

Emergency Preparedness – Level 4

"In the first 48 to 72 hours of an emergency, many Americans will have to look after themselves." - David Paulison, FEMA Director Nominee

Each of us lives in the context of a larger society. Few among us could survive for long without the support of many people and institutions we depend upon for our daily needs. A realistic disaster plan must balance these dependencies against the stark truth that you are likely to be required to survive outside this system for days or weeks at a time at some point in your life.

We will continue with the planning to address your disaster risks.

The family-level preparedness plans (and material support for those plans) should meet the following criteria:

- Any critical element of each plan must have **at least** one clearly explained alternate solution
- All plans must be in written form, ready to be executed by anyone entrusted with the safety of your family
- A written copy of your plan must be available in any context in which you might need to execute said plan (e.g. home, work, vehicles)
- Everyone involved in your preparedness plans (e.g. out-of-state relatives) must review their part of the plan and understand their role
- Material preparations must not require inspection more than once per year, and must still be capable of meeting minimum requirements if left unattended for 4 years

The fact is that people are lazy. If your disaster plan depends on dumping and refilling bottles of water every 3 months, at some point, you **ARE** going to get slack and lose the motivation to keep to the schedule. It takes a pretty deep motivation to consistently maintain your preparedness materials every 90 days over a span of years, and most people just can't sustain that level of effort. Having bad bottled water and canned food three years past its expiration date isn't an inconvenience in a crisis -- it's **dangerous**, because in an extreme situation you might be tempted to use it anyway.

A realistic preparedness plan should address the following objectives. Keep in mind that your preparedness package must address **your** risks, where you live.

Communications and rendezvous plan

In a crisis, you are likely to be separated from at least one member of your family. Start with the assumption that your family is at its most vulnerable, i.e. at maximum separation in your daily

routines. Your rendezvous plan should address the possibility that family members at work and/or may need to evacuate quickly.

Your communications plan should have two priorities: advise concerned parties on your situation (safe, injured, etc.) and propagate information between people in the disaster zone who may not be able to communicate directly.

House fire: evacuation, response, and aftermath

No explanation needed. If you don't know what you're going to do in case of a house fire, you are at significant risk of dying in one. If, after failing to plan, you get out alive the aftermath is likely to be extremely difficult.

Any number of organizations offer complete guides on how to prepare for a home fire emergency, including the American Red Cross. The Planning guide is on the Pioneer website, ask your leader to download it. The title is ARC_EmergencyPreparednessChecklist Level 4.pdf

Home refuge with no services: Ten (10) days self-sufficiency

10 days with no running water, no grid electricity, and no natural gas and/or propane delivery. This is most likely to occur during inclement weather so assume that you will need to deal with extremes of heat/humidity or cold. Sanitation and medical requirements for high-needs individuals will both be challenging; plan accordingly.

Open-space refuge with no services: Five (5) days self-sufficiency

If your house is unfit to occupy, you may still be able to set up camp nearby. For this situation, assume that you can recover a significant fraction of your home preparedness package. Identify several likely locations near your home where you might set up a temporary refuge.

Refuge in/near vehicle: Three (3) days self-sufficiency

Can you live in your vehicle for 3 days? Principal concerns are food, water, clothing and sanitation. Fuel: you either have it or you don't, and most people won't/can't carry an emergency supply large enough to make a significant difference.

Work refuge with no services: Three (3) days self-sufficiency

Assume that the preparedness kit in your vehicle is inaccessible, e.g. the parking garage fell down on your car when the quake hit. How will you get through three days at your place of employment, assuming that movement outside the premises is too hazardous to attempt?

Evacuation to community shelter: Three (3) days self-sufficiency

Relocation to a community shelter is not the end of your worries. Are you prepared to be self-sufficient within this environment for up to 3 days with minimal/no access to services?

Evacuation from disaster zone: by vehicle

Similar to the refuge in/near vehicle requirement above, but with the added requirements of routing, fuel supply, and so forth. How will you evacuate when the gas stations are closed and/or sold out and the fuel gauge is on 'E'?

Evacuation from disaster zone: on foot

In dire circumstances, it may be more dangerous to stay in your community than it is to attempt evacuation without the benefit of car. You should have a plan to walk/bike/sled/swim 30 miles over the course of 72 hours to reach safety. This is generally a plan of last resort.

Key planning considerations for your preparedness plan

As you put together your plan for each element in your risk-assessment list, consider how you will address the following needs:

- Environment (heat/AC)
- Electricity
- Water (Stored & portable)
- Nutrition (Stored & portable)
- Food preparation
- Food preservation
- Lighting
- Active communications (cellphone/payphone/radio/Internet)
- Passive communications (radio/TV)
- Entertainment (books/games)
- Clothing
- Transportation
- Shelter (Permanent & portable)
- Medical needs (maintenance medication)
- Medical needs (first-aid/trauma)
- Sanitation (personal hygiene, human wastes, trash/garbage)

Risks, training, and community

In Level 2 you were asked to consider the risks you face where you live. If you did your homework, you now have a prioritized list of risks that you should plan to address.

