



DISASTER PREPAREDNESS GUIDE



SAVING OUR SELVES

A DISASTER

PREPAREDNESS

GUIDE



Produced by

***St. Michael Parish
Independence Committee 2018***



FOREWORD

Barbados has, over many years, been fortunate to escape the unfortunate effects of many natural occurrences that have impacted its neighbours and other countries across the globe, however it remains vulnerable to several of these potential hazards. In fact, though the island has been largely spared destructive storm activity, major earthquakes, volcanic activity and the like, it has had situations that have underscored this vulnerability. This may be the comparatively mild damage inflicted by what, at the time of passing, was a relatively weak storm system, flash flooding occasioned by heavy rain, or unprecedented earth tremors. These all demonstrated that a high degree of preparation and readiness at the national as well as community level is always vital. Indeed, the unpredictable nature of many natural occurrences makes it imperative that we are all armed with enough relevant knowledge to be able to respond appropriately should specific hazards present themselves.

Therefore, this publication is intended to provide the citizen at the grassroots level with what are, hopefully, useful, easily digested tips on how to prepare for, as far as possible, the natural occurrences Barbados is most likely to be impacted by. It provides direction as to what steps to take in the aftermath of these events.

We see it as crucial that members of our community are able to take care of themselves...and to support their neighbours in the face of nature's wrath, as well as to facilitate the means by which we all can rebound as soon as possible from any destruction wrought.

The St. Michael Parish Independence Committee thanks the Barbados **Department of Emergency Management** for its support in the preparation of this document.

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Tropical Storms/Hurricanes:

Important information:

A **hurricane** (or in other regions, typhoon or cyclone) is a tropical weather system with a large low-pressure center, high sustained winds of **74 m.p.h.** or higher, and thunderstorms.



A **tropical storm** is so called when sustained wind speed in a tropical weather system reaches **39 m.p.h.**

A **tropical depression** is a system of organized thunderstorms and clouds with maximum sustained winds of **38 m.p.h.** or less.

A **bulletin** is issued when a significant weather system is detected in the area.

An **advisory** is issued at regular intervals when a tropical storm or hurricane is first detected in the area.

A **watch** is issued when the storm/hurricane continues its advance and hurricane conditions are a real possibility within **48 hours**. It does not mean that they are imminent.

A **warning** is issued when it is established that storm/hurricane conditions are expected within **36 hours**.

Before the Hurricane Season:

- Make sure that all fasteners for outside doors and windows are in order. Wherever possible, windows should be reinforced with shutters and doors with bars.
- Make sure that the roof is properly fixed to underlying structure. Spaces between the roof and supports should be sealed off during hurricane periods to prevent the wind from lifting it off.
- Wooden corner posts should be secured to stone blocks by fixing stakes to the posts and driving them well into the ground. Posts resting on concrete



blocks should be firmly fixed to the blocks with iron strips embedded in the concrete.

- Ensure there is a reserve supply of non-perishable food items on hand.
- Keep lanterns filled with kerosene.
- Have a supply of first aid materials in stock.
- Keep supplies of clean drinking water stored.
- Make sure that drinking water tanks are kept securely covered.
- Have a manual can opener.
- Trim over hanging trees or branches.
- Know the location of the Emergency shelter nearest to your home.

On the approach of a hurricane:

- On hearing a hurricane advisory, listen carefully for other messages which follow the advisory.
- On hearing a hurricane watch, continue normal activities, but stayed tune to radio or television for further messages.
- On hearing a hurricane warning, see that all livestock have plenty of water and food.
- Charge cell phones and emergency radios.
- Check flashlights, tools and first aid kits.
- Obtain and properly store batteries, matches and candles.
- Fill clean containers with potable water.
- Shut, fasten and barricade all windows and outside doors if possible.
- Take cover in a secure place. If you go to a shelter take a small supply of food and any medication you need with you.
- If you remain in a house that shows sign of collapsing take cover under stairs or under a sturdy table or bedstead.
- All fishing boats should be drawn up well above the high-water mark.



