

SHELTERS AND SHELTER MANAGEMENT

Reference Guide



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REFERENCE GUIDE

Table of Contents

Page	
1	----- Shelter Identification and Selection (Process, standards, duties and responsibilities)
5	----- Shelter Inspection Checklist
8	----- Shelter Inspection Guidelines
13	----- Shelter Re-Inspection Checklist
14	----- Shelter Re-Inspection Guidelines
16	----- Shelter Site Inspection Checklist
17	----- Shelter Site Inspection Guidelines
19	----- Shelter Maintenance Checklist
20	----- Shelter Maintenance Guidelines
21	----- Shelter Manager Duties and Responsibilities
25	----- Shelter Support Duties and Responsibilities
26	----- Programme Manager Duties and Responsibilities
30	----- Staffing and Support
31	----- Responsibility Chart
32	----- Shelter Capacity Guidelines
33	----- Equipment and Supplies
34	----- Sample Shelter Rules and Regulations
35	----- Shelter Manager Checklist (Pre-Activation)
36	----- Shelter Manager Guidelines (Pre-Activation)
39	----- Shelter Manager Checklist (Activation)
40	----- Shelter Manager Guidelines (Activation)
43	----- Shelter Manager Checklist (De-Activation)
44	----- Shelter Manager Guidelines (De-Activation)
47	----- Shelteree Preferences and Needs
47	----- Disasters and Mental Health
54	----- Role of Health Department
57	----- Glossary of Terms
63	----- Shelter Information Form
64	----- Shelter Registration Form
65	----- Supplies and Equipment Accounting
67	----- Shelter Log
68	----- Enquiry/Tracing Request

SHELTER SELECTION

Process, Standards

The process of selecting shelters must be more than just designating that all schools are shelters or that all shelters are suitable for all situations. For example, some structures that may be suitable for protecting people from the impact of a hurricane may not be suitable for occupancy for more than two or three days. On the other hand, a structure that may not be suitable for hurricane protection, might be ideal for long-term occupancy by persons evacuated to avoid an event like a flood or volcano. It is therefore imperative that physical inspection be made.

SELECTION PROCESS:

- Form a sub-committee of the national shelter committee.
 - Physical/structural planner
 - Building inspector
 - Contractor/builder
 - NDC
 - Fire and Police Departments
 - Education Administrator
 - Health official
 - Public works
 - PVO/NGO's
- Determine shelter needs.
 - What are the hazards and risks?
 - How many persons are at risk who might need shelter?
 - What shelter capacity now exists?
 - What shelter capacity is needed?
- List possible shelters.
 - What district or area is served?
 - What resources are available?
- Conduct an on-site evaluation of location and structure.

Establish shelter designations and standards for such designation.

SHELTER STANDARDS:

- Adhere strictly to building codes.
- Structure should be capable of being retrofitted.
- Structure and environment should be suitable for expected use as a shelter.
- There should be on-going maintenance of the facility.
- Security problems or potential should be minimal.
- The facility should not be vulnerable to hazards.

SHELTER SELECTION

Duties and Responsibilities

A number of persons may be involved in shelter inspections. These will vary depending on the situation. Each will bring different expertise and level of disaster knowledge and experience to the task. Following is a list of those who might be involved:

- Public works personnel
- Independent consultants
- Contractors
- Builders/surveyors
- National Disaster Co-ordinators
- Chief shelter Manager
- Shelter managers
- Fire Dept. personnel
- Health Dept. personnel
- Water Dept.

Following is a list of duties and responsibilities for some of those listed above. Again, these will vary depending on the situation.

Public Works Department

Responsible to the NDC for shelter inspection.

- Ensure shelter inspection is completed.
 - a. Identify resources
 - b. Inspection tasks assigned to appropriate personnel
 - c. Receive, evaluate reports
 - d. Provide reports to NDC
 - e. Set minimum standards for shelter categories

- Check structure for suitability and defects.
 - a. Identify and locate shelters
 - b. Locate or prepare plans
 - c. Carry out preliminary inspection
 - d. Carry out detailed inspection and vulnerability analysis
 - e. Check that structure contains necessary amenities.
 - f. Check structure and location is safe from environmental hazards.
 - g. Review plans for any proposed building

- Determine maintenance and retrofitting requirements.
 - a. Examine recommendations from inspections
 - b. Provide cost estimates
 - c. Prioritise needs

SHELTER SELECTION

Duties and Responsibilities

- Recommend approval/disapproval based on inspection.
 - a. Inspect and ensure that all defects are made good, maintenance needs are addressed, retrofitting carried out.
 - b. Determine whether or not building meets minimum acceptable standards.
 - c. Issue notification of recommendation

Independent consultants, contractors, builders, surveyors

- Similar duties as PWD except that recommendation for approval/disapproval is made by PWD officials.
- Assist in developing guidelines for inspection of shelters based on accepted minimum standards.
 - a. Research, compile and document pertinent information regarding building performance under extreme hazardous situations.
 - b. Prepare reports for relevant agencies.

National Disaster Co-ordinators, chief shelter managers, shelter managers

Conduct preliminary inspection to determine if building is habitable.

