficient on a couple of guns. It's better to have two you know how to use than 40 sitting in your gun locker.

So who do you want?

The most important attribute is someone who handles crisis well. Who doesn't panic. Unless you've actually seen someone in an emergency, this is a hard quality to ascertain.

Let's focus on skill sets:

Medical

Law enforcement and military

Leadership

Survival

Communications

Engineering

Weapons (both close quarters battle and hunting)
Gardening, farming
Ranching
Electrical

Scavenging. This last one is a skill one rarely thinks of. But as the follow on book, Survive Now, will show, a key phase in survival after a high moderate to extreme emergency is scavenging. Not just scavenging (being able to find things), but also the ability to improvise. A MacGyver type of person, who can make something out of disparate parts. Who can find different uses for things. Interestingly, often woman are better at this than men because men tend to be linear thinkers. For a man the only way to get to B is from A. Women tend to be circular thinkers and they might think the best way to get to B from A, is to go to C and loop back.

Team-Building

To truly bring a team together, a variation of something that we developed in the 2d Battalion, 10th Special Forces Group (Airborne), can be very useful: gut checks.

It would be worthwhile to perform some sort of gut check with those you plan on being on your extreme survival team. There are even civilian "tests" like Tough Mudder that "push" you under difficult circumstances. Remember one thing though: they do not have the added stressor of life or death. That can completely change even the toughest "mudder" into the biggest loser.

The core intent of a gut check, in whatever format you come up with, is to put individuals and teams in crisis. When I consulted with a nursing department at a major university, their form of the gut check was to run a mass casualty simulation for the students. This was a moderate emergency for them, which they practiced regularly.

A person's true nature comes out during a crisis. In the same manner the strengths and weaknesses of a team can quickly be determined.

A key decision that has to be made beforehand is a chain of command. Someone must be the leader. And so on, down to the last person, the minion, because every team needs a minion. Remember that survival leadership requires different traits than normal, civilian leadership. A key trait is the ability to make decisions while in crisis.

A survival group is not a democracy. Often there is no time to sit around and debate options. Decisions have to be made quickly. Hammer out the leadership issue before the emergency.

Priority Levels

The thing to understand about a team in a survival situation is that people change based on where they are on their priority levels. Humans have priority levels which to a large extent are determined by their needs. Dr. Abraham Maslow created a hierarchy of needs for people along with a hierarchy of information. People who were deprived of the lower needs on his hierarchy defended themselves by violent means.

Maslow felt that one need will be pre-potent. A pre-potent need is our primary motivator. It varies from person to person. A heroin addict's pre-potent need will be to satisfy the craving for heroin. All else is secondary. Patton's pre-potent need was to be a general and command troops in combat. What is your pre-potent need?

Maslow's hierarchy of needs:

Physiological/Biological: things that if you are deprived of, you die. Important stuff. Like water, food, oxygen, a constant body temperature. Survival stuff!!!

Security: Safety from danger and disorganization. A place to live. Shelter. More survival stuff.

Social: To escape feelings of loneliness and alienation. We need love, affection, and belongingness. This is the level most people in our society exist at. We desire self-respect and respect from others. This is the break point between avoiding negative and seeking positive. Note that positive feelings need to come from inside us and from outside. This is where team comes in. Do you see how if 1 or 2 become a problem, team might not exist or may fall apart?

Ego/esteem: At this stage, we move beyond ourselves. We become involved in a cause outside of ourselves.

Self-actualization/fulfillment: Life has direction and meaning. At this level, a person can follow a calling.

Maslow's Hierarchy of information is:

Coping: when lost, out of food, sick. Basic help.
Helping: how to be safe.
Enlightening: how to be happier; how to have a better situation.
Empowering: seeking information to help the self.
Edifying: seeking moral or spiritual uplifting. Artistic expression.

The key to Maslow's hierarchy is to understand that teamwork exists on level 3. It can assist on 1 and 2, but if 3 becomes an impediment to the ones before it, trouble ensues.

Of course, what trumps all this for many of you reading this, is family. Your team is your family and no matter what the impediments, you will fight to help them survive. Hopefully, they'll return the favor.

Here are some basics for your team:

Team Communication

It is unlikely you will all be in the same place when a disaster strikes. We are overly reliant on cell phone communication. In a moderate or extreme emergency, it is likely that this service will either be interrupted (lack of power, towers destroyed) or overwhelmed with too many people trying to call at the same time. On 9-11, many people were frustrated in their attempts to use their cell phones.

Also, if there is an extended power outage, even if service isn't interrupted, will you be able to recharge your cell phones? There are hand crank and solar rechargers for cell phones. Actually, under equipment we've discussed all-in-one hand crank flashlight/emergency radio/cell phone chargers and hand crank emergency radios that has the same capability.

Texting has a higher likelihood of getting through than voice, so consider that if you are unable to get a call through during an emergency.

When you consider using a GPS on your cell phone, remember that in many cases, the mapping information is being downloaded from your net if you haven't already downloaded it into the memory. Thus if your service is interrupted, your cell phone GPS can tell you where you are, but it might not display the map. Understand that the GPS on your cell is also a way

you can be tracked by people who have access to the technology. Most people don't understand that they are basically carrying a tracking device with them all the time (their cell phone). It's also a listening device.

There are other options.

GMRS and FRS radios work well for short distances, but their range is limited. If you are interested in learning about radio waves, etc. go to another source. Suffice it to say, that any system you use, make sure you test it. A problem with these systems is they require power to work. These usually work line of sight. So while the manufacturer might state they work 30-40 miles, the reality is, in uneven terrain, their effectiveness will be more limited. If purchasing these types of radios, get ones that run on 12 volt DC or rechargeable battery packs. It helps if they can also run on conventional batteries as you should have a supply of those on hand.

CB radios are also an option, with greater range. Again, power consumption is a problem. Also, no matter what system you use, remember that anyone can be listening in on your frequency or channel. If you don't live near water that people boat on, a sneaky way to communicate can be to get VDC marine radios. The bottom line, however, is assume any transmission you make is being listened to by others in an extreme emergency. So don't be broadcasting to a team member "oh my gosh, we have so much food here, we don't know what to do with it. Hurry up and join us for the feast tonight." You might end up with too many dinner guests.

In Special Forces we encrypted all our transmissions. The easiest way for your team is to have a short list of code words that mean various things.

Basic Code Word List	
Home	
IRP	
ERP	
I've been compromised and am sending this under duress	
A code name for every team member	
A code word for every day of the week	
Whatever key words you believe you need	

The key is if your code word for your ERP is Orange, if you say "let's meet at Orange" no one else will know where you're talking about. If you say "Orange is compromised", the same thing. Your team mates know not to go to the ERP.

A system for days of the week and how many weeks hence. This allows you to coordinate a link up. If you sit for a few minutes and talk it out with team members, you will quickly realize there is a bunch of information you would want to transmit back and forth without someone understanding exactly what you're saying. Make up your lists accordingly.

Not only do code words make your communication more secure, they can also shorten your transmission time, which is always a plus as it saves power.

Pick two times a day to make communication. Much like Will Smith in *I Am Legend*, pick a certain time when members on your team will know your system is on. This allows you to save battery life. It also allows you to focus on other things, rather than hanging around the cell phone or radio all day.

In Special Forces we had two communications sergeants on each A-Team, an indication of how valuable we viewed this skill. While we are now overly reliant on satellite

communications, these men are trained on other types of radios, including high frequency. A local Ham radio operator would be a good person to get to know. They might end up being the only one getting information from the "outside" world. There is something that can seriously disrupt communications. Electromagnetic Pulse, better known as EMP, is a high-intensity burst of electromagnetic particles. I discuss this further on, under Solar Flare.

Other Team Considerations

Here are other team considerations:

Your primary team shelter will be a home. Pick the one that is most amendable to the survival requirements as laid out in this book.

You should have an emergency rally point, ERP. This is where everyone will link up once the aliens blow up the White House, the Empire State Building and the local Home Depot. Seriously, the ERP is important. This is where you team gathers when things have hit the fan. The key to this ERP is it must be located in a hidden and relatively secure location. You must be able to put surveillance on this spot, so that if a team member is coerced into leading someone to this spot, you can see them, before they see you.

Normally in covert operations when making a personal meeting, you would have a safe signal. However, in a survival situation, you don't know who the first person arriving at the ERP will be. What you need is a danger signal. A signal that someone who is coerced to give up the location and leads the bad guys to it, will either emplace or remove so that others coming to the site will see in place, or not in place, whichever is decided upon, and know it's not safe to approach.

Practice meeting up at your IRP and ERP at least once.

Organizing Your Neighborhood/Work Place

This is particularly key in moderate emergencies. During natural disasters such as hurricane, flood, extreme weather, wild fire, etc. an organized neighborhood can be essential to survival. When I say neighborhood, I also mean your work place. On Nine-Eleven, offices in the World Trade Center that were well organized and had emergency evacuation plans with designated personnel acting in key positions had much higher survival rates. Does your place of business have an emergency plan? Is it practiced? Remember in school when you had fire drills? Does your place of business have the same?

One thing to ask yourself is what are the boundaries of a neighborhood? Realistically, you're looking at around fifteen to twenty households. Larger than that and it can become unwieldy.

Your neighborhood might already have such a team. If so, join it and find out how well organized and prepared they are. If not, then take it on yourself to start one. Usually your larger community will have resources to help you do this. Check emergency services and the Red Cross.

Check out the resources in your neighborhood. Do you know who your neighbors are and what they do for a living? What special skills they have? That person you think is a nurse going off to work in her scrubs might actually be someone who works at a kennel washing dogs. Don't make assumptions.

Inventory equipment in the neighborhood:

Chain saws

Winches
Four wheel drive vehicles
CB and other radios
Water purifying systems

Inventory the neighborhood:

Where are all the natural gas meters and propane tanks?

Who needs special help? Focus on the handicapped, the elderly, and children who might be home alone at periods of the day.

Each household should have large placards made up with OKAY on one side and HELP on the other. Use fluorescent colored poster board available at your local supermarket. Have this stored near a front window under a rug. Display as needed.

Determine where the neighborhood gathering site will be. People should go here before trying to run around and rescue others. Organization saves time and lives.

Have a contact list tree of who alerts who. In the military we always had alert systems. This is a way of communicating so each person knows who they are responsible for contacting.

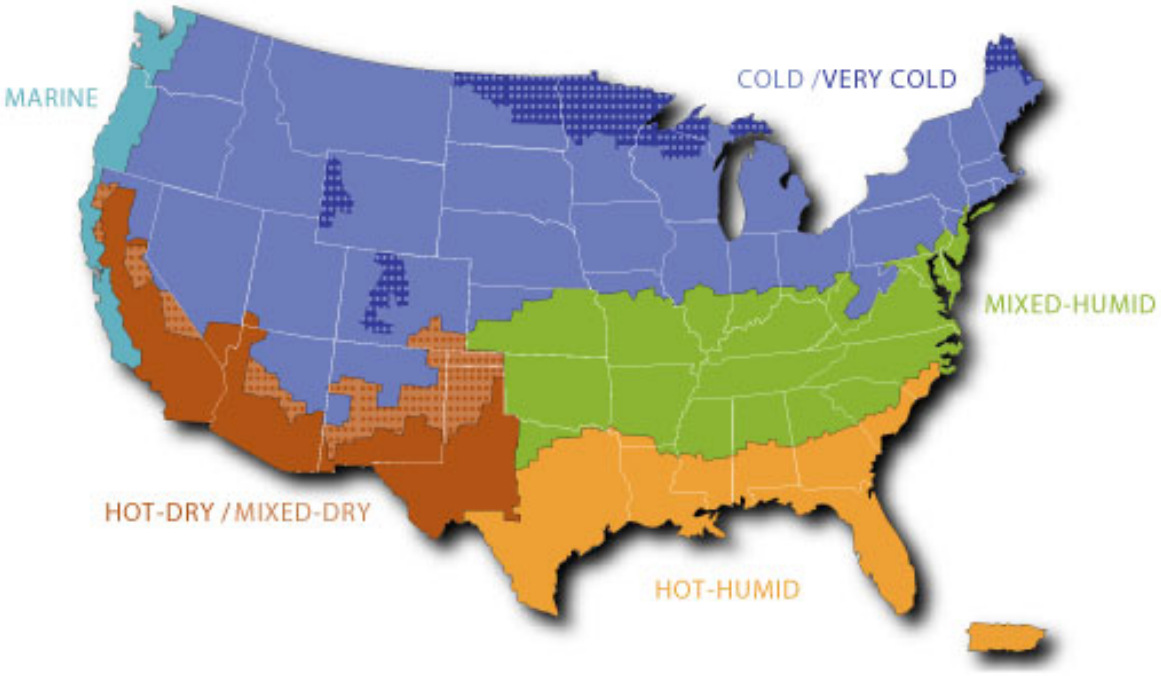
Odds of Experiencing Various Emergencies in Your Lifetime	
Car accident	Once every 18 years
Flat tire	Once every 5 years
Car broken into or stolen	Two-thirds chance
Having a heart attack at home	88%
Being assaulted	1.6%
Being assaulted with use of weapon	.36%
House burglary	2.6%

Odds of Natural Disasters	
Injured in tornado (if live in likely area)	.22%
Probably 6.7 quake or higher in San Francisco Area in next 30 years	63%
Percentage of homes in high to high risk zones	*55%*

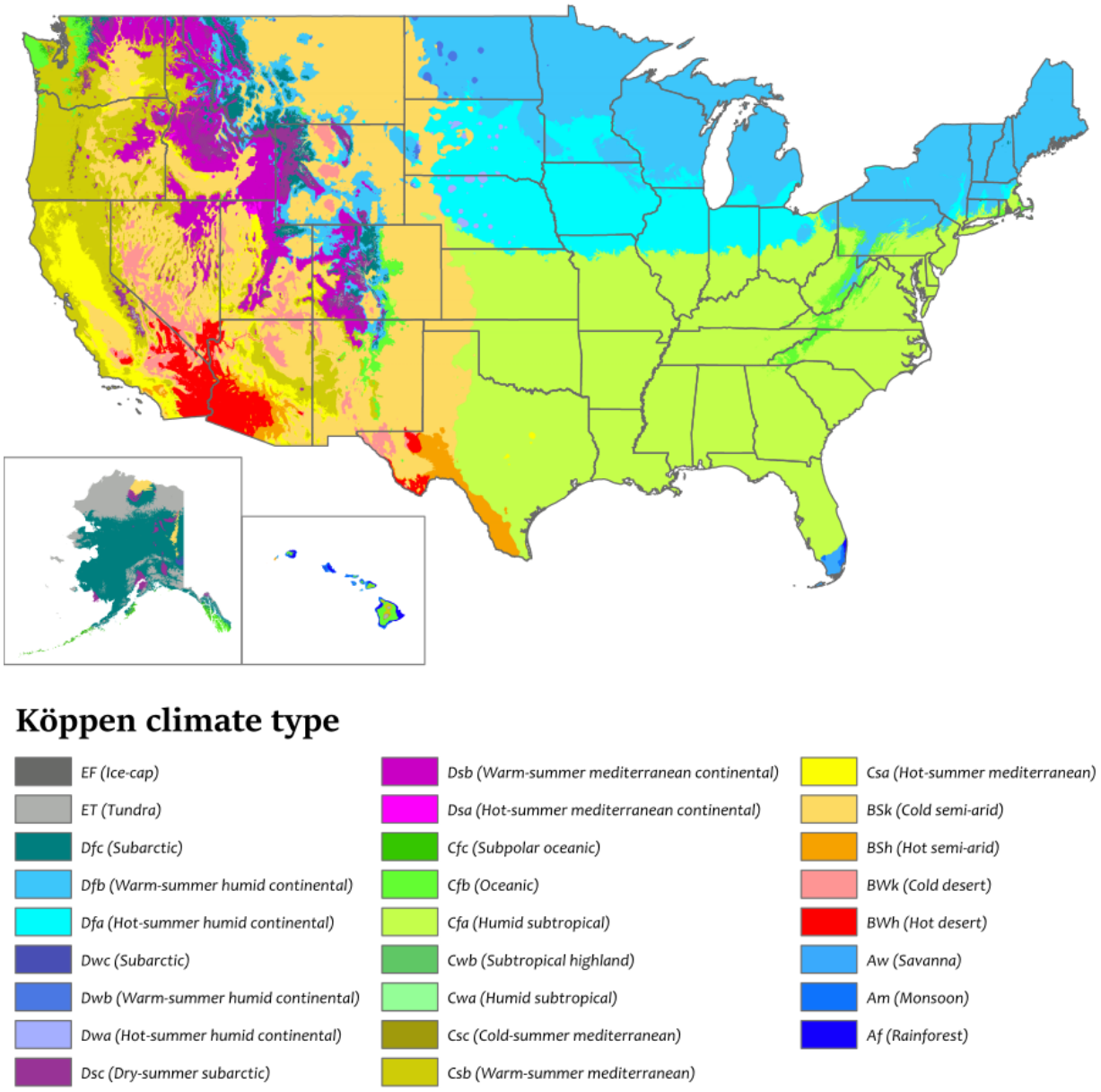
Since you've done your Area Study, you have a good idea of what you are facing in your area of operations.

Depending on where you live or travel, you must make special arrangements for extremes in terrain and weather. I'm going to briefly cover key points in preparing for four special environments: cold weather, desert, tropical and water survival.

Here are some maps to give you an idea in the United States for the various environments, but remember this is also affected by seasons:



While you understand your immediate environment based on experience and your Area Study, an understanding of the entire country is useful.



The climate of the United States varies due to differences in latitude, and a range of geographic features, including mountains and deserts. West of the 100th meridian, roughly a line along the border of Kansas and Colorado and going up and down, much of the US is semi-arid to arid. This includes desert in the Southwest. East of that line, the climate is humid continental in the north, humid temperate in the central and mid-Atlantic and humid

subtropical in the Gulf and southern Atlantic areas. The southern tip of Florida is tropical. In higher elevations in the western mountains the climate is alpine.

Alaska is largely subarctic. Hawaii is tropical.