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During a hurricane:

- Do not leave your house or shelter.
- Do not open windows and barricades
- Do not go outdoors until the all-clear has been given.
- Do not shelter in gullies or low-lying areas that are likely to flood.
- Do not leave the shelter if there is a sudden lull in the hurricane. This maybe the centre of the hurricane and the wind will start up again very violently from the opposite direction.



After a Hurricane:

- Assist members of the Emergency Services if asked to do so.
- Help take the injured requiring treatment to the nearest First Aid post, polyclinic or hospital.
- Report deaths to the nearest Police Station.
- Assist by clearing debris in the community.
- Do not touch fallen wires
- Do not throw garbage waste food or dead animals in the street.
- Do not use a car unless it is in an emergency situation
- Do not go sightseeing
- DO not drink water without first boiling it unless its declared safe by health authorities.



Flooding

This occurs when drainage channels filled and can no longer accommodate additional water. The excess water then floods surrounding areas. They can be caused heavy rainfall, blocked waterways or overflowing waste water systems. They can occur over an extended period of time, or very suddenly (flash flooding).



Tips for preparing for flooding:

- Develop an emergency plan to protect life and property. Your plan should include arrangements for your family's safety and steps to secure your personal possession, property and sources of income (e.g. crops, livestocks, and business place) from flood damage.
- Know how to contact the Police, Fire Service and local volunteers.
- Stay tuned to local news and weather reports. Listen for emergency instructions.
- Keep an emergency supply of food, purified water, essential medicines and clothing on hand at all times.
- Learn the quickest routes to get to higher ground and safer locations.
- Secure all important items including, family documents, electrical appliances, pictures and wall hangings in water proof containers.
- Store all chemicals, fertilizers and insecticides in properly labeled water proof containers.
- Store these items away from food, children, livestock.

During the flood

- Remain Calm
- Listen to your radio to keep informed about all that is happening.
- Do not listen to rumours and do not pass any along any.
- Do not use cellular phones. Keep them clear for emergency calls.
- Keep garbage tightly sealed.
- Wherever possible avoid walking or driving through floodwaters.

- Do not drive over bridges above fast moving waters as these may undermine the footings and make the bridge unsafe.
- If there is likely to be flash flooding, move to higher ground.
- Do not attempt to leave your vehicle in fast moving water. If the vehicle is stalled in non-flowing but rising water, leave it and move to higher ground.

After a flood

- Do not walk barefooted outside, during or after a flood.
Wear boots or shoes.
- Boil water until you are told that the water supply is safe.
- To prevent the breeding of mosquitoes, punch holes into all containers where water can settle.
- Report illness to the nearest health centre.
- Do not touch loose or dangling electrical wires.
- Do not go sightseeing in flooded areas
- Exercise caution when using bridges that are near streams or swiftly running water.
- Bury all dead animals as soon as possible.



Earthquake

An earthquake is a shaking of the ground caused by the sudden breaking and movement of large sections of the earth's rocky outermost crust.

Aftershocks which are smaller earthquakes follow the main one. Sometimes these can occur for up to month. Although smaller in magnitude than the main earthquake, they can still cause damage.



Danger includes damage to buildings, ruptures of water, gas and sewer lines, collapse of roads and other infrastructure, and falling debris. These may also cause serious injury or death.

Before an earthquake:

- Regularly check for objects that can fall and cause injury in the event of an earthquake.
- Bolt heavy furniture, water tanks, water heaters, cylinders and storage units to a wall or floor so that they remain in place.
- Be informed about building codes and ensure that you comply with them.
- Know the location and operation of safety valves and switches for gas, electricity and water.
- Have a list of emergency numbers on hand.
- Every business, home, school and community should have a disaster plan, which should be practiced often.



- Have an emergency kit ready. Stock up on non-perishable foods, emergency lighting, spare batteries, medication, baby items, water and first aid supplies.