In Level 3 we discussed the psychology of disaster preparedness, and the relationship between FUD (fear, uncertainty and doubt) and effective crisis response. The prescription for avoiding FUD or shock-induced inability to function is simple: training and practice.

In addition to dry-run rehearsals of the preparedness plans you assemble to address your risks, you should plan to rehearse your fire response plan on a regular basis, at least once per year. Pick a holiday which you normally spend at home, and make that "drill day".

Every adult should take a combination First Aid/CPR course at least once every 10 years. At a minimum everyone should take the combo course every 10 years.

In any disaster, community plays a huge role. The time to make these connections to hold a community together is not in the aftermath of a disaster but now when no emergency exists. Some communities have organizations that encourage outreach and relationship-building. If your community does not, look for ways to connect with your neighbors.

Scenarios

Scenario 2 - Heat wave

Description: An unrelenting summer heat wave spreads across the Southwest. Daytime temperatures of over 110F are common. The electric power generation and distribution systems, strained by the load, suffer widespread failures.

Scenario profile:

Family separated:	NO
Immediate evacuation required:	NO
Post-event evacuation required:	POSSIBLE
Services interrupted:	YES (electricity)
Mean time to restoration of services:	3 days
Period of initial isolation:	not applicable
Communications:	minimal disruption
Secondary risks:	Medical services overwhelmed by heat-related casualties

Requirements for survival:

Environment:	YES, daytime environmental cooling
Electricity:	YES, food preservation and environmental control
Water (stored):	NO
Water (portable):	YES, required in case of relocation
Nutrition (stored):	YES, fresh food may spoil
Nutrition (portable):	YES, required in case of relocation
Food preparation:	YES, if kitchen is all-electric
Food preservation:	YES
Lighting:	YES, but minimal - night-time use only
Alternate active communications:	NO, phone/cell network functional
Passive communications:	YES, need to stay informed
Entertainment:	YES, can't go outside
Clothing:	NO
Transportation:	YES, in case of relocation or medical emergency
Shelter (permanent):	NO
Shelter (portable):	NO
Medical needs (maintenance medication):	YES, 1-week supply
Medical care (first-aid/trauma):	NO
Sanitation:	NO

This one is a double whammy -- a major heat wave leading to electricity outages. Heat waves are likely to be accompanied by a drought, greatly increasing the risk of fire danger in outlying areas.

One assumes that you will have the sense to stay out of the sun as much as possible during this crisis.

Doing too much on a hot day, spending too much time in the sun, or staying too long in an overheated place can cause heat-related illnesses. To avoid developing these illnesses, learn the symptoms of heat disorders and overexposure to the sun, and be ready to give first aid treatment.

Before the extreme heat:

To keep cool air inside and warm air outside:

- Install air conditioning.
- Insulate around window air conditioners, ducts, and doors. Weatherstrip doors and window sills.
- Consider leaving storm windows up all year. They can help keep heat out during the summer months as well as keeping the cold out in the winter.
- Install reflective film or shades on windows. Outdoor louvers or awnings can reduce the heat entering a house by as much as 80 percent.
- Use fans to keep the cool air circulating.
- Plant deciduous trees around your house that block the heat in summer and let the sun shine through in winter.

During periods of extreme heat:

To avoid the effects of heat waves, observe the following Heat Wave Safety Rules:

- Slow down. Your body can't do its best in high temperatures and humidities, and might do its worst.
- Heed your body's early warnings that heat syndrome is on the way. Reduce your level of activity immediately and get to a cooler environment.
- Dress for summer. Lightweight, light colored clothing reflects heat and sunlight, and helps your thermoregulatory system maintain normal body temperature.
- Put less fuel on your inner fires. Foods (like proteins) that increase metabolic heat production also increase water loss.
- Don't dry out. Heat wave weather can wring you out before you know it. Drink plenty of water while the hot spell lasts.
- Stay salty. Unless you're on a salt-restricted diet, take an occasional salt tablet or some salt solution when you've worked up a sweat.
- Avoid thermal shock. Acclimatize yourself gradually to warmer weather. Treat yourself extra gently for those first critical two or three hot days.
- Vary your thermal environment. Physical stress increases with exposure time in heat wave weather. Try to get out of the heat for at least a few hours each day. If you can't

do this at home, drop in on a cool store, restaurant, or theater - anything to keep your exposure time down.

- Don't get too much sun. Sunburn makes the job of heat dissipation that much more difficult.