Let's cover some key points about four extreme environments

Cold Weather

I commanded an A-Team in the 10th Special Forces Group (Airborne). 10th Group had the distinction of being the 'cold weather' Group, since it was oriented toward high altitude environments. We often sent teams to Finland, Norway, Denmark and other cold regions for training. An annual event was Winter Warfare Training, where each battalion deployed for almost two months. We learned to ski, then survive and operate in high altitude and cold weather. My first winter warfare was an eye-opening experience for me. There were many tricks of the trade learned, but several key lessons:

1) Everything takes at least twice as long to achieve in cold weather.

2) Fire is eventually an essential. Whether for melting snow and ice into water, cooking meals, drying out clothing and gear, or just warming people up.

3) Moving on snow with equipment is extraordinarily hard.

4) Cold weather affects equipment in different ways. One key to remember is that any exposed water container will freeze. We quickly learned to keep our water source inside our clothing, allowing our body to keep it from freezing. The same with thawing out our next meal. On the positive side batteries keep their charge longer in the cold; in the bad side, they expend power faster when used.

The key, like everything else, is to be properly prepared at all times. Not just at home, but especially when traveling in your car. Also, at work.

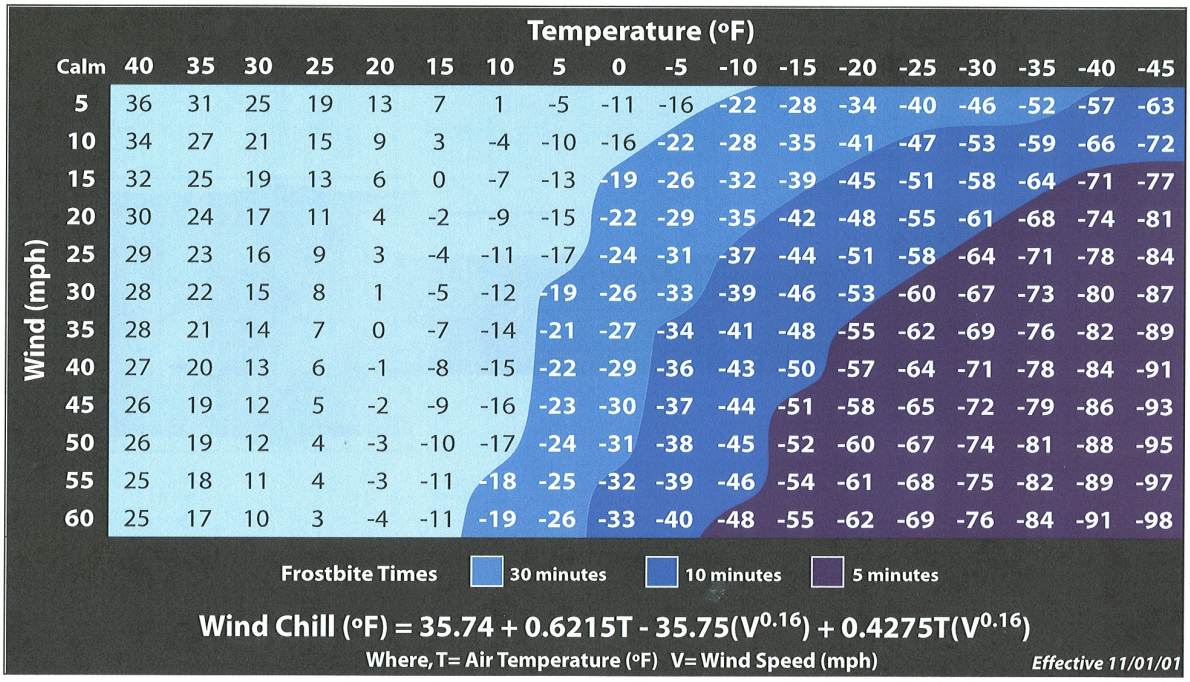
There are two types of cold weather environments: wet or dry. New England, for example, is wet cold. The Rocky Mountains are dry cold. We took more cold weather casualties when we trained in the Adirondacks at low elevation than when we trained in Utah at high altitude based on the difference between wet cold and dry cold.

When we conducted a security test of the Alaskan pipeline in November, we ran into wet cold conditions. I ended up having to medevac one of my weapons sergeants because he'd been a previous cold weather casualty and walking through the Alaskan tundra (frozen at night, thawing in the day) took him down. This is something else to consider with team members: who has had previous cold or hot weather injuries.

Wind chill is the effect of moving air on exposed flesh. Wind always exacerbates the situation, which is why your outer garment should not only be water resistant, but wind resistant. A key in building shelter is to get out of the wind. Wind multiplies the effect of low temperatures.

Here is a handy chart showing the effect of wind chill.

Wind Chill Chart



Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes; 10 minutes; 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Remember, even when there is no wind, you will create the equivalent wind by skiing, running, being towed on skis behind a vehicle, working around aircraft that produce wind blasts. One of my coldest experiences where I almost suffered instant frostbite was loading an injured soldier on board a Blackhawk helicopter at altitude in a cold environment. I made the mistake of briefly taking my gloves off and almost paid for it.

Which proves that clothing is critical in cold weather environments. You must not only have enough clothing to protect you from the cold, you must also know how to maximize the warmth you get from it.

Always keep your head covered. You lose 40 to 45 percent of body heat from an unprotected head and even more from the unprotected neck, wrist, and ankles. These areas of the body are good radiators of heat and have very little insulating fat. The brain is very susceptible to cold and can stand the least amount of cooling. Because there is much blood circulation in the head, most of which is on the surface, you can lose heat quickly if you do not cover your head. This is also why scalp wounds tend to bleed profusely.

There are four basic principles to follow to keep warm. An easy way to remember these basic principles is to use the word COLD—

C keep clothing *Clean.*
O avoid *Overheating. (once more: sweating is very dangerous in the cold)*
L wear clothes *Loose* and in *Layers.*
D keep clothing *Dry.*

C Keep clothing clean. This principle is always important for sanitation and comfort. In winter, it is also important from the standpoint of warmth. Clothes matted with dirt and grease lose much of their insulation value. Heat can escape more easily from the body through the clothing's crushed or filled up air pockets.

O Avoid overheating. When you get too hot, you sweat and your clothing absorbs the moisture. This affects your warmth in two ways: dampness decreases the insulation quality of clothing, and as sweat evaporates, your body cools. Adjust your clothing so that you do not sweat. Do this by partially opening your parka or jacket, by removing an inner layer of clothing, by removing heavy outer mittens, or by throwing back your parka hood or changing to lighter headgear. The head and hands act as efficient heat dissipaters when overheated.

L Wear your clothing loose and in layers. Wearing tight clothing and footgear restricts blood circulation and invites cold injury. It also decreases the volume of air trapped between the layers, reducing its insulating value. Several layers of lightweight clothing are better than one equally thick layer of clothing, because the layers have dead-air space between them. The dead-air space provides extra insulation. Also, layers of clothing allow you to take off or add clothing layers to prevent excessive sweating or to increase warmth.

D Keep clothing dry. In cold temperatures, your inner layers of clothing can become wet from sweat and your outer layer, if not water repellent, can become wet from snow and frost melted by body heat. Wear water repellent outer clothing, if available. It will shed most of the water collected from melting snow and frost. Before entering a heated shelter, brush off the snow and frost. Despite the precautions you take, there will be times when you cannot keep from getting wet. At such times, drying your clothing may become a major problem. On the march, hang your damp mittens and socks on your rucksack. Sometimes in freezing temperatures, the wind and sun will dry this clothing. You can also place damp socks or mittens, unfolded, near your body so that your body heat can dry them. In a campsite, hang damp clothing inside the shelter near the top, using drying lines or improvised racks. You may even be able to dry each item by holding it before an open fire. Dry leather items slowly. If no other means are available for drying your boots, put them between your sleeping bag shell and liner. Your body heat will help to dry the leather.

I remember near the end of one Winter Warfare exercise, we were so acclimated, that on a sunny day where it warmed up to around 30, we were lying on top of eight feet of snow on our ponchos catching rays in our t-shirts and fatigue pants. You do become acclimated to your environment, much more than most people believe.

A heavy, down-lined sleeping bag is a valuable piece of survival gear in cold weather. Ensure the down remains dry. If wet, it loses a lot of its insulation value. If you do not have a sleeping bag, you can make one out of parachute cloth or similar material and natural dry material, such as leaves, pine needles, or moss. Place the dry material between two layers of the material.

Cold Injuries

The best way to deal with injuries and sicknesses is to take measures to prevent them from happening in the first place. Treat any injury or sickness that occurs as soon as possible to prevent it from worsening.

The knowledge of signs and symptoms and the use of the buddy system are critical in maintaining health. Following are cold injuries that can occur.

Hypothermia

Hypothermia is the lowering of the body temperature at a rate faster than the body can produce heat. Causes of hypothermia may be general exposure or the sudden wetting of the body by falling into a lake or spraying with fuel or other liquids.

The initial symptom is shivering. This shivering may progress to the point that it is uncontrollable and interferes with an individual's ability to care for himself. This begins when the body's core (rectal) temperature falls to about 96 degrees. When the core temperature reaches 95 to 90 degrees F, sluggish thinking, irrational reasoning, and a false feeling of warmth may occur. Core temperatures 90 to 86 degrees F and below result in muscle rigidity, unconsciousness, and barely detectable signs of life. If the victim's core temperature falls below 25 degrees C (77 degrees F), death is almost certain.

Treatment for this and other cold weather injuries are in Survive Now-Thrive Later. Our goal in this book is to have the correct gear and knowledge so that they don't occur.

Frostbite

This injury is the result of frozen tissues. Light frostbite involves only the skin that takes on a dull whitish pallor. Deep frostbite extends to a depth below the skin. The tissues become solid and immovable. Your feet, hands, and exposed facial areas are particularly vulnerable to frostbite.

The best frostbite prevention, when you are with others, is to use the buddy system. Check your buddy's face often and make sure that he checks yours. If you are alone, periodically cover your nose and lower part of your face with your mittened hand.

The following pointers will aid you in keeping warm and preventing frostbite when it is extremely cold or when you have less than adequate clothing:

Face. Maintain circulation by twitching and wrinkling the skin on your face making faces. Warm with your hands.

Ears. Wiggle and move your ears. Warm with your hands.

Hands. Move your hands inside your gloves. Warm by placing your hands close to your body.

Feet. Move your feet and wiggle your toes inside your boots.

A loss of feeling in your hands and feet is a sign of frostbite. If you have lost feeling for only a short time, the frostbite is probably light. Otherwise, assume the frostbite is deep.

Dehydration

When bundled up in many layers of clothing during cold weather, you may be unaware that you are losing body moisture. Your heavy clothing absorbs the moisture that normally evaporates in the air. You must drink water to replace this loss of fluid. Your need for water is as great in a cold environment as it is in a warm environment even though you don't feel as thirsty. In fact, we often don't want to drink water when we're cold.

One way to tell if you are becoming dehydrated is to check the color of your urine on snow. If your urine makes the snow dark yellow, you are becoming dehydrated and you need to replace body fluids. If it makes the snow light yellow to no color, your body fluids have a more normal balance. You can also smell the sharp odor of the urine when someone is dehydrated. It's very hard to make people drink water in a cold environment, which makes dehydration a particular danger. A team leader must keep track to make sure every person stays hydrated.

Desert

Watch Lawrence of Arabia five times in a row. Are you ready for the desert? A large swatch of our country is either desert or high desert. There was a reason the early wagon trains going west dreaded crossing the desert as much as they did getting through the mountains.

Low rainfall is the most obvious environmental factor in an arid area. A desert is general classified as an area that received less than ten inches of rain in a year. For example, Phoenix receives slightly over eight inches a year on average.

Intense sunlight and heat are present in all arid areas. Air temperature can go well over 100 degrees F every day. The highest recorded temperature in the United States was 134 F in Death Valley. Heat comes from more than direct sunlight. Hot wind, reflective heat (sun bouncing off the sand/ground/rocks) and conductive heat when you make direct contact with the ground.

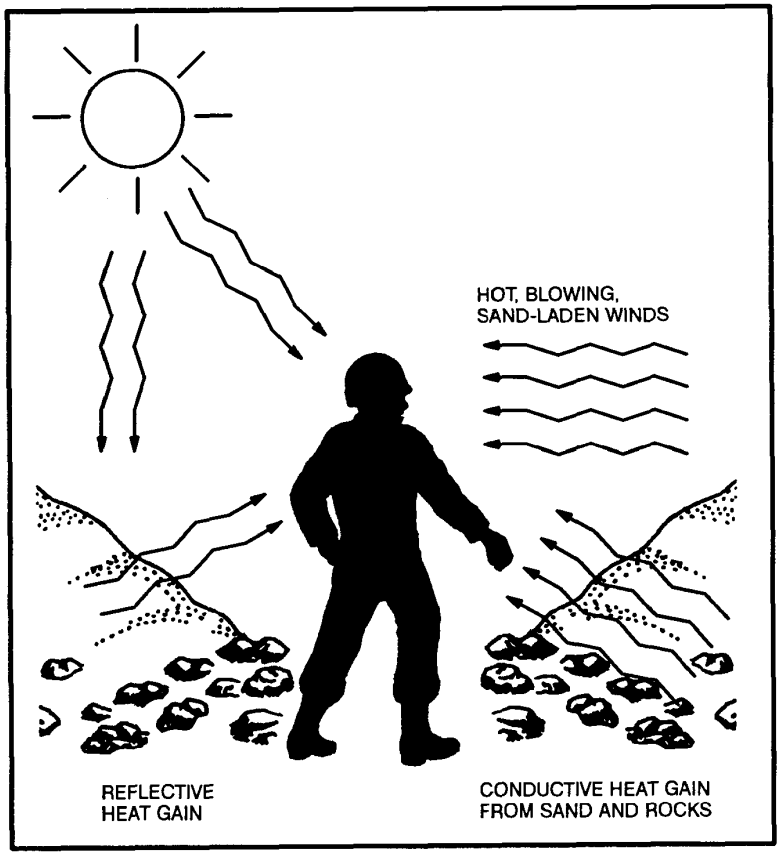


Figure 13-1. Types of heat gain.

The ground is going to be much hotter than the air. For example, if the air is 110 F, the ground could easily be 140 F.

Naturally, your requirements for water will be much higher in a desert environment. Shelter is also as critical in this environment as in a cold weather environment. If you have to move, travel at night to avoid the sun. Equipment behaves differently under extreme temperatures. High temperatures affect batteries adversely and they will not last as long as usual.

Wide Temperature Range: Temperatures will vary widely in desert areas, particularly high desert. During the day it can be well over 100 F and at night quickly drop to below 50 F. This means you have to be prepared for both extremes, especially with clothing.

Sparse Vegetation: There is little vegetation in a desert area. This means you'll have a tougher time making an expedient shelter. Sometimes the best shelter you can find during the day is in the shadows. The temperature in a shaded area is significantly less than in the open. Also, reflective and conductive heat will be much less.

Another problem in the desert is estimating distance. On average, we underestimate distance by a factor of three. What looks like a mile away, is actually three miles away.

Water requirements: Your body sheds heat by sweating. The hotter you are, the more you sweat. While in a cold weather environment you can modulate this by shedding layers of clothing, in a desert you don't have this option. What you can do is conserve your sweat as much as possible. Wear clothing that covers you. This not only protects you from the sun, and the wind heat, but it absorbs your sweat and keeps it next to your body as long as possible rather than getting immediately evaporated.

Limit eating as much as possible. Food requires water for digestion, so you are walking a fine line. Remember that water is more vital than food.

You cannot trust your sense of thirst to determine your water requirement. It's been found that a person who relies on thirst drinks only two-thirds of what they actually require.

Levels of water rationing and dealing with heat injuries is covered in the companion book.

Tropical

A tropical region has high temperatures, heavy rainfall, and high humidity. Tropics cover about seven percent of the world's land surface but contain over fifty percent of the species. Temperatures rarely fall before freezing, unless one is at altitude.

Since the tropics are near the equator, day and night are usually of roughly equal length. Night tends to come quickly, as does dawn.

On the plus side, the tropical environment provides plenty of raw material for shelter, food and water is plentiful. On the negative side, germs and parasites multiply at an alarming rate.

Information on how to survive in a tropical environment is in the companion book. For preparation, adjust your home and Grab-n-Go bags for this environment.

WATER

When we think of water survival, our minds turn to the ocean. However, the worst maritime disaster in United States history, with more loss of life than the *Titanic*, occurred on the Mississippi River when the *Sultana* exploded, caught on fire, and sank.

Even in a desert environment, water can cause an emergency in terms of flash floods which will be covered shortly.

Water covers seventy-five percent of the earth's surface. Seventy percent of that is oceans and seas. When I lived on Whidbey Island, I was on a ferry several times a week. Even though it was a short ride, it still had the possibility of an emergency occurring.

The first priority to prepare for a water emergency is to know how to swim. Sounds basic, but many people don't know how to swim. It's never too late to take a course in basic survival swimming.

The following are the best swimming strokes during a survival situation:

Dog paddle. This stroke is excellent when clothed or wearing a life jacket. Although slow in speed, it requires very little energy.

Breaststroke. Use this stroke to swim underwater, through oil or debris, or in rough seas. It is probably the best stroke for long-range swimming: it allows you to conserve your energy and maintain a reasonable speed.

Sidestroke. It is a good relief stroke because you use only one arm to maintain momentum and buoyancy.

Backstroke. This stroke is also an excellent relief stroke. It relieves the muscles that you use for other strokes. Use it if an underwater explosion is likely.

If stranded on the open ocean, you face numerous hazards. Waves, wind, extreme heat or cold, the sun, are just a few. Shelter depends on how you're stranded. Shelter, water and food are the priorities.

Any time you are on board a ship or boat make sure you know where the survival gear is. Where are the lifeboats? The life preservers? What supplies are in the lifeboats? How many does each carry? Make sure you know your route to your evacuation point.

If you are in an aircraft and survive a water landing, get clear of the aircraft as quickly as possible and in an upwind direction. Stay clear of fuel-covered water. Try to find other survivors.

When you get that briefing about a water landing at the start of a flight, one thing they sometimes mention but is often not noted is that you do not inflate your life vest until you are outside of the aircraft. If you inflate inside and the aircraft begins to flood, you could be trapped inside by the buoyancy.