During an earthquake:

- Drop! Cover! Hold On! Do not move until the shaking has stopped.
- Cover your head and neck as protection from falling debris. Seek shelter if you can under sturdy furniture.
- Stay away from windows, outside walls, light fixtures and anything that can fall.
- If you are in bed, remain where you are and cover your head and neck with a pillow. At night, hazards and debris are difficult to see and avoid, therefore moving from the bed may increase the risk of injury.
- Do not run outside during an earthquake. If inside, stay inside and protect yourself.
- Do not use elevators or stairs.
- If outside, stay outside away from buildings, electricity poles and bridges.
- If in a vehicle, stop quickly as possible and remain in the vehicle. However, wherever possible do not stop on or under a bridge, near a building, or under any structures or trees.
- Avoid roads, or bridges damaged by the quake.



After an earthquake:

- Check for injuries. Seriously injured persons should not be moved unless they are in immediate danger of further injury.
- Do not light matches, open flame appliances, ignite lighters or turn on electrical switches until you are sure that there are no gas leaks. Use a flashlight instead.

- Wear shoes and protective clothing, for example, hard hats and gloves, to avoid injuries while clearing debris and cleaning dangerous spills, such as, flammable fluids, drugs and poisonous pesticides.
- Check for broken gas, water and sewage lines, downed power lines, damaged and weakened buildings and foundations, fires and potential fire hazards.
- Do not use the telephone except in extreme emergencies. A cell phone may be used if you are trapped to enable rescue.
- Cupboards and other storage areas should be carefully opened because objects might have shifted during the earthquake.
- Stay away from beaches and other waterfront areas where seismic waves (tsunamis) could strike.
- Do not go sightseeing or into damaged areas unless authorized by appropriate personnel.
- Be prepared to **“Drop, Cover and Hold On”** should aftershocks occur.

Tsunamis

These are waves created by a major disturbance of a body of water, (by an earthquake, underwater volcano, landslide or meteorite). The disturbance can push water towards a shore in minutes but waves may continue for hours. The areas of greatest risk of being impacted by a tsunami are those below 25 feet above sea level and within a mile of the shoreline. Drowning is the cause of death most associated with tsunamis. The waves and receding water cause immense structural damage, and can contaminate drinking water, and start fires from ruptured gas lines or ruptured tanks.



It is important to be able to recognize the natural signs of a tsunami and be able to respond quickly as official evacuation orders may not be given in time.

Before a tsunami:

- Create an emergency kit (tinned foods, medication, flashlight, clean water etc.) and make a tsunami emergency plan.
- Discuss and practice the plan with family and co-workers.
- Know your community warning systems and disaster plans including evacuation routes.
- Determine escape routes to higher ground or inland. Avoid low lying coastal areas.
- In the nearby coastal areas, identify concrete steel reinforced multi -story buildings, preferably at least three storeys that can be used for vertical evacuation if necessary.



During a tsunami:

- Comply **immediately** with official evacuation orders.
- However, do not wait on an order, if you recognize any of the natural warning signs move towards higher ground immediately!! Leave belongings behind if necessary.
- If it is not possible to get to higher ground, go to a steel reinforced building three storeys or higher in height.
- Sometimes tsunamis may occur without the initial pulling back of water. In this case a massive wall of water may be seen approaching land. If you can see the wave you are already too close to outrun it.
- If necessary, climb a tall strong looking tree and hold on tight.
- Tsunami waves may flood areas much further inland than storm surges. If swept up by a tsunami, look for something to use to keep you afloat.
- A tsunami is not a single wave but a series of waves and very strong currents that can come ashore and affect beaches and harbours for hours. The first wave may not be the largest.
- If a tsunami warning is issued, never go down to the beach to watch the waves come in.
- Stay in the safe area until a recognized authority e.g. **D.E.M.** issues the all clear.

After a tsunami:

If possible, stay tuned to radio or television to get the latest emergency information. Only venture out of your safe area, return home or go to the coast when authorities give the all clear indicating it is safe to do so.



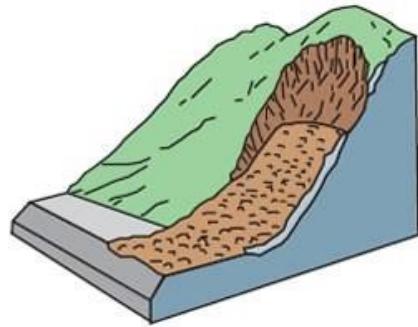
Once the all clear is given:

- Keep out of stagnant water: it may contain debris which may be hazardous.
- Check for injuries to yourself and get treatment if necessary as soon as possible. Also check for other persons and assist wherever possible if there are injuries.