Scenario 3 - Earthquake

Description: A magnitude 7.4 earthquake centered on the Hayward fault strikes the San Francisco Bay Area at 1630PDT (4:30pm) on a weekday in October. One adult from the household is at work, 20 miles away, when the quake occurs. The other adult is at home. One child is at the elementary school walking distance from the house. The other is at preschool 10 miles from home.

The home suffers minor structural damage, but appears fit to occupy. Bay Area bridges are declared unsafe pending inspection; extensive damage to overpasses and roadway make highway travel hazardous or impossible.

Within 4 hours of the quake, 7,000 Bay Area residents are dead and 27,000 require medical attention. The vast majority of these are in East Bay cities within 5 miles (8 km) of the Hayward Fault. Emergency plans go into effect across California, and within 24 hours, martial law is declared in the Bay area.

Scenario profile:

Family separated:	YES, worst-case scenario
Immediate evacuation required:	NO
Post-event evacuation required:	POSSIBLE
Services interrupted:	YES (all municipal services including sewer)
Mean time to restoration of services:	10+ days
Period of initial isolation:	7 days
Communications:	wireline phone network down hard; mobile voice network extremely unreliable for outdial, indial impossible; mobile data network mostly functional
Secondary risks:	Numerous, and all bad.

Requirements for survival:

Environment:	YES, night-time lows of ~45F
Electricity:	YES
Water (stored):	YES
Water (portable):	YES
Nutrition (stored):	YES
Nutrition (portable):	YES
Food preparation:	YES
Food preservation:	YES, short-term (until fresh/frozen food consumed)
Lighting:	YES, but minimal - night-time use only
Alternate active communications:	YES
Passive communications:	YES, need to stay informed
Entertainment:	YES

Clothing:	YES, replacements for contaminated/damaged clothes
Transportation:	YES, local and/or evac
Shelter (permanent):	NO
Shelter (portable):	YES
Medical needs (maintenance medication):	YES, 2-week supply
Medical care (first-aid/trauma):	YES
Sanitation:	YES

This is an actually a training exercise from FEMA used in one of their training modules. What follows isn't the complete response plan, but enough of it to give you a good understanding.

After the quake hits, each adult moves immediately to a safe location. If mobile-network voice calling is down (very likely) SMS text messaging is used to notify spouse and out-of-state relatives of event and status. If mobile-network data services are functional, email is sent from mobile devices as a backup to SMS messaging. If mobile network is down hard, proceed immediately to nearest pay phone with phone card and call out-of-state contacts with event and status. (Multiple pay phone locations need to be marked on emergency maps in all preparedness kits.)

Each adult then moves quickly to secure their location and ensure access to disaster supplies. The person at home immediately performs a rapid structural assessment. (Assume that both adults have self-treatable minor injuries, at worst.) If the house looks safe for the moment, homebody executes the following tasks:

- NatGas to OFF (wrench and/or emergency tool in multiple locations)
- Water to OFF at master valve (mandatory) and curbside valve (optional)
- Master power breaker to OFF, individual circuit breakers to OFF
- Pull emergency release on garage door and open manually if possible; move car out of garage into driveway
- Relocate containerized camping gear (incl. clothing duffel), go-packs and bicycles to back yard
- Relocate documents container to secure location
- Relocate fire extinguishers to back yard
- Relocate ice, frozen and refrigerated goods to 5-day coolers in back yard
- Relocate certain kitchen appliances, canned and dry food supplies from kitchen cupboards to back yard
- Advise contacts of status, and intent to retrieve older child from school
- Retrieve older child from elementary school, return home
- Advise contacts of successful retrieval of older child from school, status of child at preschool (unknown/unretrieved, etc.), advise other adult of any aid needed at school
- Enlist older child in setting up temporary camp, kitchen, sanitation station in back yard

The adult at work secures the work location and activates the company disaster plan. If the parking structure is intact, relocate vehicle to secure location. For safety and security reasons, travel is deferred until at least 0100PDT/day2. "Combat nap" time after setting up overnight watch schedule. Relocate to home, taking at least one other employee from the area as a

passenger. Drop passenger at safe point near destination, review emergency-contact procedures in case retrieval is required.

Three of four family members rendezvous at home by 0400PDT/day2. "Combat naps" for adults. Refuel vehicle from emergency reserve, assess situation at home using all available info sources, plan retrieval of fourth family member to start at first light (0630PDT/day2). Execute retrieval operation, verify that disaster plan is being executed correctly at preschool for remaining kids. Provide first aid as needed, leave emergency food/water supplies if required. Return to home.

This goes into great details from here on in. With this you get the idea of what an emergency preparedness plan entails. Each step requires communication and executing a plan to bring all family members back together. This family planned to succeed. How many planned to fail? It is now time to develop your plans. There are a few different preparedness plans available, but the American Red Cross planning guide and form is easy to fill out and update.

Homework:

Develop your plans for the risks identified.