Your best protection against the effects of cold water is to get out of the water as quickly as possible, whether it be a life raft or a piece of wreckage. Stay dry, and insulate your body from the cold surface of the bottom of the raft. If in the water keep your head and neck out of the water. Wearing life preservers increases the predicted survival time as body position in the water increases the chance of survival.

Specific Man-Made Events— Transportation

Car

We covered what to have in your car, but here are specific situations where you should know what to do before they occur.

Tornados. Should you stay in the car? Stop the car and get under a bridge? What's your answer? Probably wrong. The best option is to not be driving in bad weather. If you can see a tornado, drive away from it as quickly and safely as possible. Move at right angles to the tornado. If you can, stop and seek shelter in a building or underground, such as a culvert. If you get caught while in the car, do NOT get out of the car. It's not entirely safe, but it's better than the options. Pull off the road, out of traffic, because that other idiot is still going to be barreling

down the road at 70 miles an hour even though he can't see. Make sure you have your set belt on. Put your head down to avoid broken glass and hurled objects. Cover your head with a blanket or jacket. Do NOT seek shelter under overpasses. Tornados can move at sixty miles an hour, so think hard before trying to out-run one. To get an idea of the path of the storm, pick a stationary object near you and watch how the tornado moves in relation to that object. If it is moving to your left, drive to the right and vice versa. If it doesn't seem to be moving left or right, then it's either coming right at you or away from you. If it's getting bigger, guess which of the two? Get out of the car and seek safety in a building or culvert if you have the time.

Fire: 33 cars catch on fire every hour and 18% of all fires occur on roads. So it's not as rare as you think. On average, one person a day dies in a car fire. Prevention is best. Keep your car maintained. Many fires occur because of leaking seals where oil or gas come in contact with hot metal.

If you smell burning rubber or plastic or any smoke, immediately pull over to a safe place and check it out. If a fuse continues to go out, that's a sign of a short. Don't ignore it. Get the car checked out. You must carry a fire extinguisher in your vehicle, if the fire is fueled by your gas line, forget about using it and get a safe distance away. At least 150 feet. Warn others in the area and keep them away while calling 911.

If you are locked in your trunk, either through a car-jacking or your friends played a really mean joke on you, do you know how to get out? And get new friends? If the trunk has a release lever, use it. Do you know if yours has one? Where it is? All cars since 2002 should have one. Be calm. Trunks are not airtight. Don't hyper-ventilate. The greater danger is heat or cold, depending on your environment. See what tools you have handy. Trunks are, well, trunks. People put a lot of stuff in them. If the spare is in there, it's likely the tire iron is too. That's an excellent tool and weapon. Escape through the back seat. Some are fold down, which makes it easy. Others don't, but it's easier to tear through material than metal. Use the tire iron to punch through. If none of that works, and you've been car-napped, disconnect the brake and tail lights. You might even be able to reach through and break out the lights. The lack of these lights might lead to someone calling the car in and/or the police pulling you over. Use the tire iron to pry open the trunk itself or at least make an opening to signal for help. If the car is speeding down the highway at 70 miles an hour, that is not the moment to jump from the trunk. Every vehicle must eventually stop for re-fueling.

Keep at least a half-gallon of water and power bars within reach of the drivers seat. Most cars have storage behind the passenger seat. That's a good place to put that.

Even though you have four-wheel drive, that doesn't mean the vehicle stops any faster. Physics rules. Mass times velocity. In Colorado, I was always amazed to see people flying by in their four-wheel drive vehicles, apparently thinking the traction would remain the same if they had to swerve or suddenly brake.

When you start seeing cars that have slid off the road, that's a sign. Black ice is a great danger. You can't see it. The largest warning sign you will get of it is other cars off the road. Slow down.

If you skid, turn into the skid to straighten out.

People have a panic response to not being able to the drive their car. During any moderate to extreme emergency you will quickly see long line of people with gas cans, desperate to get gas. Wouldn't it be so much easier to have that fuel already stored? I keep at least 20 gallons of gas, in 5 gallon containers, at my home. I use StaBil in it and rotate on a set schedule.

Consider what range your emergency supply can take you?

When I take trips longer than a day, I take spare gas with me.

Never, ever, use gas to start a fire. A neighbor on Hilton Head died trying to start a fire on the beach using gas. It's faster than you are.

Plane Crash

Why not start with the spectacular? My wife hates flying. Hasn't flown in years. I don't blame her. I'm not a big fan. My ex-wife was a helicopter pilot who flew for both the Army and the FBI. She was also a maintenance test pilot, so I learned a lot watching her train and work. My wife and I are big fans of *Seconds From Disaster*, an hour-long show on National Geographic. Each episode is devoted entirely to examining the causes of various disasters.

First, let's stay in reality. The odds of dying in a car crash are 1 in 98 for a lifetime. In a plane crash: 1 in 7,178. Some of that is because you spend more time in a car than in a plane (unless you work as a pilot). Still, flying is much safer than driving.

Nevertheless, let's cover safety issues with planes.

Where to sit? Statistics from crashes indicate it's safest to sit in the rear of the plane. Yes, I know it takes longer to get on and off, but that's what the numbers show. Despite that, I prefer to be near an exit. I'll take the exit row every time, and not just for the extra room.

What to wear? There is a reason military flight crews wear a specific outfit. It's because the greatest danger is flame. Wear long pants, a long sleeve shirt, and shoes you can move quickly in: ie, don't be doing the Hawaiian shirt, shorts and sandals.

Keep your seat belt fastened at all times. Flight attendants will tell you horror stories of abrupt, unexpected turbulence that bounced them off the ceiling of the plane.

Brace for impact. Feet flat on floor, head tucked in.

If the oxygen masks drop, do put yours on before helping others.

What is the safest airline to fly? Because crashes are so few, statistics don't help you here. For me, the key element is the pilot, not the plane or airline. I prefer military trained pilots.

What is the most important thing to know? Where the closest exit is. Yes, turn and look behind you. Orient yourself to the plane. They put that safety lighting along the aisles in after learning that in the smoke and confusion of a crash, people quickly became disoriented.

And died.

What about other passengers? Before 9-11, a pilot friend told me his largest safety concern was not the plane, the weather, etc, it was the passengers. He was right. There is a person who did not get on one of the fatal planes that day because she just didn't feel right about the people she saw boarding.

What is your safety role? Pay attention. Realize pilots can't see the plane behind them. In the case of British Midland Flight 092, this was key. The pilots had smoke in the cockpit. In the rear of the plane, passengers saw smoke and flame coming out of one engine. However, the pilots believed the smoke was coming from the other engine (air conditioning units on an upgraded model had been switched from one engine to another). So they shut down the wrong engine. By the time they realized their mistake, it was too late. When passengers saw the wrong engine shut down, they should have notified the flight crew. Never assume the experts know what they're doing!

Listen to the safety briefing. Yes, I know you've heard it a million times. But it's called a safety briefing for a reason. It will also give you an idea of the level of safety-consciousness of the crew.

When evacuating the plane, get away from it. At least five hundred feet upwind of the plane. Burning fuel is the most dangerous element after a crash.

Yes, when evacuating, leave it all behind. That computer is not worth your life or the lives of others.

You laugh every time they show how to buckle and unbuckle your seat belt. Wait until you have to do it in the midst of flame and smoke. Some people will forget. Also, if you are helping someone else, you need to know how to do it.

Remove sharp objects from your body before crashing. Yes, I know the TSA has already done most of that, but that pen in your breast pocket could be your own vampire stake.

If you can, get a piece of cloth (sleeve, bandana, whatever) and wet it before the crash. Put this over your mouth as you get out.

If you have to put on your life vest (yes, you're screwed), DO NOT inflate it until you are out of the plane. Inflating it inside and then having a water landing, simply traps you inside the plane as the water pouring in will pin you against whatever part of the plane is right side up.

If your plane crashes in a remote area, should you stay with the plane or not? Stay. Most planes have a transponder. And it's easier to find a crash site than you wandering in the wilderness.

Helicopter Crash

Pretty much similar to plane, except a helicopter can land safely if the engine(s) quit. There is a thing called auto-rotate where the blades maintain some lift as the chopper goes down.

The most dangerous part of a helicopter crash are the blades. The best safety briefing I received from a pilot was simple: if you see me running from the bird after a crash, you run.

Train Crash

Once more, if you see a problem, contact the crew immediately. Don't assume they know about it.

Train stations are tempting sites for terrorist attacks because they concentrate people in a closed facility (if underground). Stay away from the most crowded section. Don't stand near the edge of the platform. Make sure you know where the exits are. Not only the doors, but most trains have roof emergency exits and windows that also work that way.

Understand whether the track is electrified or not. The simple rule is if there is a third rail, it's the one with the juice in it. Don't go near it unless you've just hijacked *Pelham 123* and are about to get caught and don't want to go to the slammer for life.

Ride toward the rear of the train. Most collisions are head on. The further back you are, the better. Remember, though, that a collision will mean you're thrown forward. Since trains don't have safety belts, check what is in front of you. Do you want to hit that?

If you survive the crash, get away from the crash site, but get in contact with emergency services. If in a tunnel, most have emergency walkways. Do not walk on the tracks. Not only because of the possibility of electrocution, but another train might be coming.

While it was cool in *Stand By Me*, don't cross trestles.

Do you have train tracks near your house? Be especially aware if they are on a downhill run with a curve. Prime area for a train to run off the tracks. Hopefully your house isn't in the path, but also be aware that toxic cargo is often carried by rail. If ordered to evacuate because of a train accident/derailment, do so.

Ferry, Cruise Ship, etc.

Taking the ferry back and forth from Whidbey Island made me think about and research this topic. Also, I commanded a Maritime Operations Special Forces Team, so we spent a lot of time in the water. I also graduated the Royal Danish Navy's Fromankorpset Combat Swim School.

Those experiences taught me that I like hot tubs and otherwise not getting wet.

Don't take a cruise. Joking (not), but they said the *Titanic* was unsinkable. But if you do decide to take a cruise, pay attention to the safety briefings. Even before that, book on a line that has a good safety record. Consider the make-up of the crew. Ever notice how in most cruise ship disasters the crews are the first one off? And most don't speak your language?

Know where the closest flotation devices are. Know how to put them on.

Know where the closest life rafts are. How do they get from ship to water?

Do you know what the evacuation signal is via the ship's horn? Seven short blasts followed by one long, followed by get the heck off the boat.

If you have the time, layer your clothing before putting on your life vest. This will help keep you warm. Most of the Titanic deaths occurred from freezing in the water. If you are in cold water, keep moving. It will keep you warm. Don't just sit there in your vest. Kick your legs, splash your arms.

If you have to jump into very cold water, expect to be shocked. Literally. Cold shock can cause you to involuntarily take a deep breath, and if you're underwater, fill your lungs with water. Keep your mouth shut until you surface. Then yell "FRAK!"

Know where you are on the ship. Take the time to walk the path from your cabin to the deck several times. Consider what it will be like making that trip in the dark and in smoke. Count the number of turns and which direction so you can do it blindfolded. Take the quickest route, not the shortest. Do not take an elevator. Have a route to both sides of the ship in case it starts to list.

Most ship sinkings, like plane crashes, will bring rescuers quickly.

Tall Building

Ever heard of base jumping? There were times going out of the back of an MC-130 Combat Talon, where I know we were jumping below 500 feet. Do you work or live in a tall building? Do you have a way to get out if an entire floor below you is impassable?

A parachute might be one way. If you have one. And if you can get through a window. Often, in skyscrapers, these are made of practically unbreakable material.

Most people think of the roof. Remember, during 9-11, no one was rescued from the roofs of either of the towers. There are several reasons for that, but mainly the updraft from the fires made landing impossible. Do you even know what the roof of your building looks like? Are there antennas and cell phone transmitters all over it? Again, we go back to conducting an area study. Have you actually gone down all the stairwells in your building? Checked them out?

Rescue Reel is an interesting device that allows you to lower yourself from a height up to 1,000 feet.

http://www.rescuereel.com/

One thing to consider with this, though, is if all your emergency stairwells are blocked, it's usually because of flame. Will you be 'reeling' yourself down along a building on fire? Pick the side that isn't showing flames.

Specific Man-Made Events—Safety and Security

Power Outage

We've all experienced a power outage. Our electrical infrastructure is in poor shape. Also, it's a tempting target for terrorists. With computers controlling more and more of the electrical grid, a simple virus could cripple large parts of the country.

Are you ready?

Beyond the tips already given for preparation, here are specifics to dealing with a power outage:

Cook perishable foods first. Of course, you can only do that if you have that secondary cooking source, which was covered under equipment. It does you no good to be sitting on top of all those freeze-dried foods and canned goods and not be able to cook them.

Do you have a back up method for heating and cooling? For heating, a fireplace works. If you have propane in a tank, can you start your fireplace or heating systems without electricity? Do you know how to work the pilot light and clicker? For cooling, there are portable fans that are battery powered, but they have limited life. Have you considered getting a generator? That house that I just purchased has a whole house generator that kicks in automatically when the power goes out. It's claimed that it can power the entire house for a week on one tank of propane. However, the reality is, if you use a generator, cut power outage down to the absolutely essential: refrigerator and heating and cooling at the margins. Turn off all unnecessary power users. It is *not* business as usual.

While we love our Kindles and our Nooks and iPads, have some print material around to read. Things called books.

Use battery powered camping lanterns rather than flashlights for a consistent light source inside the house. They last longer. Have a battery powered headlamp for in house usage. These are useful for accomplishing tasks with light while leaving your hands free.

Use your crank power radio for the latest news.

You've kept your computer backed up on a consistent basis either to the cloud and/or, preferred, to an external hard drive? The Time Machine on my Mac backs up every hour.

Have a landline. They don't require electricity to operate. But make sure all your landline phones don't require to be plugged in to work. Have a basic phone that you can plug into a jack and it will work.

Put luminescent stickers or pieces of glow tape on your light sources so you can find them in the dark.

Do NOT use gas grills or stoves inside. They release carbon monoxide and can cause death.

Make sure your generator is properly wired and vented if you have one.

Close the curtains to keep heat or cool in. Also, remember, a basement will be the most consistent in terms of temperature.

Fire

Here are some interesting, and scary, statistics about home fires.

Home Fires	
Number of home fires your household can expect in an average lifetime	5
Chances your household will have a reported home fire in an average lifetime	1 in 4
Chances someone in your household will suffer a fire injury in an average lifetime	1 in 10
Chances someone in your household will suffer a reported injury in a fire in an average lifetime	1 in 89

Most of those fires of the five average are small ones that cause little damage. Still, it's a thin line from a small fire to a large one. The 1 in 10 injury stat means that most injuries are minor. But 1 in 89 means the injury was bad enough to be reported.

Prevention is the most important thing. Here are keys:

If you use a portable heater, turn it off when you leave the room.

Make sure children understand the danger of lighters, matches and fire. Keep fire starters secure.

Never smoke in bed.

Keep flammable objects at least three feet from heat sources.

When frying, boiling or grilling, always stay in the kitchen.

When simmering, baking, roasting or boiling food, remain in the home and check regularly.

Keep anything that can catch fire (over mitts, wood utensils, etc) away from the stove top.

If you have a grease fire, smother it by putting a lid over the pan and turning off the burner.

For an oven fire, turn off the oven and keep the door closed.

Never use your oven to heat your home.

If you have a fireplace, make sure you keep a screen in front of the fire.

Make sure your chimney is swept and cleaned out once a year.

Never plug in more than one heat producing appliance to an outlet.

Make sure your dryer has a lint filter and keep it clean.

Check your outdoor vent flap to make sure your dryer is venting properly. If it's taking longer than usual for clothes to dry, clean lint out of the vent pipe.

Never heat a baby bottle in the microwave, since they heat things unevenly.

For escape planning: Have a plan. Draw a map of the house showing all doors and windows. Make sure everyone knows the plan and how to get out of every room. Make sure everyone knows to meet up at the IRP once they are out.

Practice your evacuation twice a year, once at night. Everything is different in the dark.

Children need to know how to escape on their own.

If your clothes catch on fire, Stop-Drop-Roll, to put the fire out.

Close doors behind you as you leave.

If you touch a door handle and its hot, or the door itself is hot, don't open that door.

Once out, do not go back in.

If you're trapped inside the house, stay in a room with the doors closed. Place a wet towel under the door opening and call 911. If you have a window, open it and wave something colorful or use a flashlight at night.

If you have to escape through smoke, go low, under the smoke.
If you use a fire extinguisher remember the acronym PASS:
Pull the pin and hold the extinguisher facing away from you.
Aim low. Point the extinguisher at the base of the fire.
Squeeze the handle.
Sweep the extinguisher from side to side until the fire is out.

Smoke alarms should be installed on every level of the house, inside every bedroom, and outside sleeping areas. Let children hear what it sounds like when it goes off and what that means and what they need to do. Check your alarms once a month by pressing the test button. Replace batteries at least once a year. Replace alarms every ten years.

Carbon monoxide monitors are not replacements for smoke alarms. One should be emplaced in a central location on every floor of the house. Never use a generator, grill, stove, anything that gives off smoke, inside your house.

Burglary

Here are some sobering numbers.

Burglary statistics	
Odds your home will be burglarized this year	1 in 36
Average loss per break-in	$2,230
65% of break ins happen between 6 am and 6 pm while you are at work.	34% of burglars enter through the front door.
Only 13.6% of burglaries result in an arrest.	

Often burglars case a place by doing work such as painting, carpet cleaning, or furniture deliveries. Did you see how the exterminators in *Breaking Bad* had the perfect set up? People would literally hand them the keys to their house, allow them to go through the entire place, make copies of the keys and then the owners would wonder who burglarized them weeks later. Be very, very careful who you allow into your house. To the point of leaning heavily toward paranoia. You might irritate some people, but the list of those who let the wrong person in and paid the price is long.