- Help persons who may be trapped. Call for the appropriate assistance in freeing such persons.
- Help those who require special attention: infants, the elderly, special needs persons etc.
- Check for damage to gas, sewer and water lines.
- Check food supply and test drinking water.
- Fresh food that has come in contact with floodwater may be contaminated and should be discarded.
- Enter buildings impacted by the tsunami with caution: the floodwaters may have weakened the structure and make it prone to collapse.
- Wear protective clothing and be careful when cleaning up.

Landslides

Landslide is a general term covering a wide variety of mass movement landforms and processes. This involves the downslope transport, under gravitational influence, of soil and rock usually within a relatively confined zone. A landslide is different from a **landslide** in that the former occurs instantaneously whilst the latter is slower and occurs over a longer period of time.



Facts:

Vibrations from an earthquake can trigger a landslide.

- Heavy rains and subsequent water logging saturate top layers of unstable soil and can cause them to slide downhill.
- Human activity such as deforestation, vegetation removal, improper construction of roads and buildings on steep slopes may also lead to land slippage.
- Landslides may move very slowly from a few centimeters per year to a sudden, total collapse or avalanche.
- Landslides can be deadly. They destroy houses, cars, water, mains, gas pipes or anything else in their paths.



Signs of an impending landslide to look for:

- New cracks appear in plaster, tile, brick or foundations.
- Outside walls, walkways or stairs begin pulling away from buildings.
- Unusual bulges in the ground, street pavements or sidewalks.



- Ground water seeps to the surface in new locations.
- Fences, retaining walls, utility poles or trees tilt or move.
- Soil moving away from foundations.
- Ancillary structures such as decks and patios tilting and/or moving relative to the main house.
- Broken water lines and other underground utilities.
- Sunken or down-dropped road beds
- Sounds such as trees cracking or boulders knocking together.
- Any sudden increase or decrease in the flow of natural water courses.

Factors contributing to vulnerability:

- Settlements built on steep slopes, softer soils and cliff tops.
- Settlements built at the base of steep slopes.
- Roads and communication lines in hilly areas.
- Buildings with weak foundations.
- Buried pipelines and brittle pipes.



How to reduce the risk of a landslide:

- Plant trees and shrubs that hold the soil on slopes.
- Build retaining walls.
- In areas prone to mudflows, build channels or deflection walls to direct the flow around buildings.
- Beware of changing the natural course of water ways. ☐This can cause problems, if not to you, then to others.
- Use Gabion baskets to control the flow of water down slope.
- Know and follow official building regulations which set out land use and building ordinances and regulate construction areas susceptible to landslides and debris flows.

- Watch the patterns of storm water drainage on slopes near your home, and note especially the places where run-off water converges, increasing the flow over soilcovered slopes. Be vigilant regarding any signs of land movement, such as small landslides, debris flows or progressively tilting trees.
- Learn about the emergency response and evacuation plans for your area and develop your own emergency plans for your family and business.

Important Emergency Numbers

Agency	Number
Police	211
Police PBX	430-7100
Fire	311
Ambulance	511
QEH	436-6450
Department of Emergency Management (D.E.M)	438-7575
Island Care Ambulance	537-9425
Islandwide Ambulance	271-3218
Medic Response Ambulance	228-8633
The Sparman Clinic and Ambulance Service	624-3278
Barbados Defense Force (PBX)	536-2500
Barbados Light and Power	626-9000
National Petroleum Corporation	430-4000/430-4099

