

SURVIVING CLIMATE CHANGE

How to Crisis-Proof Your Life

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Suggestions for improvement are welcome

WHY WE MUST PREPARE

Extreme climate events are happening all over the world. According to the U.N., in 2018 “Sixty-two million people were hit by extreme weather disasters fueled by climate change”. They can occur when we least expect them, and most people are not prepared. We insure our cars and our dwellings, but we often forget about preparing for other emergencies.

The Australians had no idea that in January 2019 they would experience an unprecedented heat wave. Who would have thought that much of Fort McMurray would burn? The big flood in Fredericton this year was shocking. The dam break and subsequent flood in Quebec was devastating. None of us can know what will happen next or where. What we do know however, is that we can choose to be a survivor or a statistic – the choice is ours.

The first few pages of this short guide explains why we must prepare; the second part explains how to crisis-proof your life. If you are one of the few who are prepared for a climate emergency, maybe you will consider sending this guide to someone who isn't.

I spent several years as a forest ranger prior to returning to university and changing careers. My training as a ranger taught me to respect Mother Nature because the natural environment is beyond our control. And although I was taught how to survive in the wilderness, much of this training can be adapted to survival in an urban environment. It's all about being prepared for unexpected situations. One never knows when some type of traumatic event is going to occur. As Prof. Thomas Homer-Dixon, a renowned ecologist, says, “We're sliding toward a planetary emergency.”

Are We Overacting?

Dr. Blair Feltmate, head of Intact Centre on Climate Adaptation (ICCA) at the University of Waterloo, is another prophetic voice. He was a guest speaker on CBC's Maritime Noon radio program on July 26, 2018. Many people found what he had to say quite alarming.

One of the disturbing things Dr. Feltmate told us was that Southern Ontario's maximum daily temperature is currently 37 degrees C (97 F); by 2040, or sooner, it will be 44 degrees (112 F). That is very hot by anyone's standards. They now have about 20 days above 30 degrees; by 2040 there will be 60 to 65 days of this extreme heat. And while Ontario now has one heat wave per year, by 2040 they could have three heat waves per year. This heat scenario will be about the same for the Maritime provinces. The scary part is that warming, and cooling are not

distributed evenly; they can be very concentrated. This is how we get killer heat waves and intense cold periods. These have already begun, and more are on their way - we just don't know when. It is therefore imperative that we act now.

Some areas, like Australia, Europe, and parts of the United States and Canada are already experiencing much hotter temperatures. Unfortunately, some of those areas are also experiencing the opposite effect in that they are becoming much colder in winter with more precipitation. According to a recent UN report (March 2019), winter conditions in the Northern United States and parts of Canada are going to get increasingly worse over time. As the Arctic gets warmer, we are going to have colder winters with more snow.

But no matter how bad the news, it is still human nature to procrastinate. This time however, we can't afford to follow our nature. I'm hoping we will listen to our instincts instead and push the panic button now when it counts. Later is going to be too late. I want you to read this guide and then take the recommended action.

Prior to moving on, I am going to give you a synopsis of the most serious calamities. These are the ones that are almost certain to visit themselves upon us in the next decade. No one can predict the number or the severity of any of them, only that they are all potentially serious. Here is what we could face:

- Food shortage - a disruption of the food distribution system causing a severe food shortage.
- Climate event - extreme weather conditions causing a catastrophic heat wave, intense cold spell or a massive flood.
- Pandemic – a new strain of flu or disease that has no existing antidote (like SARS, Ebola or the H1N1 virus).
- Power Outage - a prolonged disruption of the national power grid like the one that occurred in Eastern North America during the summer of 2003. It lasted days but engineers say it could have lasted much longer. As I edit (October 25/19) 2 million people are without power in California.
- Cyber-attack - so severe that it shuts down operating systems and communications for weeks.
- Terrorism - we all know it has happened before and can happen again anytime...anywhere.
- Earthquake – These horrific events can happen when we least expect them and in places where they are not supposed to occur.

Considering these potential calamities, you should ask yourself the following questions:

1. What would I do if I were without power for 2 weeks, a month, or 2 months?
2. What if it was during a severe heat wave or a prolonged cold snap?
3. What would I do if food supplies were cut off to my area for several weeks?
4. In an extreme emergency, am I ready to safely evacuate myself and/or my family with only a half hour notice?