I know you want to let that yard guy in to use the bathroom or phone when he asks, but don't unless you know him or her. He might case the place and unlatch the window. Don't let someone in unless you really know who they are, and even then . . . In *The Girl With The Dragon Tattoo* one of the most interesting scenes is where the hero is sneaking through the suspected bad guy's house and realizes he's the bad guy (really bad!) and escapes. As he's slipping and sliding downhill away from the house the bad guy comes out on his porch and calls out to him. The good guy at first wants to hide, but he knows the bad guy saw him. So, being polite, he says hello back. The bad guy invites the good guy in for a glass of wine. The good guy *accepts!* A half hour later, while the good guy is dangling, helpless in a harness and the bad guy is looking over his power tools trying to decide which one to start using on the good guy, the bad guy points out that even though good guy knew the bad guy was bad, his social courtesies were stronger than his self-preservation.

Don't be the good guy dangling in the harness.

As an emergency goes from mild, to moderate, to extreme, you have to focus more on survival and less on being the nice person. And there are times, in day-to-day normal life, where being a nice person can be very costly. That is just a reality, with no judgment passed on it.

A burglar can case the outside of your place and get a good idea of what's inside. Not just the house itself and the neighborhood, but your landscaping, the toys your kids leave scattered about, the type of car parked in the driveway. While there's not much you can do about that, be aware of it.

Newspapers piled up in the driveway are a lighthouse for thieves. They can also leave a fast food/pizza delivery/cleaning flyer jammed in your front door and see how long it stays there. It takes a couple of days to suspend newspaper delivery, so for any trip you are taking, plan that into it ahead of time. Or have a friendly neighbor come by each day and clean up.

If it snows and you are out of town, while your neighbor might not want to shovel your walk, ask them to at least tramp up to the door and drive in your driveway to leave tracks. It makes it look like someone might be there, even someone too lazy to shovel their walk.

If you have glass in your front door, check to see if the alarm system pad is visible through it. If it is, change it or make sure you block the view when arming and disarming.

Surprisingly, most thieves strike during the day, especially now that most couples have dual careers and kids are in day care or school. Turn your alarm on if you have one even when just leaving for a short day trip.

Thieves knock. Yes, they will ring the doorbell and if you answer, pretend to be something else: asking directions, to clean your gutters, etc. They might carry a clipboard or wear a uniform. Watch anyone who does this and see if they go to your neighbor's house. Let them know you're watching. They don't like to be watched. Write down license plate numbers.

Don't hide stuff in your sock drawer. Really. Once more, think like the other guy. They hit all the obvious hiding places fast. The first room burglars go to is the master bedroom.

There's a method to the way a professional burglar works and you can find that information elsewhere in case you're looking for a new career. But think counter-intuitively if you want a hide spot. Remember, you might lock everything in that fireproof lockbox, but since they can take it with them, it's not a deterrent. You have to put it somewhere not easily found, but where you can grab it quickly on the way out in an emergency. Think.

Those automatic light turn and off things, work as a deterrent.

In Special Forces we often had to consider deterrence to attacks. Opportunistic attackers like thieves go for the easier target. The harder you make your house as a target, the less likely you are to be robbed. Check out your neighbors. Are you a harder target than them? Sort of like when you and your camping buddies are getting chased by the grizzly. You don't have to out-run the grizzly, you just have to out-run your buddies.

Don't overdo it though. Leaving all your lights on and the TV blaring for the two weeks you're trekking the Amazon is indicating to people that no one is home.

Use deadbolts. Regular locks are very easy to get past.

A dog door can be invitation into your house. A dog isn't. I'm a big fan of dogs. Thieves just don't want to mess with them, even though Cool Gus here, snoring at my feet, isn't exactly dangerous looking. Until he gets riled with all 100 pounds and barking.

The two most effective deterrents: a dog and/or a nosy neighbor.

Thieves rarely go into kids' rooms when in the house.

Big windows invite people to look in. They can case your house from the outside. Close curtains in the evening.

Don't do foursquare or announce your vacation on Facebook or Twitter or whatever. Every time I see someone tweet "I'm at Starbucks on Elm Street" I have to resist the urge to tweet: "I'm in your home robbing you."

Have your car keys on your nightstand. If someone breaks in, hit the alarm on the keys and your car will act as a poor man's home alarm. In the same manner, when approaching or leaving your vehicle, especially in indoor garages, have the keys in hand.

Robbery

This is when you are confronted outside of your home and someone wants to take something of value from you, whether it be your wallet, purse, watch, car, etc.

The rule is simple: give it up.

You are more valuable than any material object.

The most important thing is to remain calm and don't panic. Remember, the robber is often in a turbulent emotional state and could be under the influence of drugs or alcohol. Your panic could add to their panic.

Make eye contact while you agree to comply. Move slowly. Hand over whatever they want. Do not act overly weak or aggressive. Try to remember as much about them as possible. Let them get away, then call 911.

Carjacking

Most car-jackings occur when the vehicle is parked and within five miles of your home. Again, always have your keys ready when approaching or leaving your vehicle. If threatened to give up the keys, give them up. It isn't worth it.

A common plot for carjackers is to bump your car from the rear. When you get out to investigate, they take your car. Let them have it.

Here are some rules of the road:

Don't park in isolated or places where you can't be seen.

Always have your keys ready.

Remember the alarm button on your key fob. Many people forget it in the panic. Consider it your personal alarm system when in range of the car. Test it and see how far away it works.

Use valet parking, especially if you are a woman alone. The tip is worth it.

Look at other cars near yours as you go to it. Be aware of anyone just sitting there. Walk away if someone is.

Don't help the guy with the cast on his arm trying to load his couch into a van. His name was Ted Bundy.

Don't be hesitant to ask for a security escort to your car at a mall, college, etc. People are paid or volunteer to do that.

Be aware. Tune in to the environment. You should never talk or text while driving, don't be on the phone or text while heading to your car.

As Gavin DeBecker wrote in *The Gift of Fear*, if your senses alert to someone or something, trust your instincts and get away.

As you approach your car, check around it, under it, and always, always look in the back seat or cargo compartment of your SUV/minivan.

Always lock your doors once you're in the car.

When stopping at a light, always leave enough room in front of you that you can turn hard and accelerate away if you have to. Don't trap yourself.

If bumped in traffic by a pair of males, be very suspicious. Pull to a lighted, populated place before unlocking your car.

Again, if confronted by a carjacker, don't resist. Get out of the car and let them have it.

Don't chase the robber.

Never agree to be kidnapped. Hit the alarm, drop the keys and run while yelling loudly.

If you are forced to drive, you can crash the car near a busy intersection to attract attention.

Civil Unrest and Riots

This can quickly become an extreme emergency on a local or large-scale level. The psychology of crowds is very interesting, but suffice it to say people act very differently when in groups and especially when scared and/or angry.

To get through the initial stages of a riot, you must learn how to survive your fellow human beings.

Be prepared by:

Know the area where you live, work, and go to school. Know alternate routes.

Get familiar with the area. Check maps by looking at your phone apps.

If you can prepare and have to travel through an area that might have a riot, carry a solution for rinsing your eyes out in case of tear gas.

Make sure you have identification.

When traveling, aim for as many crossroads as possible because they give you three options for directions.

Remain calm.

Hide. Avoidance is always best.

Blend in while moving away. Avoid law enforcement if they have donned their riot gear because they will tend to arrest first and ask questions later.

If you must pass through rioters/looters/etc. wear long sleeves, long pants, consider a motorcycle or other helmet.

Walk, don't run, as you might attract attention. Don't make eye contact. Don't confront people. Don't stop. If you're with someone from your team, hold hands tightly.

Don't get involved. It's not your riot.

Stay close to walls, on the edges of crowds. Avoid bottlenecks.

If you're in your car, don't stop. You are in a position of power as long you keep moving, slowly but surely. Don't speed up or act aggressive. People will give way. Keep your doors locked and your windows up.

Riots usually happen on streets, not in buildings. Get off the street and into a building. Stay away from windows. Look for another exit. Be careful of fire.

If necessary, on foot, go with the flow. Become part of the crowd and edge your path away from the violence.

Terrorist Attack

Since there are so many ways terrorists can attack, it's hard to be comprehensive. The most common, however, is commonly called the suicide bomber. I believe that's a misnomer. If they

were true suicide bombers they'd go out into the middle of the desert and blow themselves up. When they detonate around other people, they are homicide bombers. You have to expand this concept: the terrorists on 9-11 were homicide bombers, using the airplanes as bombs.

The best defense against terrorism is making the target difficult to attack. In fact, our intelligence community and military are doing an outstanding job given the lack of attacks on our country. It's not an issue of what you see in the movies where the hero catches the bad guy just before the bomb goes off, but stopping the bad guy from even being able to emplace the bomb in the first place. It's called hardening the target.

The best defense is citizens being aware.

Here are some keys to counter-terrorism for you to keep in mind:

Reconnaissance. Targets have to be cased. All those tourists snapping happy pictures? What about the one that's taking pictures of security cameras and police positions?

Supplies. While you're preparing for survival, a terrorist is preparing for an attack. Timothy McVeigh had to buy a lot of fertilizer to make the bomb he detonated. Also, think of all those sites where you can buy FBI/DEA/Police jackets, badges, etc.

Training. Yes, the 9-11 pilots were trained by Americans.

Information. When someone asks too many questions about things that shouldn't be talked about, like security, that's a warning.

Rehearsal. Just as you conduct your survival rehearsals, terrorists tend to rehearse their actions. Pay attention to people acting suspiciously.

Top targets for homicide bombers: subways, train and busses. Malls. Restaurants and night clubs. Stadiums. Movie theaters. Schools. Churches. In essence, places where people gather together tightly. Whenever you are in such a place, you should always be aware of where the nearest exit is. Actually, any time you're indoors, you should always know where the exits are. That knowledge can save your life. Think if the power goes off, a fire starts, someone begins shooting. In the panic, it's hard to do what you should have done upon first entering the place.

Be aware. Those warnings not to leave your luggage unattended in the airport are serious. If you see someone walk away from a bag, that's something you shouldn't ignore.

If you are ever in a hostage situation, realize that when the good guys break in to free you, they're going to cuff everyone until they can sort out who is who. A trick kidnappers can play is to tape toy guns to hostages' hands, or pretend to be hostages themselves in order to escape. Let the experts do their job.

If you are at home and hear of a terrorist attack nearby, stay at home. Do not go out. Listen to reliable media sources.

A homicide bomber is carrying a bomb. That sounds self-explanatory, but you need to consider where the bomb is. If it's a vest, they will appear unnaturally bulky. If someone is wearing a coat or jacket that is inappropriate to the weather, that's a warning sign. If they're carrying it in a backpack, briefcase, etc. they often will clutch it to their chest just prior to detonation.

If a bomb goes off, be aware that a common plot is to have follow on bombs designated to kill the first responders. Do not gather in the area unless you are helping those injured, and even then, be aware there could be secondary or follow on attacks.

While it is best to run away, as a last ditch effort, an effective way to disrupt a homicide bomber is to go low and take their legs out from under them. It is an instinct that a person will put out their hands to break their fall, thus releasing the detonation switch. Unless it's a dead

man's switch in which case releasing it makes it go off. It's pretty much a sucky situation all around and you can only do the best you can.

The best defense against terrorism is not the TSA or even the intelligence services. It is aware citizens who pay attention to their surroundings.

Active Shooter

The odds you will be caught in an active shooter emergency are very, very low. Like shark attacks, they tend to gather a lot of news, despite being rare.

Nevertheless, it remains a large concern for many people so we'll cover it.

Understand that it takes a while for law enforcement to respond. Also, do you know what real gunfire actually sounds like?

The first thing is to be aware and to accept pretty much anything is a possibility. It should be standard for you to always be aware of at least two exits when you are inside any place. This is true for a number of possible emergencies. Remember, people will tend to rush toward the way they came in, even if there is a closer exit.

If an active shooting situation develops:

Remember these three words: RUN. HIDE. FIGHT.

If you can, evacuate. Leave regardless of what others want to do. Leave everything behind, just like escaping a plane. Help others escape if they want to come, but do not move wounded people. Keep your hands visible as you exit so police can see you are not armed. Follow the instructions of the police, no matter what they tell you to do. If they tell you face down on the ground, get face down on the ground. There is a good chance you will be cuffed.

If you can't evacuate. If you are in a hallway, get into the nearest room.

Secure the door in the room. Lock it and blockade it with the heaviest objects you can place against it. Silence your cell phone. Turn off any other sources of noise. Hide behind large objects (desks, filing cabinets, etc.).

Remain quiet.

Call 911. If you can't talk, leave the phone on so the dispatcher can listen.

If, as a last resort, you must take action, act aggressively and without reserve. Throw whatever is handy, scream and charge. Take them down.

Understand how law enforcement will be reacting.

They will usually assault in teams. They could be wearing a variety of uniforms, since they might be responding from different agencies. They might use gas, flash-bangs, and other non-lethals to secure an area.

Do not have anything in your hands. Keep your hands visible at all times. Don't make any quick movements. If they are passing you by, searching for the shooter, move in the direction they came from. Remember, the initial breaching team will not stop to provide assistance to wounded. They are going for the shooter. Medical personnel will be following. If you are able, help the medical personnel as they arrive.

If you can, provide police or the dispatcher with the following information:

Location of the shooter. Number of shooters. Description of shooter. Number and type of weapons. Number and location of victims.

Once you are out, you will be held in an area until the situation is under control. Do not leave until instructed.

Weapons

I leave this until last because it is rather controversial. I believe a gun is a tool. In itself, it is neither good or bad. It is in how it is used that makes that distinction.

Many survivalists think first of weapons before anything else. There is a fundamental question you must answer before going any further: are you willing to use a weapon on another human being?

If the answer is absolutely not, then there's no point reading this section any further.

In the Special Forces Qualification Course, during survival training, you had to kill a small animal. There were some who could not bring themselves to do it. If they weren't willing to do that, they really were in the wrong place.

However, I do believe that most of us are not really aware of the lengths we will be willing to go to in order to save ourselves and those we care about.

We spent a lot of time in Special Forces discussing weapons. Two of the twelve men on an A-Team were Weapons Sergeants. If I make any recommendations here, there are many people who would disagree with my choices, so I'm just going to give an overview.

First, it's not just the gun you have to consider. The same gun with two different bullets is essentially a different weapon. A tendency is to think "bigger is better". I prefer to think accurate is better. A Desert Eagle .50 pistol looks impressive but is difficult to handle.

For a survival arsenal here is what I suggest:

A pistol for each team member. All same caliber. While many scoff at 9mm, I see no problem with that as you can carry a lot of rounds and also have a number of rounds in your magazine. Have a holster that can secure the weapon. Secure the holster to you. Carry at least two back-up magazines, ready for use. Get hollow point or similar bullets that make the gun more potent.

A semi-automatic rifle designed for military use. The staple is the AR-15, the civilian version of the M-16. You can spend thousands of dollars outfitting it with laser aiming, telescopic sites, etc. etc. Whatever you do, make sure you can fire it accurately. It is illegal to have an automatic weapon and I was never a fan of firing on automatic anyway. It wastes ammunition and unless you are highly trained, is very inaccurate. Again, carry several loaded back up magazines. I am not a fan of the AK-47, but it's the most prolific gun in the world. Another thing about the AR-15 is that since so many people have them, and the military uses versions of it, ammunition will be easier to scavenge.

A .22 survival rifle. You can stockpile thousands of rounds for this and it's good for hunting. Some of these break down in a way that make them easily transportable, such as the Henry Arms AR-7.

You can consider having a shotgun, but how much can you really carry? A shotgun is useful for home defense though as you don't have to be as accurate and it tends to make a bigger impression on whoever you point it at.

Which brings up this issue: if you point a weapon at someone, you must be prepared to use it. Again, my recommendation is discretion is the better part of valor. A weapon should only be used when your life, or the lives of your team members are at stake and you cannot escape/

Specific Man-Made Events—Nuclear, Biological and Chemical

Nuclear Plants

Three Mile Island. Chernobyl. Have you heard of them?

Do you live near a nuclear plant? They usually don't advertise their location. I didn't realize there was one nearby in North Carolina until I was flying in to Raleigh-Durham Airport and saw the cooling tower.

Here is a list of nuclear power reactor sites:

List of nuclear power plants: http://www.nrc.gov/reactors/operating/map-power-reactors.html

What's really scary about that list is to note how old they are.

Realize, that there are more nuclear facilities than just reactors. When I lived in Boulder, Colorado, the glow from Rocky Flats south of town was always enchanting. The Savannah River Site in South Carolina? And since I wrote a bestselling series on Area 51, do you know what's just west of there? The Nevada Test Site is where we tested most of our nukes.

So what to do, other than move far, far away?

Let's focus on a meltdown as I'll cover a nuclear explosion later.

Nuclear power plants work by using heat from the reaction to convert water into steam, which powers generators. They produce around 20% of our country's electricity. Over three million Americans live with ten miles of a nuke plant. That radius is important because emergency response plans have two zones. One is the ten-mile radius where people can be hit by direct radiation exposure. The other is a fifty-mile radius where radiation can contaminate water supplies, crops and livestock.

Without getting into physicist speak, here are the basics: radiation is the danger. Even if you are a distance from the plant, radiation can get into the air through venting or explosion. You want to avoid exposure from material on the ground, from inhaling it, or ingesting it.

Here are the keys to minimize your exposure:

Distance. Get away. The further you are from the source of the radiation, the better. If it is going into the air, check prevailing wind patterns. If you want some history on this, check out how Chernobyl dispersed radiation across Russia and Europe.

Shielding. Put heavy, dense, material between you and the source of the radiation. That is why paper works well. Hunker down in the middle of a library. Or a records center.

There are a series of alerts, curiously named mostly to prevent panic, that you should be aware of it you live near a reactor:

Notification of Unusual Event: a minor problem has occurred but no radiation has leaked or is expected to leak. We're just notifying you because the law says so and we want to scare you. But no action on your part is necessary.

Alert: A small problem has occurred and small amounts of radiation have or may leak inside the facility. This won't affect you—we hope—and you don't have to do anything. Personally, I'd be bugging out. Because they are, in essence, telling you they've had a breach of containment. They wouldn't be telling you that unless absolutely necessary.

Site Area Emergency: They're a little vague on this one. Area sirens may sound. Listen to your radio or television for safety info. I'd be listening to the radio while leaving.