EMERGENCY SHELTER REGULATIONS

1. The Senior Warden is the supreme authority in the Shelter and his/her decision is final.
2. The Emergency Shelter Warden or other Shelter Warden designated by the Senior Warden will be responsible for the Shelter in the absence of the Senior Shelter Warden.
3. The Warden is entitled to call upon any occupant of the Shelter to assist in its operation and every occupant is expected to cooperate to the best of his or her ability.
4. If a State of Emergency is proclaimed at anytime under the Emergency Powers Act, all persons within the Shelter will be subject to the Orders made under the Act and will be liable for such penalties as may be imposed for failure to comply.
5. The Senior Warden and all assistants are forbidden to accept responsibility for any item of personal property of any occupant of the Shelter.
6. The **Department of Emergency Management** will not be liable for any damage to, or loss of any property belonging to any occupant.
7. Any person who is seen defacing or in any way damaging the Shelter or any item of its furniture or equipment will be prosecuted.
8. Unseemly, indecent, or unsocial behaviour such as the use of violence, profane language or drunkenness will not be tolerated and will result in prosecution where any such offence is contrary to the law.
9. No smoking of any kind will be allowed in an Emergency Shelter.
10. The consumption of alcohol or other alcoholic beverages is strictly forbidden in an Emergency Shelter.
11. No Firearms will be allowed in an Emergency Shelter.
12. No offensive weapons will be allowed in an Emergency Shelter.

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WELFARE OFFICES

DISASTERS

RECOMMENDED LIST OF PERSONAL ITEMS TO BE TAKEN TO SHELTERS

If you feel that your home is not secure or safe, or if you have been advised by D.E.M. to evacuate, go to the nearest shelter.

A copy of the Shelter Booklet can be obtained from the DEM Website.
www.dem.gov.bb

It is recommended that the following items be taken to the Emergency Shelter for your health and comfort:

		 3. FLASH LIGHT RADIO & BATTERIES
	 5. SPECIAL FOODS (Diet, etc.)	 6. BABY DIAPERS, FORMULA, BOTTLES, MEDICATION POWDERED MILK & OTHER BABY NEEDS
	 8. BOOKS, GAMES AND TOYS FOR SMALL CHILDREN	 9. PLENTY BOTTLE WATER
7. SLEEPING BAGS		

PLEASE NOTE

1	NO MEALS will be provided at the shelters. However persons are advised to take to the shelters non-perishable food items or special food to last at least three (3) days.
2	The Red Cross Society and the St. John Ambulance Brigade will provide First Aid service, but are not equipped to provide hospital care
3	Pets are NOT allowed in Emergency Shelters. Provide food and water in your home or arrange for your pets to be boarded with your veterinarian or kennel
4	No intoxicating beverage will be permitted in the Emergency Shelters
5	If you are pregnant, contact your physician as to his/her recommendations, for your health and safety

DISASTER SUPPLY KIT CHECKLIST

Here is a list of supplies you should always have in the event of any disaster.
«Hope for the best, and prepare for the worst»

FIRST AID KIT

FOOD AND WATER

- Sterile adhesive bandages in assorted sizes
- Assorted sizes of safety pins
- Cleansing agent/soap
- Sunscreen
- Latex gloves (2 pairs)
- 2-inch sterile gauze pads (4-6)
- 4-inch sterile gauze pads (4-6)
- Triangular bandages (3)
- Non-prescription drugs
- 2-inch sterile roller bandages (3rolls)
- 3-inch sterile roller bandages (3rolls)
- Scissors
- Tweezers
- Needles
- Moistened towelettes
- Antiseptic
- Thermometer
- Tongue blades (2)
- Tube of petroleum jelly or other Lubricant

DOCUMENTS

- Water 11 litres/per-person/per-day (store water in plastic containers)
Change your stored water supply every six months so it stays fresh.
- Non-perishable food or ready to eat canned food and juices (store at least a three-day supply) Replace Your stored food every six months
- Snack foods for kids
- Non-electric can opener
- Baby food
- Keep these records in a waterproof, portable container.
 - Will, insurance policies, contracts
 - Deeds, stocks and bonds
 - Passports, immunization records
 - Bank account numbers
 - Credit card account numbers and Companies
 - Family records (birth, marriage, death certificates
- Inventory of valuable household goods, important telephone numbers

TOOLS AND SUPPLIES

- Paper cups plates, and plastic utensils
- Battery- operated radio and extra batteries
- Flashlight and extra batteries
- Cash, Change
- Utility knife
- Fire extinguisher: small canister ABC type
- Tube tent
- Pliers
- Tape
- Matches in a waterproof container
- Aluminum Foil
- Plastic storage containers
- Signal flare
- Paper, pen, pencil
- Needles, thread
- Medicine Dropper
- Whistle
- Plastic sheeting