In the Fall of 2018, 170,000 people had to be evacuated immediately when the Camp Fire in California burned through more than 200 square miles and incinerated an entire town of 25,000 people. Closer to home, last Spring and again this Spring, south of Fredericton New Brunswick, hundreds of people had to be hurriedly evacuated due to extreme flooding. Some were out of their homes for weeks. The right weather conditions could turn large areas of Canada and the United States into a disaster zone overnight.

A critical aspect of disaster that people often don't realize is that all food would disappear within hours of a panic situation. This has happened during many recent events, the latest one being the big snowstorm in Seattle, WA in February 2019 – food was gone, and power was out. What saved them was that the emergency didn't last very long – what if it had? In similar circumstances, would you have been prepared?

Are We Ready for What Lies Ahead?

Not only are we being inundated with stories about extreme heat and extreme cold, we are also getting them about extreme rain events and unprecedented snowfalls. Meteorologists say that naturally occurring weather events are being “turbocharged” by heat and moisture from rapidly warming oceans. Storms have doubled in the last thirty years and their magnitude has increased dramatically as the planet warms. Extreme precipitation events, which the weather people now refer to as ‘rain bombs’, are now as devastating as hurricanes and tornadoes. There are 40 percent more violent rainstorms than there were 50 years ago. The Northeast now gets 70 percent more of these devastating rainfalls. And since 1958, heavy downpours are three quarters heavier than they used to be. One of them dumped more than 50 inches of water in just over twenty-four hours. Power outages from these storms have more than doubled in just the last 15 years. Puerto Rico, for example, was without power for months after extreme flooding in 2018. Huge rainstorms can now happen very quickly and occur anywhere. We have entered uncharted territory.

Massive floods from snowmelt are also becoming increasingly common. As we are editing this guide on the afternoon of March 16, 2019, three States in the Midwestern United States have declared a state of emergency due to excessive flooding from snowmelt. The headline read as follows: ‘Flooding triggers emergency, disaster declarations throughout the Midwest’. Some areas were

grappling with the worst flooding seen in half a century...affecting as many as 74 million Americans.

Humans soon forget and are easily lulled into a false sense of security – therefore most people don't prepare for emergencies. According to Dr. Nancy Levenson, a professor at MIT, dire environmental predictions only occupy our focus until the current flood, hurricane or heat wave has ended. Then it becomes 'life as usual'. We can not stay focused on the negative for very long, and that is normally a good thing – UNTIL NOW. We need to face some very harsh realities and take the appropriate action. A lot of people will be fooled into thinking that all is okay because not every year will bring climate extremes – some years will be very normal. Then, suddenly, when we least expect it, disaster will strike. For this reason, we have to take action while we can. Complacency could kill us.

HOW TO CRISIS-PROOF YOUR LIFE

Most people don't want to read a survival guide, let alone get prepared. As humans, we usually read the instructions only after things go wrong. But once a disaster situation begins, it can spin out of control very quickly. Much better to learn the basics of urban survival before an event occurs rather than after. Any sailor will tell you that during a hurricane is no time to learn how to sail.

With this in mind, I am going to lay out the minimum that you will need to survive for weeks or even months. This might sound far-fetched, but with our changing climate, it isn't. In fact, it could prove to be very prudent. Don't listen to the government and others who say you only need to be prepared for a 72-hour emergency – those days are long gone. With what lies ahead, we could be on our own for extended periods of time. Depending on the type of emergency, you will either have to stay in your home or be forced to leave. This guide will prepare you for either situation. Good preparation is a mix of learning, planning, community and cooperation.

This simple guide is designed primarily for an urban audience since most people now live in cities or large towns; often in apartments, condos or subdivisions. People in rural areas tend to be a bit more self-sufficient because they often have a wood stove for heat, kerosene lamps for power outages and preserves from their garden.

My proposals are also designed with ordinary people in mind. We are not all going to become survival specialists. Most people just want to do enough to make them feel reasonably secure. For this reason, I will stick to the basics.

As you read these next few pages, please keep in mind that you could be virtually alone once an emergency begins. Police, militia and the military will, in many cases, be overwhelmed. The system is not designed to handle the sudden and widespread

climate disasters that scientists are predicting. Another important thing to consider is that there is no national stockpile of food. As mentioned earlier, food distribution to any area can be dramatically affected by events far away. Vast power outages, big forest fires, floods and other situations could cut food supplies for an extended period. What food there is will be gone in a very short time.