General Emergency: Radiation could be coming off the plant site. Sirens are sounding. Dogs are barking. Frogs are falling from the sky. Tune to radio/TV for information. I'd check the information first, before bugging. Because you might be better off hunkering down inside your house than going through a radiation cloud.

Measures to be taken in a nuclear emergency:

Keep windows closed in your house and car. Use re-circulating air.

If you are advised to stay in your house, turn of the air conditioner, ventilation fans, furnace and any other air intakes into the house. Go to the basement or other underground area.

If you have been exposed to nuclear radiation take off all clothing. Bag it and seal it. Don't ever wear it again. Safely dispose of as soon as possible. Take a thorough shower. You are literally washing radiation off you. Put fresh, unexposed clothing on. Any exposed food should be disposed of.

The bottom line is to get as far away as quickly and as far as possible if you can.

Nuclear Weapons

Duck and cover. How many remember that?

A nuclear attack could be limited to a single explosion or a World War.

Let's focus on what you should do:

First, a nuclear war probably won't happen in a vacuum. Keep an eye on the news. Currently the situation between Israel and Iran, or North and South Korea, are the most likely flashpoint for a nuclear exchange. It is more likely there could be a small yield nuclear explosion by terrorists and that will probably be a 'dirty' bomb where the fallout will be more dangerous than the initial explosion.

We have DEFCON levels, which are defense readiness conditions for the Armed Forces.

DEFCON 5: lowest state of readiness. Supposed to be the norm.

DEFCON 4: Increased intelligence watch and strengthened security measures. Above normal readiness, but no running around screaming in the streets yet.

DEFCON 3: Increase in force readiness. This is when alerts go out to military forces to up their alert status. The Air Force is on 15 minutes notice to mobilize. Still no running around screaming but take some deep breaths.

DEFCON 2: The next step will be nuclear war. All military units are ready to engage in six hours. Start screaming.

DEFCON 1: Nuclear war is imminent. The code name for this is Cocked Pistol, which gives you an idea.

We've never gone to DEFCON 1. Publicly, we've gone to DEFCON 2 once, during the Cuban Missile Crisis. On 9-11, we went to DEFCON 3.

Analyzing the intelligence available to you, make a decision whether it's best to stay put or evacuate. Again, this goes to the issue: do you live near a likely target? Military posts? Missile silos? Transportation hub? City? Centers of government? Should you get away? Do you have a place to go? You might have to go further than your hide site.

In *Panic in the Year Zero*, Ray Milland and his family see the mushroom cloud over Los Angeles in the rear view mirror, which is their first clue of the attack. It's better than seeing it through your front windshield. At least they were heading in the right direction.

There are different types of nuclear weapons.

Fission (Atomic Bombs) are pretty basic and what we are most familiar with. Fusion (Hydrogen Bombs) are much more powerful. These are also known as thermonuclear weapons because a high temperature is needed to fuse the deuterium and tritium.

For a single nuclear event, which is a distinct possibility (I'm actually rather amazed that a nuclear weapon has not been used since the end of World War II), you will probably get little to no warning.

Again, assess the likelihood of it occurring near you. My estimate is that the most likely terrorist target will be a port, as the weapon will be in a cargo container.

One sign that a nuke has gone off somewhere is the EMP effect. If all electronic devices suddenly fail, assume a nuclear bomb has been detonated high in the atmosphere and expect more to be coming.

If a nuke goes off, seek shelter immediately. The first sign of an explosion will be a flash, which travels at the speed of light. Behind the flash comes the shock wave, so you will have some moments to react. Do not look in the direction of the blast. If outdoors, seek a depressed area, exposing as little of your skin as possible. If indoors, get away from windows and fight the temptation to look to see what the bright light was about—the imploding window will likely kill you with lacerations. If you survive the initial blast, you have to take the correct steps to stay alive.

Most people who survive initially, will want to flee. However, this is the exact wrong thing to do. You are exposing yourself to fallout by fleeing. The blast has thrown a large amount of irradiated debris into the air. This fallout will be coming down. You don't want it to come down on you. Your goal is to place the most protection between you and the fallout and radiation. Ideally be underground.

Fallout tapers off relatively quickly. After an hour it's down about 50%. After a day it can be down to only 20%. So these first hours are critical.

After that, the issue is whether this has been a large-scale attack or a local event. If a local event, wait for responders. If a large-scale event, execute your escape and evasion plan.

Infectious Diseases and Biological and Chemical Weapons and Accidents

The Black Death killed between 75 to 200 million people between the years 1346-1353. In just seven years. There have been pandemics throughout history and we are due for another one.

A pandemic is an epidemic of infectious disease that spreads across a large region; usually multiple continents. Experts believe the odds of a pandemic within the next fifty years are very high.

Estimates are that:

1 billion people would get sick.

165 million will die

There will be a global recession and depression Why are the odds of a pandemic high? Global population has increased dramatically. People are moving to crowded, central locations: cities. World-wide travel is much faster and more common.

A pandemic will most likely consist of a virus. Viruses are tiny organisms, 100 times smaller than a single bacteria cell. They are an infective agent that typically consists of a nucleic acid molecule in a protein coat that is able to multiply only within the living cells of a host. Thus, by itself, the virus is not alive. It needs a host. When a virus infects a host, it invades the cells and take them over in order to carry out its own life process of multiplication and growth.

An infected cell produces viral particles instead of doing its normal functions. When a virus infects a host, it invades the cells and take them over in order to carry out its own life process of multiplication and growth.

Anthrax is the most likely agent to be used. It is pretty much 100% deadly when it enters a person's lungs. A minimum fatal dose is one spore and the problem is the symptoms don't show up for days. However, the spores are highly static and tend to clump together and with dust and dirt, making them too big to actually get into the lungs. Thus a package containing anthrax would be very dangerous to the person opening it, or an anthrax bomb deadly for those directly exposed to it, but beyond that immediate circle, others could quickly clear the area and be safe, because it has a very low rate of secondary uptake. This means once it's on the ground, it tends to stay there. So if you are in an area where anthrax is released, go to a sealed room and wait it out. Of more concern is smallpox, because it spreads more easily and is more persistent, although its lethality rate is lower. The problem is that you must quarantine people who are exposed because symptoms might not appear for several weeks.

What are the Six Stages of a pandemic?

The World Health Organization has a Six Stage influenza program, plus two Periods:

Stage 1 No animal influenza virus circulating among animals have been reported to cause infection in humans.

Stage 2 An animal influenza virus circulating in domesticated or wild animals is known to have caused infection in humans and is therefore considered a specific potential pandemic threat.

Stage 3 An animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks.

Stage 4 Human-to-human transmission of an animal or human-animal influenza reassortant virus able to sustain community-level outbreaks has been verified.

According to the WHO, if an influenza pandemic were to emerge today, we could expect:

As people today are highly internationally mobile, the pandemic virus would spread rapidly around the world.

Vaccines, antiviral agents, and antibiotics to treat secondary infections would quickly be in short supply.

Several months would be needed before any vaccine became available. This is because some pandemic viruses are new ones.

Medical facilities would be overwhelmed.

There would be sudden and potentially considerable shortages of personnel to provide vital community services as the illness became widespread.

Stage 5 The same identified virus has caused sustained community level outbreaks in two or more countries in one WHO region.

Phase 6 In addition to the criteria defined in Phase 5, the same virus has caused sustained community level outbreaks in at least one other country in another WHO region.

LOST PEAK PERIOD Levels of pandemic influenza in most countries with adequate surveillance have dropped below peak levels.

POST PANDEMIC PERIOD Levels of influenza activity have returned to the levels seen for seasonal influenza in most countries with adequate surveillance.

As long as there has been warfare there have been biological weapons. In early days, corpses were used to spread diseases or infect water supplies. Targets of bioweapons aren't just

people, but also crops and animals. With advances in genome sequencing, the threat of bioweapons is growing exponentially.

The problem with bioweapons in warfare has always been that they are indiscriminate in their targets. They affect everyone the same. However, the threat of targeted, sequenced, bioweapons means they could attack certain groups of people with specific genetic markers. Also, terrorists often don't care if they die with their victims.

What To Do?

Depending on where you live and how much you travel will determine what your chances of getting infected. If you live in an urban setting, the chances are higher. Whether it's a pandemic or just the flu, here are basic steps to take:

Cover your nose and mouth with a tissue when you cough or sneeze. Throw it away after use.

Use a mask if you become aware that people are getting sick. Actually, it might look odd seeing those people in airports wearing a mask, but it's a good idea. Better to look a bit foolish than catch something that will make you sick and might possibly kill you.

Wash your hands with soap and water. Use disinfection. One curious fact brought up in *Contagion* was the number of times we touch our faces with our hands.

Stay away from the sick people. That sounds easy, but what if you're a first responder or a health care provider?

Stay away from crowds.

If it's a true pandemic, it's not likely that a hospital is a place to go as it will quickly become overwhelmed with the sick and dying.

The bottom line is to stay aware and isolate yourself and your team as quickly as possible.

Biological and chemical weapons are normally not weapons of choice for the military because they target indiscriminately. Even for terrorists they have a high failure rate because even though they can be very lethal there is the problem of delivery and dispersal. So many variables can affect chemical and biological agents: air quality, winds, temperature, humidity, and the shelf life of the element itself. When you consider biological/chemical weapons, you also have to consider accidental release of these agents.

Looking at your area study, do you have a level four containment facility for biological agents around the corner from you? Not likely, but what industries are in your area, upwind, or upriver? Are you along a rail, water or road line on which dangerous agents are transported?

One method of dispersal would be of agents via a crop dusting plane. The plane would have to fly quite low, but if you ever see one in a place where there are no crops to dust, seek shelter. A good target for such an attack would be an outdoor sports stadium. Even better, an air show where people expect to see planes and even smoke coming out of a plane.

Another mode of attack would be to put a biological agent into a water supply. This is one reason to have a top-level filtering system in your house and use it for drinking water. Our first priority in our household is to put in a Kinetico system wherever we live. Not only is the water safer, it tastes better.

You can purchase a gas mask, but the problem is you must know when to put it on and how to use it. Many agents also work via your skin, rendering a gas mask ineffective.

Avoidance is the best defense for these kinds of attacks. As noted, targets are places where a large group of people are contained in a tight space. I don't go to movie theaters (watch it on-demand). I don't go to sporting events (can you say *Black Sunday*?). Ditto on air

shows. When going shopping, go at off peak times, during the week, rather than on the weekend when malls and stores are most crowded.

If you are at home when there is a chemical/biological attack or accident, shut all air intake into the house: windows, doors, garage. Turn off your heating/air conditioning. You do not want air circulating inside the house or coming in from outside. Choose the room that has the least windows and doors. Run tape along any windows where there are seams. Cover the windows with polyethylene sheeting. Link to *LBM Poly 6X8-C "Poly-film" 6 MIL Polyethylene Sheeting 8X10* in Appendix B.

You should have one room in the house designated as the safe room to survive the initial stages of a nuclear, chemical or biological incident. When you have all team members and supplies in the room, finish sealing it by taping around the door, paying particular attention to the gap between the bottom of the door and the floor. You can use a wet towel and then tape it over. Look for any air vents (either in or out) and seal those with sheeting.

Specific Natural Disasters

Tornado

Tornados strike with little warning. If an alarm or alert has been sounded, even if you don't see one, assume it's there. Seek shelter. NOW!

Underground is always best for a shelter. Those areas that are prone to tornadoes have designated shelters. If your house is in a tornado area, you should have a room, a neighbor's house with a room, or a shelter already decided upon.

If a shelter is not available, go to the basement of a building. Stay away from windows and glass. Cover yourself with a mattress, cushions, blankets or a sleeping bag. Look around you for objects that could be blown over and don't be in their path if they fall.

If stuck in a building with no basement, go the lowest floor and the smallest room near the center of the house. Or under a stairwell or in an interior hallway with no windows. Bathrooms are good because you have pipes in the wall which help strengthen them and you can lie in the bathtub. Lie on the ground, face down, and cover your head with your hands and arms. If you have a strong table, take cover under that. Cover yourself with cushions, blankets or a mattress.

Stay in your safe place until well after the danger has passed. Have your G&G bag with you with your crank radio so you can check in to the National Weather Service.

When you do leave your shelter, be careful. Avoid power lines and water that might be touched by power lines. Stay clear of buildings as they still might collapse. Avoid using open flame as it's likely there are gas leaks.

Hurricane

Evacuate.

That sounds so simple, yet just today I read an article while researching about a family killed because they refused a mandatory evacuation for Hurricane Sandy. Their house had been robbed when they evacuated before and they didn't want that to happen again. What happened this time makes a robbery look like such a not bad thing. Hurricanes, unlike tornados, move slowly. So you will have warning and time to get away.

Most of the preparation for a hurricane you've already done in preparing your house. There are some special preparations you can add:

Board and tape windows. Plywood is best for covering window. For taping, use alligator tape, not duct tape. Masking tape is not useful.

Fasten your roof down to the house with tie down straps. Really long ones. You need to have these on hand *before* the hurricane is coming.

Turn off gas and/or propane.

Clear away debris that can be picked up and smash into the house and windows.

Secure all outdoor furniture. If you have a pool, put the furniture into the water.

Make sure your garage doors are closed.

Looking at the deaths from Hurricane Sandy, over half of them were from falling trees/limbs. Make sure the trees around your house are properly trimmed and if old and unstable, pay to have them removed. It's worth your life and your family's lives.

As the storm approaches, turn your freezer and refrigerator to their coldest settings.

Pack any coolers with as much ice as possible. Use them first instead of opening the refrigerator door. If you grew up like I did, your dad was always yelling at your for opening the fridge door anyway.

Fill bathtubs with water.

Make sure all vehicles are topped off.

Know where the closest shelter is for you and for your pets.

If you have to evacuate leave a note saying where you are going.

Unplug everything before leaving.

Turn off electricity, gas and water.

After the hurricane passes, beware of flooding.

Use flashlights or chem lights, never candles.

Do not use tap water after the storm until you are sure it isn't contaminated.

EVACUATE.

If you did not evacuate and it strikes, then you are in tornado mode. Go back a couple of pages ago and do what's listed.

You already have an hurricane Apps downloaded.

Heat Wave and Drought

Heat waves are becoming more common. In the desert section I listed ways to deal with that environment; dealing with a heat wave in your home and work area can be a regular occurrence depending on where you live.

Keys:

Naturally, keep your air-conditioning at a livable level. However, if there is a power outage or you don't have air-conditioning there are things to keep in mind. Lower floors are always cooler as heat rises. Close shades and lower blinds. Go somewhere that does have air conditioning such as a mall or theater.

Drink sufficient water but don't overdo it. During heat waves and also athletic events, there is the danger of *over-hydration*. This is a potentially fatal condition. Not long ago a student in Ranger School died from this. You drink too much water for your kidneys to process. It's not just the amount, but how quickly you drink the water.

Drinking too much water increases the amount of water in your blood. This dilutes the electrolytes, especially sodium. Sodium is critical in balancing the fluid inside and outside of

cells. When there is an imbalance from over-hydration, sodium moves inside the cells, causing them to swell. This is particularly dangerous to your brain cells.

Thus one of the first symptoms is a headache. Nausea and vomiting are also symptoms. If it gets worse, more symptoms follow, including high blood pressure, confusion, double vision, drowsiness, difficulty breathing, muscle weakness and cramping. If not caught in time, seizures will occur, brain damage, coma and even death.

A dangerous thing about hyponatremia (what this is called) is that it can be confused with dehydration and people can force the victim to drink more water. Extreme sports athletes are at risk for this, as well people during a heat wave.

13% of participants in the Boston Marathon has symptoms of hypernatremia (over-hydration)

Without access to special medications, primary treatment for this is to stop the water intake. If symptoms are not extreme, try to balance out the sodium with a sports that contains sodium.

Eat lighter meals during a heat wave so the body doesn't have work as hard digesting, producing more internal heat. Keep your skin covered. If outdoors, wear a hat to protect from sunlight. Wear lighter colors to reflect sunlight.

Use fans in your house to promote circulation of air. In the evening at night, open windows to let in cooler air, then close them in the morning along with blinds and shades.

Turn off extra sources of heat such as lights and appliances. Don't use the stove or oven.

Avoid alcohol and caffeine as they are diuretics and dehydrate you.

Recognize heat-related illness symptoms. Covered under first aid in *Survive Now-Thrive Later*.

Remember your pets. They also suffer in a heat wave. Put them in the shower. Give them a cool, wet towel to lie on. Make sure they have plenty of water to drink.

Heat waves contribute to drought. It is considered an 'insidious hazard of nature' because it creeps up on you. How it occurs varies by region. Six days without rain is nothing in the desert. In the tropics, that is a drought. The bottom line is a lack of normal precipitation over an extended period of time leads to drought.

Checking the FEMA and/or Disaster Alert App will help you know if you are in a drought, if checking local conditions aren't sufficient.

Here are ways to deal with drought:

Purchase rain barrels and other ways of collecting rain water. The typical roof produces 500 gallons of run off from just one inch of rain! Typically the water is considered non-potable, but it can be used for a variety of uses, and can be filtered in an emergency.

Make sure the dishwasher and clothes washer are full before using.

Don't leave water running on a faucet. Take shorter showers.

Water Usage	
Dishwasher	8 to 12 gallons per load
Clothes washer	50 gallons per load
Shower	3 to 5 gallons per minute
Running faucet	2 to 3 gallons per minute

Remember that drought can lead to . . .

Wild Fire

While I lived in Boulder, CO, several times wild fires threatened the foothills. I like what the Department of Interior says about wildfires: "All fires start small. All fires go out. What matters is what happens in between."

Just recently we had a wildfire here in Tennessee that destroyed numerous homes and businesses and killed several people. This followed a couple of months of drought, which should have raised awareness levels higher.

The wind throws embers one mile or more ahead of the flames. These embers start new fires. A fast wild fire has an intense wall of heat in front of it. Even if the flames haven't arrived, it will combust the most flammable material.

As the main fire approaches your house, strong winds blow embers everywhere possible – under decks, against wood fences, into woodpiles, and through open doors and windows. Embers blown onto the roof can come to rest in piles of dry leaves.

In some places the air is so smoky that you can't see more than 10 feet.

