

Some comments on our emergency planning

by Jacqueline Windh, PhD

This article is the second part of a 2-part series commenting upon our west coast emergency preparedness programs. I appreciate and acknowledge the efforts of all of the volunteers who have put together our local emergency preparedness programs and information brochures. However, I do not believe that all of the information and advice that they have put together is appropriate for the magnitude and character of the expected events.

I hope that these comments and suggestions will be used for the continuing improvement of our emergency procedures.

What are we preparing for?

In order to prepare for a disaster, it is important to understand as much as possible *what* we are actually preparing for. Last week's article explained what we should be prepared for:

1. a magnitude 9 to 9.5 earthquake that will cause extensive damage to all buildings, will injure some people, and will cause extensive infrastructure damage (roads, power and phone lines, water lines) all over coastal BC, followed by
2. a series of tsunami waves that will come in over the following 6 to 12 hours, inundating areas up to 10 m above the high-tide line on the open coast, and possibly higher up some inlets.

Emergency kit lists do not need to be drawn up district by district. Emergency planning procedures for surviving earthquakes have already been drawn up in many places around the world, and much of the information that I am providing here comes from earthquake emergency plans from:

Northern California <http://pubs.usgs.gov/gip/2005/15/#stepthree>

Southern California <http://www.earthquakecountry.info/roots/step3.html>

Japan <http://www.clair.or.jp/tagengo/general/en/en01-04.html>

Grab'n'go kit

The Grab'n'Go kit is an essential emergency kit for anyone who lives, or spends time, within the tsunami inundation zone (below 10 m elevation, and possibly higher up certain inlets). It is a good idea for everyone, regardless of where you live, to have a Grab'n'Go kit ready, in case you need to evacuate for an earthquake or other emergency.

This is the kit that you grab as you exit your house following the earthquake, or if you receive notice of a Tsunami Warning from emergency officials. Its purpose is to enable you to survive the next 12 hours – until the tsunami waves have subsided and you may either return to your house or go to an emergency centre. It needs to be small and light enough that you can flee on foot with it.

My concerns about the Grab'n'Go kit list provided by our local officials are its great length (126 items!), which I think might put some people off of trying to make their own kit, and by the content of the list (including cribbage board, fire extinguisher, shower cap...). These extra items not only add weight, they also diminish the seriousness of what this kit is for: *short-term survival*.

The two California websites listed above provide good lists of what to have in your Grab'n'Go kit. Rather than have an intimidatingly huge list of items and specific foods, they provide a short list of general guidelines, and each person or family can use this to pack what works for them. Some of these categories include:

- First aid kit, and duplicate bottles of any essential medications, eyeglasses etc.
- Snack foods high in calories (e.g. granola bars) and bottled water
- Emergency lighting (some emergency lists recommend that they *not* be candles, because of the risk of fire following an earthquake)
- Important papers e.g. personal ID, medical information forms, list of emergency contact phone numbers
- Sturdy shoes and warm clothing (think of the “what ifs”: what if the earthquake comes at 3am when you are in bed – can you get dressed and out of the house quickly enough?)

Remembering that out here there is a 50% chance that it will be dark, and about a 50% chance that it will be raining, you should pack some sort of shelter: a light tent if you have one, or else a tarp and some way to put it up (rope and possibly a pole) and some emergency blankets. (If you have never tried to shelter under a tarp in the rain before, you should try out your tarp before you pack it – it needs to be surprisingly large to actually provide any protection, minimum 10x12 feet for one or two people).

If you are a backpacker, storing your camping gear (tent, sleeping bag, stove and fuel, etc) packed with enough food as if you were going on an overnight trip, along with First Aid supplies, is a very simple way to create a Grab'n'Go kit.

Longer-term survival kit

We learned this past winter, with all of the power outages, that Tofino/Ucluelet is second-lowest on the province's emergency assistance list (only Bamfield is lower than us!). Remember that the earthquake will damage infrastructure not only here, but throughout much of the province. If it took multiple days to clean up roads and restore power from some of the big storms last winter, I think we can count on it taking many *weeks* to restore road access and power when that earthquake hits. So that gives us an idea of what we should prepare for: no electricity and no incoming supplies.