Most areas import over 85 percent of their food and 95 percent of the food in our local grocery store arrives there by transport truck. So, when bakeries can no longer bake, and transport trucks can no longer roll, we are going to have a serious problem. Just think of how many times you go grocery shopping. What will happen when you can't?

Shelter – The first priority

If you are without power for an extended period, the problems quickly multiply. If it's winter, most people must worry about freezing. Should it happen in the summer, keeping cool will be one of your biggest concerns. I have been in both scenarios; a big winter storm caused a two-day power loss in 1976 when temperatures were far below zero and the big power failure on August 14, 2003. For the first outage I was at home in a rural area and had a wood stove. The next one was different. I was staying in a large hotel in Toronto for a business meeting and it was very hot. Nothing worked. There was no television, no radio, no Internet, no elevators. With subways not working and traffic gridlock, people were trapped in the downtown area. Food could not be served; bank machines didn't work and neither did traffic lights or cell phones. Grocery stores and service stations closed immediately; other stores quickly followed suit. To make matters worse, when the power shut off at about 4:30 p.m., Toronto was 32°C or 90°F and the humidity was like a sauna. For two days we suffered. At night all was dark and people were scared. The whole of Eastern North America was without power. How long before this happens again?

But not all suffered the same. I, having been a ranger, always travel with emergency candles and concentrated energy food. Under normal circumstances, some think this to be extreme. However, in Toronto with no power, I was praised for my preparedness. As word got out, my colleagues quickly flocked to my room to get out of the darkness. A smile comes to my lips when I remember seeing a group of my colleagues, including the company vice-president, sitting around my hotel room enjoying the light of my candles. Interestingly, I began writing my third book in that hotel room by candlelight.

Heat is terrible without air conditioning; but cold is worse. Pipes freeze and windows frost up as the temperature slowly decreases. Eventually it becomes unbearable. Therefore, preparing one's surroundings in advance is paramount.

Houses should have a gasoline generator large enough to run whatever heat system they have, a refrigerator plus a few lights. The generator should be wired into the electrical panel by a licensed electrician. I recognize that this might not always be feasible in which case a portable generator will often suffice. A wood or pellet stove is also great if it can be accommodated.

Step 1 – The Comfort Room

Both houses and apartments or condos should have one room that can easily become a comfort room. This is a room in which you can be comfortable for an extended period should conditions be severe enough. This would likely be an intense cold spell with no electricity. Odds are, of course, that you will never need your comfort room for a disaster situation, but should you only need it once, it will have been worthwhile. People will be surprised at how quickly condo buildings and apartments will freeze when there is no electricity or other source of heat.

The door and the windows of your comfort room need to have insulated interior panels available. These can be easily constructed using a simple frame made of 2x2's and insulation bats covered with plastic or fabric; if you have somewhere to store them. If not, insulated curtain material or a comforter/duvet suspended on hooks or Velcro will also work well. Whatever one chooses, the insulating panel should be at least one inch (2.5 cm) in thickness and preferably light in colour. These panels can be easily stored and could greatly improve your situation by allowing heat to remain in the room.

To heat the comfort room, one must be careful. Among the best heating devices are those using solar, kerosene or solid alcohol for fuel. Best to consult the professionals at your local hardware/outfitting store for the products available in your area. One must be especially careful with kerosene devices to ensure there is enough space and/or ventilation. Always read the manufacturer's instructions carefully. Certain large candles can provide a fair bit of heat as well as light. As with solid alcohol one must be careful of the open flame.

NEVER use propane devices such as barbeques, camp stoves, etc. indoors. These are great for cooking outdoors but should be left there.