Close to where the fire is burning most intensely, the air is far too hot to breathe.

The rising smoke and ash create winds on the ground which cause the fires to burn even more intensely.

Fires like this occur every year. Wild fires don't just happen in the summer; in many areas fires can happen year round. When it is dry and windy be watchful and be prepared to take action to protect your family and property.

To prepare your home if you live in an area prone to wildfires, here is a list of things to do:

Keep your roof and gutters free of leaves.

Store firewood at least 30 feet away from structures. The nice pile up against the side of your house is called fuel for a wildfire.

Your outdoor furniture should be made of noncombustible materials.

Clear the area around your house of other combustible material such as leaves, bark, pine needles and underbrush. Especially trim grass and brush around your propane tank. Optimally you want a hundred foot barrier of no trees, shrubs or bushes around your house.

When building walls, barriers, gates, landscaping, etc use noncombustible materials.

When evacuating a wildfire, you should leave as soon as you receive notice. Considering there is a chance your house might not be there for you to come back to, besides your G&G bag, also take that fireproof container with all your key documents in it. And your pets. Beyond that, forget about it. Just like below, when discussing a tsunami, people are more important than any keepsake. And wild fires move fast!

While evacuating, make sure you have enough gas. This goes back to always keeping your tank at least half full and having at least a five gallon spare can that you can grab to take with you.

Leave any gates open for firefighters and others.

Drive with headlights on. If it's smoky, close all windows, and recirculate air inside the vehicle.

If you get trapped, park in an area that is clear of vegetation (parking lot, gravel area, dirt), close all windows and vents, cover yourself with a blanket or coat and lie on the floor. Car tires may burst from heat.

In an extreme situation, you have to consider whether you can stay in your house only if: your only escape route is blocked; smoke is so thick you can't travel; you don't have time to evacuate; or emergency personnel tell you to.

You cannot stay in your house if: you have wood siding or shingles; you're located in a narrow canyon or on a steep slope; you have a lot of vegetation close around the house. Find a neighbor with a better house.

If you do stay in a house, do the following: use a sprinkler or the sprinkler system to wet the yard. Wet the roof with a hose. Turn off all propane and gas. Close all windows and doors. Move fabric covered furniture away from large windows or sliding doors. Turn off everything that circulates air through the house. Close all interior doors.

On the opposite extreme from wild fires, there is . . .

Blizzard

Like a hurricane, there is usually warning before a blizzard strikes. A blizzard is defined as a severe snowstorm with sustained winds over 35 miles per hour and lasting more than three hours.

You're already done the preparation in your home and car. For work/school, with adequate notice, you should be sent home.

Actual actions during a blizzard are covered in *Survive Now-Thrive Later*.

Earthquake

The USGS publishes maps about the potential for earthquakes in the United States and keeps it updated. While every year people on Florida worriedly follow the weather channel and track hurricanes, people in California, Oregon and Washington rarely check on the earthquake likelihood.

There is a 62% chance San Francisco will have a 6.7 or worse earthquake by the year 2032. The Pacific Northwest is long overdue for a major quake.

Pacific Northwest Seismic Network: https://www.pnsn.org/earthquakes/recent

Preparation and securing your home

No building is earthquake proof. Just like no ship is unsinkable, aka the *Titanic*.

A seismic retrofit usually means securing the house to its foundation if it isn't already. If you take one of the carriage tours in Charleston, SC you'll see bolts sticking out the sides and fronts of old buildings. They've been "retrofitted" since the earthquake of 1886. Do you know how your building will fare in an earthquake? Where you live? Where you work? For example, in downtown Seattle there are some beautiful old brick buildings, which, while quite elegant, are a very bad place to be in case of an earthquake.

Besides the building itself, the ground it's on is key. One of my greatest concerns on Whidbey Island was looking at the high bluffs that lined the shore. They were sand and dirt, not rock. People who'd lived there for decades told me of constantly eroding bluffs and houses having to be taken off their foundations and moved back inland. Imagine what an earthquake would do to those high bluffs?

Beware of things moving inside the house. Look around. What large items of furniture do you have that aren't secured? That could be tipped over during an earthquake? Look at what you hang on the walls. What happens if that fell off? Think of shelves and what could fall off

them. There are entire companies that specialize in "earthquake proofing" your dwelling, but some common sense can go a long way.

Secure tabletop objects. TVs, stereos, computer monitors, etc. should all be tied down.

Make sure your gas appliances have flexible connectors to reduce risk of leak and fire.

Anchor your furniture. When anchoring to a wall, make sure you attach to a stud, not drywall. Purchase a stud finder for this.

Make sure your windows are safety glass or cover them with shatter-resistant film. Make sure you use safety film and not just a sun film.

Ceiling fans and lights should be double secured with a second chain, loose enough to allow them to sway and to keep them from coming completely loose if the primary attachment fails.

Framed pictures and painting should be anchored to a stud and with a closed hook so they can't shake off.

Strap your water heater to a straight wall nearby.

Like every emergency situation covered so far, the best thing you can do is be properly prepared and then be knowledgeable. How prepared are you for an earthquake if there is a high probability of one in your area? Consider some special adaptations if you live in a high earthquake zone. Think about how much time you spend in bed? Doesn't it make the odds of an earthquake happening while you are there high? It's a good idea to keep shoes, flashlight and even a bike or construction helmet underneath your bed. Beyond that, you should be prepared as noted earlier.

Actions during an earthquake are covered in *Survive Now-Thrive Later.*

Tsunami

Again, you should be relatively well prepared based on what you've already done from this book. Here are specifics for a tsunami:

If you live in a tsunami zone, any earthquake should be cause for concern. Even one across the ocean.

If the water recedes suddenly, get out. Don't go pick up the flopping fish or you'll end up being one.

If animals start acting strangely, or running away, follow. Animals are often a good indicator that something in nature is abnormal. Often they are smarter than us. They don't grab a flashlight in a horror movie to go investigate that strange noise in the basement.

Evacuate when warned. Right away. Don't stop to gather personal items. Get your G&G and go.

Make sure you have a vehicle route and a walking route to higher ground. In the panic of evacuation, the vehicle route can turn into an obstacle.

Bottom line, get to higher ground. If you can't, climb a large tree, go up the stairs to the roof.

If you are caught in the water, grab onto something that floats. The real danger is being smashed against other objects. You also might get washed out to sea.

Do not return until officially notified. Sometimes tsunamis come in groups.

Volcano

What did your Area Study say? Take a drive through Oregon and you can see all the volcanoes dotting the horizon. A trip up to Crater Lake is really worth it.

There are different types of volcanic eruptions. You have the trickle of lava slowly moving downhill to the violent explosion of an all out eruption. The good news is most volcanoes are carefully monitored and you should get some warning. In 1980, USGS geologists convinced authorities to close off Mount St. Helens to the public and in doing so saved thousands of lives. Despite that, fifty-seven people were killed. For two months prior to eruption, the mountain gave off serious indications of trouble. If you live near a volcano, what should you do, beyond the regular survival preparations you've already put into place:

Pay attention to the news regarding the state of the volcano. If warnings are being issued, for what kind of eruption are they being issued?

Know your escape routes. Like those in a tsunami zone, plan your vehicle and foot routes. The USGS can provide you with a hazard map around the volcano to help you plan. You should have multiple routes planned because you don't know exactly how the volcano will erupt and in what direction.

Leave immediately if ordered to evacuate. Keep tuned in on your radio for the latest updates.

Get to high ground. Lava follows the rule of gravity. Don't try to outrun it, try out-altitude it.

Avoid breathing poisonous gasses. Do not go to low ground as gasses accumulate there.

The gas flow from an eruption can expand at over 300 miles an hour.

Beware of roof collapse if a lot of ash is being deposited.

Never try to cross a lava flow even if it appears the surface has cooled and solidified.

Most people die in mudflows and flooding after an eruption. Thus, even though you are out of the immediate danger, be aware of these other dangers.

Mud/Land Slide

When you did your area study, did you focus on the potential for mud or landslides? If you have any steep terrain in your locale, these are always a possibility. Check the history of your area with a Google search and these keywords. In fact, do a Google search of your area connecting it with all potential natural and man-made disasters.

The difference between a mudslide and a landslide is that the former has a higher degree of content. Mudslides can have the consistency of wet concrete and the same effect.

The best preparation is to not build or travel through areas where there is a high likelihood.

Warning signs:

Periods of heavy rainfall or snow melt saturate the ground and cause instability in sloped areas. Areas prone to earthquakes, hurricanes, wildfires and other natural disasters are also prone to slides. Roads cut through hills and mountains are susceptible since the natural geography has been disturbed. Locations at the base of steep ridgelines, hills and mountains are in danger.

If you're in a building and notice cracks developing in the walls, that's a sign that trouble is coming. More signs:

If doors and windows begin to get jammed.

Utility lines start to break.

Fences, poles, and trees start to tilt.

Water starts accumulating in abnormal places.

The terrain starts to bulge or starts slanting at the base of the slope.

GET OUT.

Actions for during a mud or landslide are covered in *Survive Now-Thrive Later*.

Dams

In your area study, did you find out you live downstream from a dam? There are over 80,000 dams in the United States. About one-third of those pose a danger to life and property if they fail. To see if you are in danger check the National Inventory of Dams or the Association of State Dam Safety Officials.

Here are some web sites you can use to check.

DAMS

National Inventory of Dams: http://geo.usace.army.mil/pgis/f?p=397:3:0::NO
Association of State Dam Safety: http://www.damsafety.org/

While a dam failure can happen catastrophically, without warning, often there are signs that you can heed. Flooding can cause overtopping or a build up behind the dam that exceeds its capacities.

Dams can also fail for the following reasons:

Sabotage/terrorism, although a dam is much harder to destroy than you would think.

Structural failure.

Movement in the foundation of the dam; earthquakes are a great danger to dams.

Settlement and cracking of concrete or embankment dams.

Poor maintenance and upkeep.

Make sure you know your evacuation route. Have one for vehicle and one for on foot. Make sure you can do the route in the dark. Disasters rarely conveniently time themselves for us.

Get out of channels below the dams. Most people killed in a dam emergency are caught by the massive amount of water being channeled downstream and the debris carried with it.

If you have time before an evacuation prepare your home as noted earlier.

Avoid moving water. Even just half a foot of rushing water can take your feet out from under you. The odds are you won't drown: you'll get bashed to death as you are tumbled downstream.

Flood

Floods can happen in conjunction with other events, such as a hurricane or a tsunami. Storm surge can also cause floods, as can extreme rainfall. My house flooded at 5,600 feet on a ridgeline in Boulder, CO, because the rain overwhelmed the ability of the land to absorb it and the entire water table rose.

Know if you live in a flood plain. Understand what it means when they say 'hundred year flood zone'. Basically, that means in any year, you have at least a 1% chance of the water reaching that level or beyond.

Regardless of your beliefs, the reality is that water levels of the oceans are rising. Storms are becoming more extreme. That is not dogma, but fact. So be prepared.

A flood WATCH means a flood is possible.

A flood WARNING means the flood is happening.

If you have time, move valuables in your house to the highest level before evacuating.

When evacuating, move to higher ground, away from water sources, such as rivers and lakes.

Never go around a barrier on a road during a flood. It's there for a reason. To keep you from being dumb.

If evacuating in your car, avoid standing water. Drive very, very slowly. Many people have lost their lives driving into a dip in the road and submerging their vehicle. If you live in a flood zone, prepare your car as I described for the boat/ferry.

Don't walk through moving water. Even very shallow water can knock you off your feet and sweep you into deeper water.

Flash floods kill a lot of people every year. Here are the keys:

Never drive through a flooded road or bridge.

Stay to high ground.

Keep track of weather information. Just because it's not raining where you are, doesn't mean it's not raining up-water.

Do not stay in a flooded car.

If the car is swept away or submerged, stay calm and wait for the vehicle to fill with water. The doors will not open before then (although you might try to get out the sunroof). Open the door, hold your breath, and swim for the surface. You will now be in the current. Point your feet downstream. Go over obstacles, never under. Strive to angle toward dry ground, but don't fight directly against the current.

If you are stuck above the flash flood, such as in a tree, stay in place and wait for rescue rather than risking the fast-moving water.

Solar Flare

It's estimated there is a 12% chance Earth will experience a massive mega-flare erupting from the sun in the next decade. This event would be devastating in impact and after-effect.

The last one to strike Earth was the Carrington Event in 1859. When it occurred, northern lights were reported in Honolulu, while southern lights were seen in Santiago, Chile. The flares were so powerful, people could read newspapers at night just from the light of the resulting aurora.

Of more significance, the geomagnetic disturbances were so strong that telegraph operators reported sparks jumping from their keys; some sets even caught on fire. The telegraph networks reported major outages. The Earth's magnetic field was so disturbed, the reading, even for equipment in those days, was off the scale.

Without getting into the science, a similar sized eruption now would severely damage the world's power grid, erode oil and gas pipelines, disrupt GPS satellites and damage, if not wipe out, radio communication.

It's estimated the damage would cost 1 to 2 trillion dollars. Of more concern to you and I is that it would take 4 to 10 years to recover from. While that is a worst case scenario, it would essentially mean a breakdown of civilization. That's because with a long term outage, transportation, banking, and government services would crumble. Drinking water would cease to be delivered. Perishable foods and medications would be done.

In 1989, a solar flare collapsed Canada's Hydro-Quebec power grid in 90 seconds and it took nine hours to restore. On 23 July 2012, a massive solar flare twice the power of the one that hit Canada occurred, but missed the Earth.

A solar flare could essentially affect us as much as *Electromagnetic Pulse* from a nuclear weapon. EMP is essentially a high-intensity burst of electromagnetic particles. In the case of the nuke, an EMP nuclear event is actually a more likelier terrorist scenario in my opinion than a physically destructive nuclear blast. What I mean is that for an EMP attack to be effective, the weapon does not need to be detonated inside our borders. A short-range ballistic missile carrying an EMP or nuclear warhead launched off our coast or from a plane outside our borders could have a devastating effect, especially if it targets large centers, such as New York City. Over thirty countries have this capability.

The EMP blast would seriously disrupt our electronic infrastructure. Your power is gone. Which leads to your water and sewer systems being gone. Most planes and cars would no longer work (sucks if you're in the air when this happens, and yes I do think about it, along with that gremlin on the wing unscrewing the bolts). Computers would no longer work. All electronic records, unless they are shielded, will be wiped out. Pretty much every usual means of communication would be gone.

There are ways of protecting some equipment from EMP, but if the overall grid has failed, I'm not sure that's of much use. The more important thing is to be prepared for an extreme emergency of long duration where electronics do not function.

This is not to end on a negative note but to show that this manual covers the gamut from a mild emergency where two cases of water can save your life, to a catastrophic world-wide event where you must bug out to your ERP with your Grab-n-Go bag and then shift into survival mode.

Which is covered in *Survive Now-Thrive Later*.

The key is that YOU ARE NOW PREPARED!

In Conclusion

Preparing your family/team

Besides all the equipment and planning preparation listed in this book, you should also conduct rehearsals as needed. At the very least, rehearse assembling at your IRP and ERP. Make sure everyone knows exactly where these are. Make sure they understand the route and an alternate route.

If you have children, get the daycare or school's emergency SOP and find out how they will act in time of crisis. Have plans for someone to pick up your children if you can't make it.

If someone on your A-Team doesn't speak English, have a card made up with that person's name, address and any special needs, such as medications or allergies.

Make sure everyone knows the safe room and the safest place in each room in the house.

Make sure everyone knows where the shut off for gas, electricity and water are located.

Keep copies of all vital records in your fireproof lockbox.

Cribs should be clear of windows that could implode and heavy furniture that might fall over.

While you've baby-proofed your house for your toddler, putting latches on all the cabinets he/she can reach, what happens during an explosion or earthquakes if higher cabinets come open and spill contents? Consider latching those too.

Make sure your children know what gas and propane smell like.

Preparing the physically challenged

Keep on you a list of all medications, allergies, special equipment, along with the names and contact information of doctors, pharmacists and family members.

Keep extra medications on hand.

Keep emergency supplies within reach and if in a wheelchair, have a way to take them with you.

Have a whistle to signal for help.

After an emergency situation, have at least two people who you can count on to check on you. Make sure they know your special needs, how to operate any special equipment, what meds you take and the schedule, and where your emergency supplies are. Make sure they have a spare.

If you evacuate your home, leave a message so those two people checking on you know you've left and where you are going.

Preparing the Elderly

Keep walking aids close by at all times.

Have extra medications on hand.

Put a security light in every room. These plug in and automatically go on if there is a loss of electricity.

Have a whistle on hand.

Have at least two people who will check on you.

Pets

Yes, they actually sell pet survival kits. You laugh. You won't if you need to evacuate.

The key to pet survival is that what is good for you, is good for them: water, food, shelter being key.

If you evacuate, do not leave your pets behind. However, if you are going to a public shelter, understand that pets might not be allowed inside. Do you have an alternative for them? Check hotels in the area to which you will evacuate and find which ones will accept pets under those conditions. Check with your local animal shelter and get their advice. At the absolute very least, set them free.

Take pet food, bottled water, medications (tick and heartworm meds), vet records, cat litter/pan, can opener, food dishes, water dishes, and any other supplies as needed. We use a large plastic container for our dog food and store the dishes and all their supplies inside, on top of the food. Keeping everything in one place makes it easy to grab it and go if needed.

Make sure your pet id tags are up to date with your current cell phone number and address. If evacuating, attach the evac destination on their collar with paper covered with clear tape or a label maker.

Make sure you have a current photo of your pet for identification purposes.

Make sure you have a leash and collar to control your pet.

Beware Scam Artists after a Disaster

Yes, there are those unscrupulous people who will try to take advantage of those whose lives have already been devastated. These are similar to the people you will have to face down after an extreme emergency.

After a disaster, there will be many business, faith-based, community-based, volunteers, government agencies and others who will come forth to try to help. There is actually a disaster fraud hotline at 866-720-5721.

Here are ways to spot these scam artists and avoid them:

Government workers never charge for their services. They have photo ID.

Do not trust anyone who tells you that you will receive a payment but asks that you give them an up-front payment first.

There is never a fee to apply for FEMA disaster assistance or receive it. The same for FEMA or US Small Business Administration property damage inspections.