STORAGE OF KIT

- Store your kit in a convenient place
- Keep a smaller version of the Disaster supplies kit in the trunk of your car

FOR BABY

- Formula Diapers
- Bottles Powdered milk
- Medications

OTHER

- Pet care items (supply of food)

FOR ADULTS

- Heart and high blood pressure medication
- Insulin
- Prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eyeglasses

CLOTHING AND BEDDING

- Include at least one complete Change of clothing and footwear per person
- Sturdy shoes or work boots
- Rain gear
- Blankets or sleeping bags
- Hat and gloves
- Sunglasses

SANITATION

- Toilet paper, towelettes
- Soap, Liquid detergent
- Feminine supplies
- Personal hygiene items
- Plastic garbage bags, ties (for personal sanitation uses)
- Plastic bucket with tight lid
- Disinfectant
- Household chlorine bleach

NON-PRESCRIPTION DRUGS

- Aspirin or non aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for stomach upset)
- Laxative

STORAGE CONTAINERS

- A large, covered trash container
- A camping backpack
- A duffel bag

SPECIAL ITEMS

- Remember family members with special requirements such as infants and elderly or disabled persons

Family Disaster Plan

FAMILY SURVIVAL KIT for at least 3 days

- Food items (non-perishable)
- Water 2-6 litres per person, per day (for drinking & cooking)
- Hygiene supplies soap, toothbrushes & toothpaste, feminine products
- Essential medications
- First aid supplies
- Matches
- Can opener & kitchen knife
- Transistor radio
- Torch & batteries /lamps & fuel/whistle
- Bedding
- Reading glasses
- Copies of important documents
- Pet food

Name and type of pets/ livestock:



What will I do with my pets if I have to leave my home?:

FAMILY EMERGENCY CONTACT NUMBERS

How will I secure that car*/boat?:
 Yes No

How will I secure that car*/boat?:
 Yes No

In case of emergency at home, I will evacuate to:
• _____
• _____
• _____

In case of emergency at work or school, I will evacuate to:
• _____
• _____
• _____



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CDEMA

The Caribbean Disaster
Emergency Management Agency

CDEMA

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Emergency Management Agency

To get involved in disaster preparedness in your community, contact your local Red Cross Society and National Disaster Office.
www.caribbeanredcross.org
www.cdemain.org

It's important that you be prepared for emergencies and possible disasters. Natural or human caused disasters can strike suddenly at any time and anywhere.

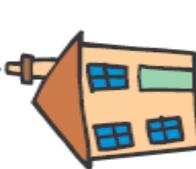
Get involved. Make a plan. Join other members of your community to get prepared.

You never know how many people your action will affect and How many lives you might save.

PLEASE TICK THE APPROPRIATE BOX

My house could possibly be affected by the following severe events:

- Flood
- Hurricane
- Earthquake
- Volcano
- Sea surge
- Tsunami
- Landslide
- Bush/forest fire
- Industrial accident



If I stay at home, I will do the following to protect my home and myself from disaster:

- I will install sandbags and other flood barriers

Flood:

- I will clear dry bush from around the house to prevent fire from spreading

Earthquake:

- I will secure large objects which can fall and injure family members



The following documents are safely secured in a known location.

- Yes
- No

If at work or school: Where will I go if I cannot get home?

- Birth, marriage and other certificates
- Personal ID cards/ papers/ passport
- Land & building deeds/ rental agreement
- Insurance & other policies

In the event of hurricane, I have identified a safe room:

- Yes
- No

If I have to evacuate, I will go to:

- Name: _____
- Address: _____
- Phone: _____

Hurricane:

I have the following protection for my windows and glass doors:

- Shutters
- Plywood (1/2 inch or thicker)
- I already have barrier materials
- None purchased as yet
- Other: _____

EMERGENCY SHELTER:

EMERGENCY DOCTOR:

AMBULANCE:

POLICE:

Fire:

Family Disaster Plan

I have made proper arrangements to go there:

- Yes
- No

I have a survival kit: Yes No

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