For severe situations, one needs a portable camping type toilet (most of them fold up) or similar alternative toilet container. In intense cold, without power, toilet water will freeze and so will drains, causing much damage. That is why it is crucial to have plumber's anti-freeze on hand to pour in the flush and drains in extreme situations. This is what people use for winterizing their cottages and campers. It can be purchased at most building supplies and hardware stores. This step can save you a lot of grief and most people are unaware of its importance. It is also essential that

you know how to drain your water system – this is a very easy task and one that can be explained to you in minutes by your local plumber. Never underestimate the importance of alternative toilet facilities. Having a bowel movement on the lawn or a parking lot is frowned upon in most municipalities 😊

Food and Water

Water is ultimately more important than food. In an emergency, one will need storage containers and water purification tablets. Unscented bleach will do in a pinch but better to have the proper tablets ready. Some planners suggest having one gallon (4 liters) per person, per day stored at all times and changed periodically. How many days for which you prepare will obviously depend on the amount of space you have - a two-week supply is recommended.

Food is a lot less difficult to store than water. Most people need only increase their regular dry food and canned goods supply by about 50 percent and rotate it every six months. I like extra oatmeal, molasses, beans, sardines, condensed milk and other canned goods. Some people recommend having a year of extra food on hand; to me, this is a bit much. It would be reasonable to have six months of regular non-perishables on hand and possibly some dehydrated survival food like that used by wilderness campers/hikers. Of course, the type and amount of food required will depend on the number of family members and the extent to which you want to be prepared. My contention is that you need a minimum of two months food and supplies – three would be better. No need to become a big time ‘prepper’ with an underground bunker, etc.; being reasonable is acceptable. The main thing is to act now. Those who procrastinate will probably do nothing.

It is also important that you have a place in your home to hide valuables and important documents should you have to leave in a hurry. Looting is common when houses are evacuated in an emergency. This happened in May 2018 during the big flood in the Saint John River Valley; hoodlums went around in boats looking for opportunities to steal items from vacant homes – fortunately, several were apprehended and brought to justice. Your imagination can serve you well when it comes to hiding things – just make sure you remember where you put them.

Step 2 - The Home Readiness Kit

The items in your home Readiness kit should be stored together in easily accessible containers. This way, when a situation develops you will know where everything is, and you won’t have to look for them. Obviously, some of these items will already be around your home, so having a little bit extra on hand is not going to be difficult. The main thing is to be able to locate these things when there is no power. Again, it sounds extreme, but it isn’t.

I have included only those items that are most practical – you may wish to add other things in the kit for your own comfort. I am mainly concerned that you have the basics. It is surprising how many people do not have these items and are not prepared for an emergency of even 72 hours. For these essentials it's always better to assume a worse case scenario.

- A solar powered radio or a crank type and a solar charger for your mobile devices
- A couple of good flashlights with extra batteries; one being solar rechargeable
- Kerosene lamps and two gallons of lamp fuel; and maybe a couple of battery lamps
- Candles (the big long-burning type)
- Extra toilet tissue and toothpaste
- Soap and hand sanitizer
- Several large sheets of 4 mil plastic and lots of packing tape or duct tape (should have both) in case of window breakage, etc.
- Two manual can openers
- 100 feet of good quality rope
- A well stocked first aid kit with plenty of bandages, peroxide and rubbing alcohol
- Plenty of matches or lighters (I keep both)
- Coleman stove with plenty of fuel
- Cash (at least \$200 in small denominations)
- Bottled water (a few gallons); to be changed periodically
- Water purification tablets

Step 3 - The Scootin' Bag – Your Friend in Time of Trouble

It is usually unwise to leave the safety of your home during an emergency. However, should you be forced to leave, you would be well-advised to prepare in advance. Every family member should have a backpack with emergency supplies which we call a Scootin' Bag. The ideal Scootin' Bag should be a lightweight, mid-sized backpack. The size of the backpack should be of a size that fits the person who will be carrying it. Keep in mind that not every Scootin' Bag will have all the same items because some of the items will only be required by adult members of the family. This will allow a distribution of items that will keep the Scootin' Bags to a reasonable weight thus they can be carried for quite a distance without becoming a burden. Have your Scootin' Bags easily accessible, fully packed and ready to go on a minute's notice. It is important that all the Scootin' Bags be kept together in the same place.

Along with having your Scootin' Bags always ready, it is also important to keep your gas tank full and check your spare tire from time to time. If circumstances allow you to evacuate in your vehicle, you will still take your Scootin' Bags but will also be able to include extra items such as blankets, extra food and additional containers of water. But since we must be prepared for both possibilities, I have included some unusual items for your Scootin' Bags. Remember that in certain situations even hotels will not have power or food – this is why your Scootin' Bag could be a lifesaver. All of the items mentioned can be purchased at Wal-Mart, Canadian Tire, outfitting stores or online.