To register for FEMA help call 800-621-3362 or visit www.DisasterAssistance.gov or m.fema.gov from a smartphone.

Get written estimates for any repair work. Check credentials and contact the local Better Business Bureau or Chamber of Commerce for complaints against the businesses. Before work begins, make sure you get a written contract detailing all work to be performed, the costs, a completion day and clauses to negotiate changes and settle disputes. Also make sure the contract specifies who will get the necessary permits. Keep a copy of the signed contract.

Pay only by check or credit card.

You will be frazzled and upset and a bit desperate after a disaster, but don't let these bad people make it worse.

Plan and Prepare Now!

What makes Special Operations Forces the best in the world, is that we always planned for every possible eventuality *before* going on a mission, knowing exactly what we would do if it happened. We made sure we had the equipment with us to deal with these situations to go along with the plans.

There is preparation you need to do before emergency strikes. Implicit in that preparation are decisions that need to be made now. Some of them are very serious issues that you will have to spend a lot of time thinking about and discussing with your family/team. Many revolve around core ethical and emotional issues.

For example, on a personal level, are you willing to use a firearm to protect yourself? Because there's no point in having one for that reason, if you're not willing to use it. I take no stand on this

issue, but rather point out that you must realistically determine if this tool, which is what I view a firearm to be, is something you will use, and how will you use it? If your belief system dictates that you won't ever use one, then you need to factor that into your preparation and planning for survival. You have to decide to what level you will prepare: mild, moderate, extreme? Where is your IRP? Your ERP? What will be your procedure if you have to move and one of your team is incapacitated? If you have to ration food or water or other essential supplies, what will be the protocol? Who is your team leader?

When you're in the emergency, it's too late to try to make these decisions, because the situation itself will skew your reasoning.

The companion book, *Survive Now-Thrive Later* works off the base assumption that you have prepared. Thus it's shorter, more direct and focused than many other similar manuals that start from scratch.

The good news?

YOU'VE ALREADY PREPARED by following the checklists in this manual. You've done what Special Forces does.

GREAT JOB!

A Final Word

You might be feeling a bit overwhelmed after reading this book. The key is to take it one step at a time. Focus on preparation for a mild emergency first. That's the base from which you can build over time. The keys are to gather the equipment and supplies needed NOW and to conduct your Area Study. That will give you the base to build on.

What I want you to take from this is exactly the opposite feeling of dread and despair. Seeing all the bad that *could* happen should make you focus on all the good you have in your life. Enjoy the fact you are enjoying the highest standard of living humans have ever known.

When I take a hot shower I think to myself what a delight this would have been to someone in the Middle Ages.

When I drive a car, I think how someone like Alexander the Great would have reacted to have such a chariot.

When I go to a grocery store, I imagine what the frontiersmen and women would have thought to have such abundance available to them.

Do the preparation for the future. Worry less. Enjoy life now.

I welcome feedback, suggestions, or other comments about ***Prepare Now Survive Later***. Please email me at surivival@coolgus.com

Appendix A: All checklists

Check when done	Checklist
	Baseline: this is the minimum required
	Mild: what you need in order to prepare for a mild emergency
	Moderate: what more you need in order to prepare for a moderate emergency
	Extreme: what more you need in order to prepare for an extreme emergency
	Grab-n-Go bag: what is going in your Grab-n-Go bag
	Work: What you need at work
	Car: What you need in your car

Check when done	Water Checklist	Expiration Date
	Baseline: A gallon a day (8 regular water bottles) per person	Indefinite, check every six months
	Mild: six gallons/two cases per person	Indefinite, check every six months
	Moderate: 15 gallons per person/five cases per person	Indefinite, check every six months
	Extreme: 30 gallons/ten cases	Indefinite, check every six months
	Extreme: water filter	
	Extreme: know location of a water source	
	Extreme: 55 gallon drums (HDPE#2)	Refill every six months
	Grab-n-Go bag: a gallon/ eight water bottles	Indefinite, check every six months
	Grab-n-Go bag: Survival straw	Check expiration date
	Grab-n-Go bag: bottle of water purifying pills	
	Work: half gallon/ four water bottles	Indefinite, check every six months
	Car: 3 gallons/ a case of water	Indefinite, check every six months
	ERP, Emergency Rally Point: two cases	Indefinite, check every six months
	ERP, Emergency Rally Point: access to water source	

Check when done	Food Checklist
	Baseline: FEMA says a 3 day supply of non-perishable food
	Baseline: 2,400 calories per day per person
	Baseline: non-electric can opener
	Mild: 3 day supply of non-perishable food equaling 2,400 calories per day
	Moderate and Extreme: A mean of cooking food without power
	Moderate: A week's worth of non-perishable food equaling 2,400 calories per day
	Extreme: A month's worth plus the means to self-sustain through hunting, farming, gathering
	Grab-n-Go bag: 3 day supply of non-perishable food equaling 2,400 calories per day
	Work: Enough to get you to home or ERP
	Car: 3 day supply of non-perishable food equaling 2,400 calories per day
	ERP, Emergency Rally Point: A week's worth of non-perishable food equaling 2,400 calories per day
	ERP, Emergency Rally Point: A mean of cooking food without power (fire starter)

Check when done	First Aid Checklist	Expiration Date
	Baseline: A first aid kit in your house	Note expiration on any medications
	Baseline: Choking and CPR APP downloaded	
	Baseline: Red Cross first aid APP downloaded	
	Baseline: Medical alert badges	
	Baseline: Yearly physical	
	Baseline: extra pair of glasses	
	Baseline: iTriage APP downloaded	
	Mild: A first aid kit	Note expiration on any medications
	Mild: 1 week supply of medications	Note expiration on any medications
	Mild: Quickclot bandage	
	Moderate: Mild plus take online first aid course.	Note expiration on any medications
	Moderate: Mild plus 1 month supply of medications	
	Extreme: Mild and Moderate plus:	
	Extreme: take an in person first aid course.	Refresh training every six months
	Extreme: 1 month supply medications.	Note expiration on any medications
	Extreme: knowing what homeopathic substitutes are available in nature for your medications	
	Grab-n-Go bag: A first aid kit	Note expiration on any medications
	Grab-n-Go bag: QuickClot bandage	
	Work: A first aid kit	Note expiration on any medications
	Work: QuickClot bandage	
	Car: A first aid kit	Note expiration on any medications
	Car: QuickClot bandage	
	ERP, Emergency Rally Point: A first aid kit	Note expiration on any medications
	ERP, Emergency Rally Point: QuickClot bandage	

Check when done	Shelter Checklist	Expiration Date
	Baseline: Preparing your home.	
	Mild: Home prepared to mild levels for water, food and first aid.	
	Mild: Proper clothing for environment	
	Mild: Have a safe room inside of the home	
	Moderate: Mild plus an emergency sleeping bag	
	Extreme: mild and moderate plus tent	Air out every six months
	Extreme: mild and moderate plus additional proper clothing for environment	
	Grab-n-Go bag: emergency sleeping bag	Air out every six months
	Grab-n-Go bag: poncho	
	Grab-n-Go bag: Proper clothing	
	Work: walking shoes/boots and sock	Air out every six months
	Work: poncho/rain jacket	
	Car: walking shoes/boots and socks	Air out every six months
	Car: rain suit/poncho	
	Car: emergency sleeping bag	
	Car: Blankets	
	ERP, Emergency Rally Point: Poncho	Check every six months
	ERP, Emergency Rally Point: Tent	
	ERP, Emergency Rally Point: additional proper clothing	
	ERP, Emergency Rally Point: walking shoes/boots and socks	

Check when done	Fire Checklist	Expiration Date
	Baseline: A means of cooking meals and maintaining body warmth in the given environment	
	Mild: None need. Can eat food for three days that requires no cooking; use blankets and clothing for warmth	
	Moderate: A portable stove with fuel; access to a way to build a fire.	Check stove fuel supply every six months.
	Extreme: Starting and maintaining a wood fire in nature	
	Grab-n-Go bag: storm proof lighter	Check every six months
	Grad-n-Go bag: fire starter (magnesium)	
	Work: storm proof lighter	Check every six months
	Car: storm proof lighter	Check every six months
	ERP, Emergency Rally Point: storm proof lighter, fire starter (magnesium)	Check every six months

Key Information Everyone Must Know	
Family/Team Contact Information and Alert Flow	
Team/family members	Phone number
Team member #1	
Team member #2	
Team member #3	
Team member #4	
Team member #5	
Team member #6	
Team member #7	
Team member #8	
Team member #9	
Team member #10	
Out of area emergency point of contact:	
Rally Points	
IRP:	
ERP:	

Location and phone number of closest emergency room	
Home:	
Work:	
School:	
Location and phone number of next closest emergency room	
Home:	
Work:	
School:	
Location and phone number of closest police station	
Home:	
Work:	
School:	
Location and phone number of closest fire station	
Home:	
Work:	
School:	
Location and phone number of closest military base	
Home:	
Work:	
School:	

Home Supplies	
Check when done	Item
	Two cases of water per person
	Three days worth of food per person
	Manual can opener
	Flashlight
	Extra batteries
	Crank powered emergency radio
	First aid kit
	Weeks worth of medications
	Cash
	Baby supplies as needed
	Pet supplies as needed

Work Place Items for Emergencies	
Check when done	Item
	Battery operated radio or TV
	Non-perishable 3 day food supply for employees
	At least one gallon of drinking water per employee for at least 3 days
	Blankets, pillows, cots
	First aid kits
	First aid manual
	Flashlights, batteries, light-sticks
	Toolkit
	Camera for recording damage
	Whistle, flare to signal for help
	Access to roof and VS-17 type panel to signal for help
	A designated IRP outside the building
	Tarps, plastic bags, duct tape
	Everyone knows building evacuation routes

Car Emergency Equipment	
	1 case of water
	Fire extinguisher
	Drivers license, proof of insurance, insurance company contact number
	Cell phone charger cable
	First aid kit
	Three reflective warning triangles
	Flashlight with red warning flasher
	Blankets
	Snow shovel
	LifeHammer
	Ice scraper
	Work gloves
	Tool kit
	Jumper cables
	GoTreads Emergency traction tool
	Tow straps
	Poncho
	Food as listed under Food
	Road side flares
	Flat tire inflation canister
	Spare fuses
	Road maps
	Walking shoes and socks
	Extra quart of oil
	Duct tape
	Battery powered siphon
	Multipurpose tool
	Emergency battery charger
	Battery powered radio

Emergency Travel Items	
	Passport and a copy of your passport. Scan your passport and upload it to the cloud
	Health insurance card
	Two credit cards, carried in two separate locations
	List of emergency contact numbers, written out (in case you lose your cell phone or its stolen)
	Prepaid long distance card
	A few blanks checks
	Adequate prescription medications plus 3 days extra
	Protein bars

MAIN GRAB-N-GO BAG: WATER	
Check when done	**Item**
	4 full 500ml water bottles
	Water containers
	Lifestraw
	Water filter
	Water purifying tablets
	Waterproof sacks
	Compressible water containers*

MAIN GRAB-N-GO BAG: FIRE	
Check when done	**Item**
	Windproof lighters, 3 each
	Windproof matches with striker
	Magnesium fire starter
	Portable stove and fuel supply

MAIN GRAB-N-GO BAG: FOOD	
Check when done	**Item**
	3 day food supply
	Pot to cook in, utensils, pot holder

MAIN GRAB-N-GO BAG: FIRST AID	
Check when done	**Item**
	Emergency first aid kit
	Medical mask
	Quickclot bandage
	Universal splint, rolled
	Extra medication, one week's worth
	Extra glasses

MAIN GRAB-N-GO BAG: SHELTER	
Check when done	**Item**
	Emergency, lightweight sleeping bag
	Small tent or poncho
	Sleeping pad
	Insect repellant
	Sleeping bag*

MAIN GRAB-N-GO BAG: TOOLS	
Check when done	**Item**
	Leatherman multi-tool
	Portable handcrank emergency radio
	Handcrank flashlight
	Battery powered headlamp
	Chem lights
	Fixed blade survival knife
	Folding saw
	Paracord
	Signal mirror
	Signal panel
	Fishing kit
	Snare wire
	Sewing kit
	Electrical tape
	Duct tape

MAIN GRAB-N-GO BAG: TOOLS OPTIONAL*	
Check when done	**Item**
	Candles
	Survival axe
	Machete
	Snow shovel
	Pocket chainsaw

MAIN GRAB-N-GO BAG: MISC ITEMS	
Check when done	**Item**
	Compass
	Zip ties
	Map of the area
	Waterproof map case
	Pen, paper and pencil
	Identification (license, passport)
	Optics (binoculars or small telescope)
	CASH
	Apps (download from Appendix C)

MAIN GRAB-N-GO BAG: PERSONAL ITEMS	
Check when done	**Item**
	Toilet paper (baby wipes)
	Toothbrush and paste
	Razor and blades
	Camping soap
	Camping towel
	Feminine hygiene as needed

MAIN GRAB-N-GO BAG: CLOTHING	
Check when done	**Item**
	Workout shoes or boots
	Extra socks
	Boot bands
	Wool watch cap
	Boonie hat
	Gloves

WORK GRAB-N-GO BAG	
	Small first aid kit
	Emergency radio
	Flashlight
	Energy bars
	Emergency poncho
	Bottle of water
	Length of parachute cord
	Extra keys home & car
	Extra medication
	Extra set of glasses
	Boots or workout shoes

	CAR GRAB-N-GO BAG
Check when done	**Item**
	Water (recommend a case)
	Trickle charger or Emergency battery charger
	Week worth of non-perishable food
	Blankets
	Tri-fold shovel
	Road flares
	Emergency light with flashers
	Paper road maps
	Pair of comfortable shoes/boots with socks
	Pepper spray, mace, taser
	Tow line
	Jumper cables
	Fire extinguisher
	Spare tire and jack
	First aid kit
	Small backpack
	Glass breaker, seat belt cutter
	Rain jacket, rain pants.

Basic Code Word List	
Home	
IRP	
ERP	
I've been compromised and am sending this under duress	
A code name for every team member	
A code word for every day of the week	
Whatever key words you believe you need	

Appendix B: Items mentioned with links

WATER

Lifestraw http://amzn.to/2gGVpTT
Aquamira Frontier Water Filter (20 gallon): http://amzn.to/2ecg8g9
Potable Aqua Water Tablets: http://amzn.to/2f3f7pm
Waterproof Sacks. Here is a dry, compression sack: http://amzn.to/2eSglU3
*Empty compressible water containers** http://amzn.to/2ecnfW7

FIRE

Windproof lighters. Torchzilla lighter: http://amzn.to/2ecmRa1
Windproof matches with striker. Stormproof Match Kit: http://amzn.to/2fkEKWG
Magnesium fire starter. Magnesium fire starter: http://amzn.to/2ecgeoe
Portable stove and fuel supply. MSR PocketRocket: http://amzn.to/2f3gdl2

FOOD

Mountain House, Just In Case (29 servings): http://amzn.to/2e2AZ23
A basic pot set w/holder: http://amzn.to/2echwj2

FIRST AID

Emergency first aid kit.
Adventure Medical Kit Weekender: http://amzn.to/2f3gh4c
Lifeline 4038 Hard Shell: http://amzn.to/2eSbS3H
Medical mask. 3M Particulate respirator: http://amzn.to/2e2lQOc
Quikclot sponge. 2 each http://amzn.to/2fkHgMr

Universal Splint, rolled. 1 each. http://amzn.to/2f3eCfe

SHELTER

Emergency, light weight sleeping bag. SE EB 122OR Emergency Sleeping Base: http://amzn.to/2f3hnx1

TOOLS

Leatherman, Mutli-Tool
Leatherman, Mutli-Tool http://amzn.to/2ecry3J
Leatherman, Crunch Multi-Tool http://amzn.to/2eS9DO3
Portable, hand crank, emergency radio.
Ambient weather compact radio, flashlight, charger: http://amzn.to/2e2D0eQ
Hand crank rechargeable flashlight.
Cynergy Lifelight w/LED, red light flasher, cell phone charger, window breaker, seatbelt cutter: http://amzn.to/2fuhPrn
Energizer 3 LED Headlight: http://goo.gl/9Vl0M
Chem lights. I have the following set, broken down. http://amzn.to/2ecgQdp
Fixed blade survival knife. Gerber Bear Gryllis Knife: http://amzn.to/2fkVgpL and a knife sharpener: http://amzn.to/2f79rcX
Folding saw. Folding Saw: http://amzn.to/2ecjYFX
Paracord. http://amzn.to/2ecf8sq
Fishing Line, hooks, sinkers and some lures. Friendly Swede Survival Kit: http://amzn.to/2fuix7R
Snare wire. Dakota Line Versatile Snares: http://amzn.to/2e2AuFv
*Survival axe**. SOG Survival Hawk. http://amzn.to/2fEQu64

MISC.