The intention behind the “52 Weeks to Being Emergency Prepared” brochure about survival kits is hard to work out – whether this is a kit we are supposed to take with us when we evacuate, or whether we are supposed to leave it in our home. While it says that the kit should be transportable, the size and weight of everything on this list would not fit

in most cars, and the logic of transporting so many tools escapes me. Some items that many people already have are missing (see below). The list of foods is far too specific and will not work for everyone. The organization of the list, by what to pack each week, rather than by category (food, shelter, etc.), is inconvenient.

It is beyond the scope of this article to come up with a complete emergency survival kit list. Some general tips, that hopefully can be used to improve this list, are:

1. Think about cooking. If you are a camper, keep your camping stove and lots of fuel handy and count it as doubling as emergency supplies. If you have a gas or charcoal BBQ at home, make sure that you always have enough spare fuel on hand that you could cook for at least a week if the power is out.
2. Think about foods. We are talking emergency rations, not *haute cuisine*, and basic survival this week is more important than taste. Unless you are 100% sure that you will be able to cook, most of your emergency food should be things that you can eat without heating: for energy, things like rice crackers and granola bars; for protein, things like beef jerky, instant hummus mix, tinned fish or oysters, and nuts or nut butter. Oily foods are good for helping to stay warm. Tinned foods like stew can be heated or eaten cold. If you think you will be able to cook, foods that cook very quickly (instant rice, couscous, instant oatmeal, powdered soup mixes) will make your fuel last much longer.
3. Think about water. It is hard to store the recommended 4 litres per person per day, so water purification tablets are essential, as is a way to catch and store water (e.g. pots set out at the bottom of your tarp or tent, and collapsible water storage bags).
4. Think about shelter. Depending upon the age and structure of your home, and whether it is anchored on bedrock or not, your home may or may not be habitable after the earthquake. If you don't think your home is likely to survive the quake, your kit should also have extra shelter items, like large tarps or tents, and sleeping gear.
5. Think about storage. If your home has been very badly damaged by the quake, it may be hard to access your gear. Storing your kit near a door, or in a shed if you have one, might make it easier to dig out. If you live within the tsunami inundation zone, storing your gear upstairs might be safer – if you think you will be able to get back into your house. If you are worried that your home may not survive the quake+tsunami, then storing your long-term survival gear at the home of a friend who lives at a higher elevation might be a better option. For some people, there is no easy answer here – you just have to figure out what is the best solution for you.

Everyone's situation is different (food needs, family size, house location and structure), and there is no specific list that can work for everyone. I think that a format that outlines categories and suggestions is far more useful than a huge comprehensive list.

Some general remarks

Radio. Although our emergency kit lists all have battery-powered radio as an item, we all know that we lose our radio transmission when the power goes out. *CBC Radio has*

no plans to upgrade the power source to the repeater out here, so we cannot count on them in the future. Although there are plans to provide a back-up power source to Tofino's CHMZ, I am very concerned about plans to relocate the station to the bottom of First Street, within the tsunami risk zone. A reliable radio transmission source on high ground should be planned for our communities – but until it is, don't bother weighing down your kit with a radio.

Home earthquake preparation. The Japan website provides information about preparing your home for an earthquake. For example, they suggest having metal fittings that keep furniture from falling over, and mention a special film that you can put over windows and glass cupboards to help prevent injury from shattering glass.

Immediately after an earthquake. The Japan website also provides a good list of what to do during and immediately after an earthquake. Remember, even after a small earthquake, to double-check that your phones did not get jiggled off the receivers. Even if you are doing the right thing by not making calls after an earthquake, you still could be clogging up the phonedlines if your phone is off the hook!

I hope that this information will help you to prepare an emergency kit that is appropriate to your own situation, and I urge you to look up the web resources that I have listed above. A short article like this cannot provide all the answers, but hopefully it provides some food for thought. Remember, there is a 90% chance that the earthquake will *not* come within the next 40 years... but it *will* come eventually, and it *could* come within our lifetimes. It is important that we are all as equipped to take care of ourselves and our loved ones as absolutely much as possible.