Involving family members in this preparation exercise can be very beneficial. It can be a learning experience as well as a fun project. Of the three steps, I think that the Scootin' Bag is probably the most important. Evacuations are increasing in both frequency and duration. We can not predict what will happen, when it will happen or how long it will last.

Items for your Scootin' Bag:

Never put low quality items in your Scootin' Bag – poor quality can cost you dearly in an emergency. That does not mean that you need the most expensive brand name items, but at least use good standard quality. I will recommend a few brands that Joanne and I use.

- Survival Techniques Field Guide
- Water for each family member (minimum 500 ml bottle each)
- Solar charging device to charge mobile devices (Patriot, Qi or similar)
- Water purification tablets (you can only carry so much water due to its weight)
- Flashlights
- Radio (preferably solar or crank type)
- Multi-tool (good quality one, not the type from Dollar Stores)
- Whistle (example: Coghlan's has a wilderness signal whistle)
- Good quality sharp knife (Buck, Russell or similar quality)
- Emergency cash (about \$200 in small denominations)
- Prescription and non-prescription drugs
- Waterproof area map and GPS or a compass (if you know how to use one)
- 50 feet of ¼ in. nylon rope
- 8' X 10' lightweight plastic tarp for temporary shelter (Ozark Trail)
- Flagging tape
- Photo identification for each family member and pet (laminated)
- Emergency phone numbers – on laminated cardstock (stationery store)

- Health issue identification tags and health care identification cards (also laminated)
- Extra eyeglasses and personal items
- Toothbrush and toothpaste
- Soap, toilet tissue and hand sanitizer (the camping variety is good)
- Survival blanket (SOL makes one for 1-2 persons)
- Work gloves
- Duct tape and zip ties
- Sunscreen and insect repellent
- Pencil & small notepad (pens can be unreliable)
- Playing cards
- Emergency rain poncho (pocket-sized)
- Emergency candles
- Two 3-in-1 can openers
- Hiking socks
- Waterproof matches or lighter
- Synthetic fire starters
- Emergency Food (concentrated camping/survival food available in most outdoor stores); semi-sweet baking chocolate, granola bars, nuts, etc.
- First Aid Kit (description below)

First Aid Kit Items (packed in a waterproof container)

- First Aid manual
- Imodium* or other anti-diarrhea tablets
- Laxatives in case of constipation*
- aspirin
- adhesive bandages, assorted sizes
- gauze pads & adhesive tape
- alcohol swabs
- antibiotic ointment
- safety pins
- scissors
- tweezers
- Tums, Roloids or other anti-acid tablets
- Pain relievers (Aspirin, Tylenol, Ibuprofen or similar brands)
- epinephrine pen (if needed)

*Bowel upsets are common in stressful conditions and can make a bad situation a whole lot worse. I know this from experience having taken my Scout troop on a few week-long excursions.

Car Kit

We have the following items in our vehicle at all times, in a small kit bag we bought at an army surplus store. You never know when you will be stranded or be involved in an accident.

- A multi-tool
- Emergency blanket (Coghlan's is a good brand)
- Flashlight
- Fire lighter
- First Aid Kit
- Cash
- ¼ inch nylon cord
- Water
- Emergency food
- Laminated map of your area

Under the seat you should also have:

- Sharp knife to cut a seatbelt
- Window breaker
- Signal/flare kit

NOTE: Certified brand has a 4 in 1 tool which includes all 3 items listed above

Pandemics – The Worst Calamity

Some of what I wrote about in the preceding sections does not apply in the case of a pandemic. Special rules apply here. The first rule is that you will likely be on your own. I realize that this is a rash statement; but it's true. Even if your best friend is dying, you can't risk your family getting sick by helping him/her. In a pandemic, you must avoid other people at all cost; associating with other people who might be contagious could result in your death. As Anthony Fauci, head of the National Institute of Allergy and Infectious Diseases says, "Severe outbreaks tear communities apart, forcing people to fear their neighbors".