Compass. Suunto M-3G compass: http://amzn.to/2f7cNwH
Waterproof Map case. http://amzn.to/2glGzl9

PERSONAL ITEMS

Camping soap: Campsuds: http://amzn.to/2ecwENc

CLOTHING

Boot bands. http://amzn.to/2e2g1AB
Wool watch cap. http://amzn.to/2ecpmsT
Boonie hat. http://amzn.to/2e2g1AB
Gloves. Mountain Made Crestone Gloves with Touchscreen: http://amzn.to/2fulZ2p

CAR

LifeHammer: http://goo.gl/O5hSr

Appendix C: Links to Apps and Web Pages

First Aid Apps

Red Cross First Aid (Apple):
https://itunes.apple.com/us/app/first-aid-by-american-red/id529160691?mt=8
Red Cross First Aid (Android):
https://play.google.com/store/apps/details?id=com.cube.arc.fa&hl=en
iTriage (Apple): https://itunes.apple.com/us/app/itriage-symptom-checker/id304696939
iTriage (Android): https://play.google.com/store/apps/details?id=com.healthagen.iTriage
CPR and Choking (Apple): https://itunes.apple.com/app/cpr-choking/id314907949
CPR and Choking (Android):
https://play.google.com/store/apps/details?id=org.learncpr.videoapp

KEY APPS FOR AREA STUDY & EMERGENCY AND THREAT ASSESSMENT

National Geographic 1:24,000 maps: http://www.natgeomaps.com/trail-maps/pdf-quads
USGS maps: http://nationalmap.gov/ustopo/
Road ID eCrumb: https://www.roadid.com/ecrumbs
Compass Android:
https://play.google.com/store/apps/details?id=com.gn.android.compass&hl=en
Google Earth Apple: https://itunes.apple.com/us/app/google-earth/id293622097
Google Earth Android: https://play.google.com/store/apps/details?id=com.google.earth
Home facts: http://www.homefacts.com/
Dams: http://nid.usace.army.mil/cm_apex/f?p=838:12

MAP Apps

Road ID eCrumb: https://www.roadid.com/ecrumbs
Compass (Android):
https://play.google.com/store/apps/details?id=com.gn.android.compass&hl=en
Google Earth (Apple):https://itunes.apple.com/us/app/google-earth/id293622097
Google Earth (Android):https://play.google.com/store/apps/details?id=com.google.earth

Key Apps to download

Family locator Android:
https://play.google.com/store/apps/details?id=com.life360.android.safetymapd
Emergency Alert System for Apple: https://itunes.apple.com/us/app/silent-beacon-emergency-alert/id933730960?mt=8
Red Cross hurricane app (Apple): https://itunes.apple.com/us/app/hurricane-by-american-red/id545689128?mt=8
Red Cross hurricane app (Android):
https://play.google.com/store/apps/details?id=com.cube.arc.hfa&hl=en
Earthquake alert (Android):
https://play.google.com/store/apps/details?id=com.joshclemm.android.quake&hl=en
Quake Alert (Apple): https://itunes.apple.com/us/app/quakefeed-earthquake-map-alerts/id403037266?mt=8
Weatherbug (Apple): https://itunes.apple.com/app/weatherbug-forecasts-radar/id281940292
Weatherbug (Android): https://play.google.com/store/apps/details?id=com.aws.android
Disaster Alert (Apple): https://itunes.apple.com/us/app/disaster-alert-pacific-disaster/id381289235
Disaster Alert (Android): https://play.google.com/store/apps/details?id=disasterAlert.PDC
FEMA (apple): https://itunes.apple.com/us/app/fema/id474807486
FEMA (Android): https://play.google.com/store/apps/details?id=gov.fema.mobile.android
Flashlight (Apple): https://itunes.apple.com/us/app/flashlight-o/id381471023
Flashlight (Android):
https://play.google.com/store/apps/details?id=com.ihandysoft.ledflashlight.mini
FEMA safe room guidelines web site: https://www.fema.gov/residential-safe-rooms
Scanner App: (Apple):
https://itunes.apple.com/us/app/scanner-radio-deluxe/id498405045?mt=8
Scanner App: (Android):
https://play.google.com/store/apps/details?id=com.scannerradio&hl=en

Web Pages Mentioned

Red Cross on line First Aid Courses: http://www.redcross.org/take-a-class/first-aid/first-aid-training/first-aid-online

Downloadable Maps To Print Out

National Geographic Maps: http://www.natgeomaps.com/trail-maps/pdf-quads
USGS Maps: http://nationalmap.gov/ustopo/
Home Facts: http://www.homefacts.com/
FEMA safe room guidelines web site: https://www.fema.gov/residential-safe-rooms
Car safety ratings: https://www.safercar.gov/Vehicle-Shoppers
List of nuclear power plants: http://www.nrc.gov/reactors/operating/map-power-reactors.html

Pacific Northwest Seismic Network: https://www.pnsn.org/earthquakes/recent

DAMS

National Inventory of Dams: http://geo.usace.army.mil/pgis/f?p=397:3:0::NO
Association of State Dam Safety: http://www.damsafety.org/

About Bob Mayer

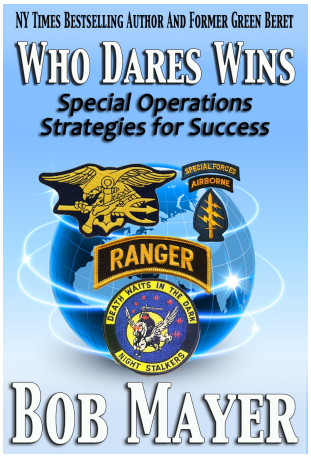
Bob Mayer is the grandfather of two future leaders of the Resistance Against the Machines, a NY Times Bestselling author, graduate of West Point, former Green Beret (including commanding an A-Team) and the feeder of two Yellow Labs, most famously Cool Gus. He's had over 70 books published including the #1 series Area 51, Atlantis, Time Patrol and The Green Berets. Born in the Bronx, having traveled the world (usually not tourist spots), he now lives peacefully with his wife, and labs in an undisclosed location.
http://bobmayer.com

Connect with Bob Mayer on Twitter | Facebook | Goodreads | Pinterest | YouTube Channel
Never miss a new release by Bob Mayer on Amazon by following his Author Amazon Page.

Subscribe to Bob Mayer's Newsletter

To contact Bob Mayer and give feedback, suggestions, or other comments about ***Prepare Now Survive Later***, please email at surivival@coolgus.com

Non Fiction by Bob Mayer



Special Operations Forces are the most elite and flexible units in the world. Green Berets, Navy SEALs, Rangers, Nightstalkers, Special Operations Wing: these are the warriors trained to perform beyond the ordinary and to make the impossible, possible. The author, a former Green Beret, takes you inside their shadowy world, laying out their history and lineage. More importantly, he delves into the mindset and training that makes them special. He gives strategic and tactical templates you can apply to yourself and your team. He uses narrative examples, both factual and fictional to illustrate his points.

This book shows you how to Dare to be like the elite, sharing with you the secrets of success needed to conquer fear and succeed.

"Success in life--as in combat--has always demanded depth of character. Who Dares Wins reveals what it takes for you to move into the world of elite warriors and how their training developed that Can Do spirit and Special Forces ethos of excellence."
Lewis C. Merletti: Director United States Secret Service (retired), Former Sgt 5th Special Forces Group (Vietnam); Cleveland Browns Executive Vice President & COO

About the author: Bob Mayer is a NY Times bestselling author, former Green Beret and CEO of Cool Gus Publishing. He graduated from the Military Academy at West Point, served in the Infantry and Special Forces, commanded a Special Forces A-Team, taught at the JFK Special Warfare Center & School at Fort Bragg and served in other Special Operations assignments. He has over 70 books published with over 5 million sold and has been on the numerous bestseller lists including The Wall Street Journal, Publishers Weekly & US Today.

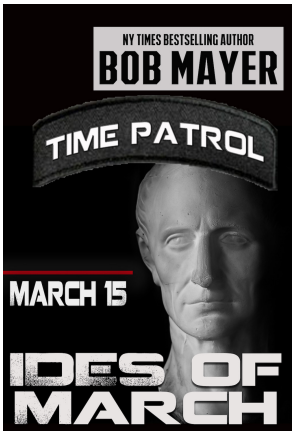
In 2011 he made the leap from traditional to indie publishing and built a seven-figure business within 18 months.

He is an international speaker and consultant. He has done interviews/appeared in/on the Wall Street Journal, NY Times, Forbes, Psychology Today, Sports Illustrated, PBS, NPR, the Discovery Channel, the SyFy Channel and others.

Amazon | Nook | iBooks | Kobo

Fiction by Bob Mayer

Ides of March



Amazon

"The vicissitudes of fortune, which spares neither man nor the proudest of his works, which buries empires and cities in a common grave."

Edward Gibbon. The History of the Decline and Fall of the Roman Empire.

D-Day

The future is made by ordinary people doing extraordinary things.

The fact that history doesn't record the heroics of these people doesn't alter that.

The 6th of June is a day full of such events.

While history doesn't record the heroics, there are those who notice. And there are those who want to stop those ordinary people and change our history in order to create a time tsunami and wipe our present out.

It is up to the Time Patrol to send an agent back to each 6th of June and make sure that doesn't happen!

Order your copy now!
Amazon

Independence Day

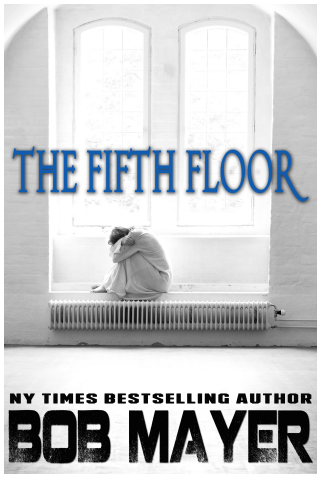
'The distinction between the past, present and future is only a stubbornly persistent illusion.' Einstein.

What does it take to change history and destroy our reality? The same date, 4 July, six different years.

Nine Eleven

'He who controls the past, controls the future. He who controls the present, controls the past.' Orwell. 1984.

The Fifth Floor



Before there was just me now, there was a bunch of other stuff that I don't remember. People keep telling me I should remember, but maybe if you can't remember there is a reason.

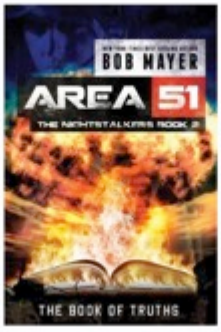
Thus begins Lara's story. Who is she? What reality should she believe?

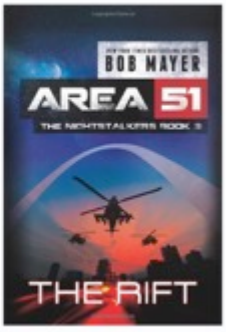
Amazon

For more on the following, I recommend these books:

Nightstalkers: Time Patrol. How the Nightstalkers became the Time Patrol
Time Patrol: Black Tuesday. The first mission run by the Time Patrol, to 29 October in six different years.

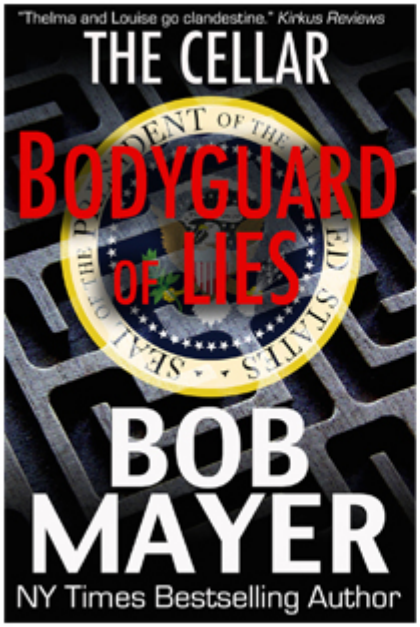
The Nightstalkers Series: The Fun in North Carolina. The Fun in the Desert. And a history of the Nightstalkers and how they dealt with the Rifts, a President who cannot tell a lie and more! Where the Nightstalkers first encounter Scout in a gated community in North Carolina.

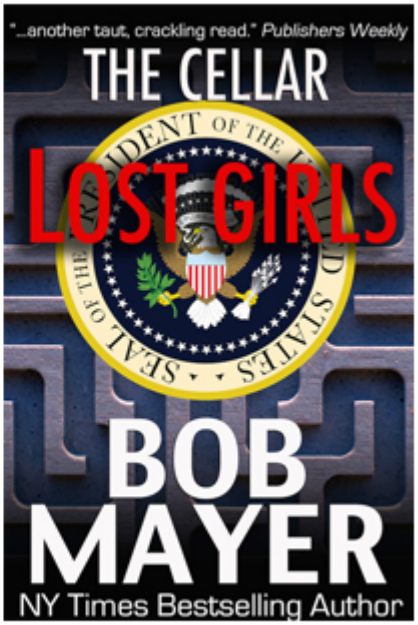




The Cellar Series: Praise for Lost Girls: " . . .delivers top-notch action and adventure, creating a full cast of lethal operatives armed with all the latest weaponry. Excellent

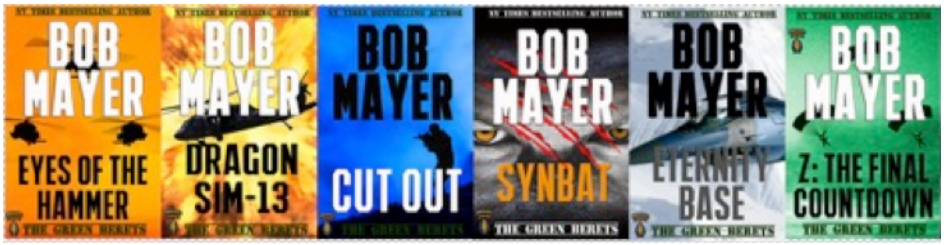
writing and well-drawn, appealing characters help make this another taut, crackling read." Publishers Weekly





burners: "My candle burns both ends; It will not last the night. But ah my foes, and oh my friends, It gives a lovely light!"

THE GREEN BERET SERIES



EYES OF THE HAMMER IS FREE!
Amazon | Nook | iBooks | Kobo | Google

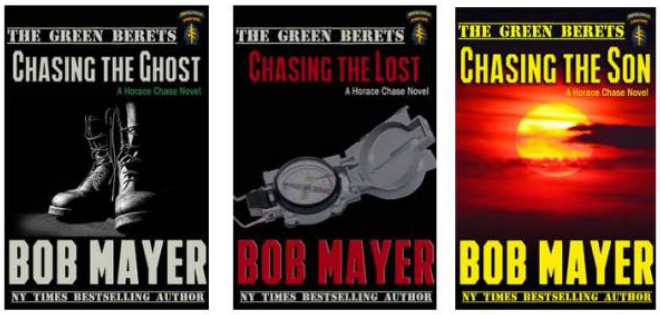
DRAGON SIM-13
Amazon | Nook | iBooks | Kobo | Google

CUT OUT
Amazon | Nook | iBooks | Kobo | Google

SYNBAT
Amazon | Nook | iBooks | Kobo | Google

ETERNITY BASE
Amazon | Nook | iBooks | Kobo | Google

Z: THE FINAL COUNTDOWN
Amazon | Nook | iBooks | Kobo | Google

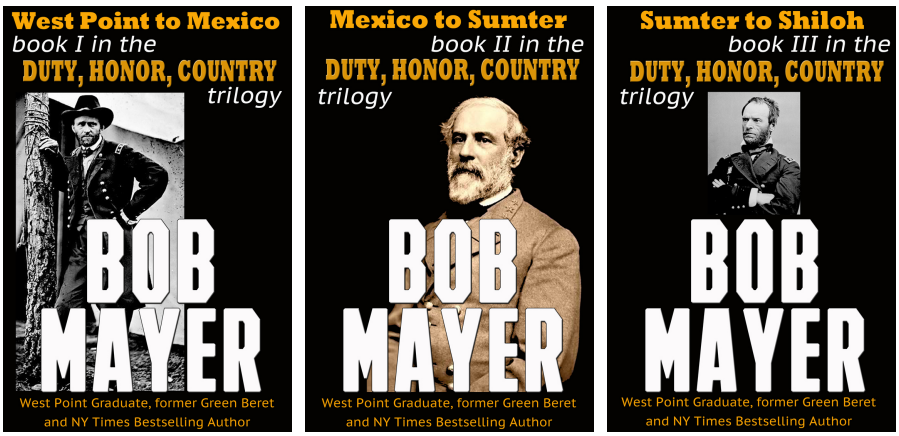


CHASING THE GHOST
Amazon | Nook | iBooks | Kobo | Google

CHASING THE LOST
Amazon | Nook | iBooks | Kobo | Google

CHASING THE SON
Amazon | Nook | iBooks | Kobo | Google

DUTY, HONOR, COUNTRY



WEST POINT TO MEXICO IS FREE!
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MEXICO TO SUMTER
Amazon | Nook | iBooks | Kobo | Google

SUMTER TO SHILO

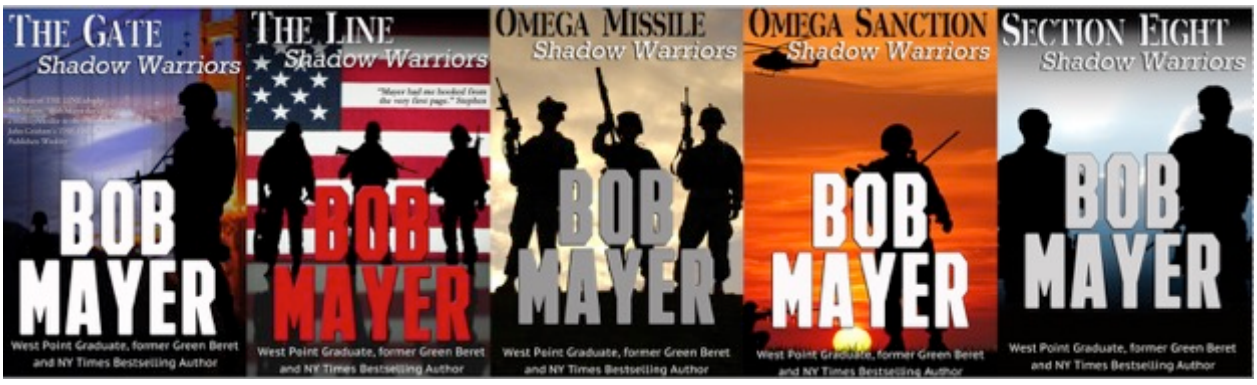
Amazon | Nook | iBooks | Kobo | Google

THE PRESIDENTIAL SERIES

THE JEFFERSON ALLEGIANCE
Amazon | Nook | iBooks | Kobo | Google

THE KENNEDY ENDEAVOR
Amazon | Nook | iBooks | Kobo | Google

THE SHADOW WARRIOR SERIES



"A pulsing technothriller. A nailbiter in the best tradition of adventure fiction." Publishers Weekly.

"Mayer has crafted a military thriller in the tradition of John Grisham's The Firm." Kirkus

THE GATE
Amazon | Nook | iBooks | Kobo | Google

THE LINE
Amazon | Nook | iBooks | Kobo | Google

OMEGA MISSILE
Amazon | Nook | iBooks | Kobo | Google

OMEGA SANCTION
Amazon | Nook | iBooks | Kobo | Google

SECTION EIGHT
Amazon | Nook | iBooks | Kobo | Google

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