What this all means is that you must be totally self-sufficient to withstand the ravages of a pandemic. Keeping to yourself could save your life. But what are the chances of a severe pandemic? About 10 out of 10, if you listen to the scientists at The Center for Disease Control and other such agencies (see *The Atlantic Magazine*, July/August 2018 Issue, titled, 'When the Next Plague Hits'). They say it's not a matter of IF, but WHEN we are going to see something worse than SARS or the H1N1 outbreak. These were only a warmup compared to what could be waiting for us down the road. The intent here is not to scare you, but a plague could be a nightmare scenario. *The Atlantic* article is worth reading.

Of all the possible bad situations, a pandemic is the worst. It has the potential to disrupt everything and force people to be on their own and in their dwelling for a long period of time. Going forward, we must be extremely vigilant regarding the possibility of a pandemic. Too often we forget this lurking danger.

If you have prepared your home as suggested in this guide, you can avoid having to leave. It is wise to do all that is possible so that you can stay in your own home. To their detriment, many will leave and follow the crowd. Most of these people will not know what they are doing or where they are going. You would be unwise to join them. Advance preparation can save your life.

Banding Together

As a young ranger, I once worked on an evacuation plan for 5,000 people. I later got to practise my skills in two real life emergency situations; a massive flood in 1973 and a forest fire in 1975. Some of the suggestions below, I learned during those situations.

1. Get to know your neighbours and their resources. Banding together in time of trouble is very beneficial. People can be more resourceful when they work together. Many will have special talents or expertise in areas that can be helpful. They will probably be either active or retired rangers, police, military personnel or medical professionals. An informal community survival association can be a very positive endeavour; Neighborhood Watch has been very successful. Ideally, an association should have a command structure and a communication system. If there is no power, phones or cells, a 'runner network' could prove invaluable.

2. Become knowledgeable regarding your local EMO (Emergency Measures Organization), National Guard, the police or whoever is responsible for safeguarding your community in an emergency. Know where they are located and how to contact them. Also, familiarize yourself with their evacuation plan or what help they will be able to provide. In some cases, you will be surprised at their limited resources. Therefore, the more resourceful we are as individuals, the better.

3. Many cities have designated locations where people are to gather if evacuation is necessary. Wise to know where yours is located. Also, where will the water and food distribution centers be located? If there is no designated evacuation plan, you will have to design your own. Last minute planning can be a killer in an emergency.

4. Panic sets in quickly. In most places, as already mentioned, there is no stockpile of emergency food or water – especially for an extended crisis. When people realize this, there could be trouble. Things can get serious very fast – remember what New

Orleans was like after Hurricane Katrina. Bolt your door, draw your shades and stay inside. The first few days will probably be the worst depending on the type of crisis. You and your family will probably find it difficult to remain calm – but it is important that you do. If you let fear and panic permeate your psyche, it could cause you to think irrationally and thus take inappropriate actions. One such irrational act might be to leave your home unnecessarily. In times of panic, your home, if well prepared, will be the safest place available. This is particularly true in a pandemic. Survival can often depend on remaining calm.

5. To keep everyone calm, get them involved. Encourage them to cook, clean, study or simply get a card or board game going – but do something. In the days of sailing ships, during a storm they would have people who were frightened hold tightly on a rope. They were told that it was necessary, and they must not let go. Thus, their mind was drawn from the terror of the storm to the importance of their responsibility. The same is true during an emergency – fear will be rampant, so keep everyone occupied.

Possibly by now you think I am a paranoid survivalist. Nothing could be farther from the truth. Joanne and I are just ordinary people who believe in being prepared for life's unexpected emergencies. We live in a condo in the small city of Fredericton and know how vulnerable most of us have become. What we are advocating is reasonable preparedness as we face the growing possibility of a major calamity. Prof. Jared Diamond says, "For the first time in history, we face a global emergency". Although as a society we might be limited right now as to what we can do for the environment, we can at least protect our families by becoming more resilient. To do nothing now and see our families suffer would be the ultimate act of negligence.

Now that you have finished reading this guide, here is what I want you to do next. Right now, or as soon after 'now' as possible, head out and start buying the items for your Scootin' Bag and Home Comfort Kit. My effort will have failed if you fail to act.

If you found this guide useful and wish to help us with this project, you can make a donation on our website (dfs2000.com) by clicking on the "Support our Project" button. Any amount will be appreciated.

Also, please be sure to enter your email address on our website to receive free updates which will be added periodically. This guide is a 'work in progress' and we invite your comments and suggestions.