- a. Check building for essential facilities in good working condition (running water, toilets functioning, power, kitchen, storage).
- b. Check for any visible defects (loose connections, bolts and fasteners to roof, leaks, windows and doors).

Note: Shelter Managers should be trained to carry out preliminary inspection. Such training is to be determined by relevant authority.

Fire, Police, Health and Water

Ensure compliance with statutory provisions.

- a. Carry out on-site routine inspections.
- b. Send reports with recommendations to NDO.
- c. Certify compliance.

Intentionally left blank.

SHELTER INSPECTION CHECKLIST

The following checklist is for use in the inspection of a building and its site for consideration to be used as an emergency shelter. Refer to the guidelines for specific information about each item.

1. Building location (site) Yes No
- 1.1 Is building easily accessible? -----
 - 1.2 Is there adequate parking space? -----
 - 1.3 Is building located in a flood plain? -----
 - 1.4 Is building located on landfill, or soft deposits? -----
 - 1.5 Is building located in a coastal plain? -----
 - 1.6 Is building sheltered from high winds? -----
 - 1.7 Is building threatened by mudslides or landslides? -----
 - 1.8 Is building threatened by falling trees, boulders, powerlines or flying debris? -
 - 1.9 Is building located close to the source of any potential hazardous materials? --
 - 1.10 Is building threatened by a dam or reservoir failure? -----

2. Building design and layout
- 2.1 Is building regular in shape (square or rectangular)? -----
 - 2.2 Is length is no more than 3 times the width? -----
 - 2.3 Does building have at least 2 entrances and exits? -----
 - 2.4 Is building height two stories or less? -----
 - 2.5 Is ceiling height 10 feet or more? -----
 - 2.6 Does building have adequate rooms and space? -----
 - 2.7 Does building have laundry area/facilities? -----
 - 2.8 Are there adequate recreation areas? -----

3. Building structure
- 3.1 How old is the building (years)? -----
0-20 21-50 50+
 - Has the building survived a previous hurricane or earthquake? -----
 - 3.2 Is building maintenance adequate? -----
 - 3.3 Is the building free of hazards? -----

3.4 Walls (Conform to the Local Building Code?)

- 3.4.1 Are external walls at least 8 inches thick? -----
- 3.4.2 Are columns spaced no more than 16 feet apart? -----
- 3.4.3 Are walls generally in good condition and free of large cracks? -----
- 3.4.4 Is the ring beam at least 12 inches in depth? -----
- 3.4.5 Are the walls reinforced? -----

3.5 Roof

Yes No

3.5.1 Structure

- Is roof flat (with or without parapets)? -----
- Is roof hipped (with or without overhang)? -----
- Is roof gabled (pitch less than or greater than 2 to 1)? -----

3.5.2 Type

- Is roof covering galvanized or concrete? -----
- Is roof covering shingles or tiles? -----

3.5.3 Construction

- Are rafters attached with bolts or cables? -----
- Are hurricane straps used? -----
- Are span and spacing within building code limits? -----

3.6 Windows & doors

- Are windows and glass doors protected by shutters? -----
- Are frames properly affixed to walls? -----
- Are frames at least 3 inches thick? -----

4. Amenities and services

4.1 Electrical

- Are fuses, wires, outlets and sockets adequate and functional? -----
- Is there a standby power generator? -----

4.2 Water

- Is there supply from the public water system? -----
- Is there water storage capability? -----
- If yes, capacity _____ gallons.

	Yes	No
4.3 Are there sanitary facilities?	<input type="checkbox"/>	<input type="checkbox"/>
No. of baths/showers _____		
No. of toilets _____		
No. of wash/face basins _____		
No. of urinals _____		
Is septic system adequate (tank, soakaway, drainage)?	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Food preparation		
Are there kitchen facilities? -----	<input type="checkbox"/>	<input type="checkbox"/>
Is there adequate and proper food storage area? -----	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Is security adequate? -----	<input type="checkbox"/>	<input type="checkbox"/>
4.6 Are contents adequate and suitable? -----	<input type="checkbox"/>	<input type="checkbox"/>
4.7 Sanitation & Vector Control		
Is there an adequate and proper refuse collection area? -----	<input type="checkbox"/>	<input type="checkbox"/>
Is the site free of mosquito breeding areas? -----	<input type="checkbox"/>	<input type="checkbox"/>

CERTIFICATE OF INSPECTION

This certifies that the building located at _____ and called the _____ building, has been duly inspected and has satisfactorily met all requirements of the National Shelters and Housing Policy and is recommended/designated as an emergency shelter to accommodate a maximum of (number) _____ persons for the following uses:

Temporary shelter	
for protection from a hurricane -----	<input type="checkbox"/>
following a disaster not caused by an earthquake -----	<input type="checkbox"/>
following an earthquake -----	<input type="checkbox"/>
Long term shelter	
following a hurricane -----	<input type="checkbox"/>
following an earthquake -----	<input type="checkbox"/>
for refugees from other events -----	<input type="checkbox"/>

Date: _____ Inspector: _____
 Title: _____

Comments/Recommendations:

SHELTER INSPECTION GUIDELINES

The following guidelines are provided to assist with the use of the Shelter Inspection checklist.

1. Building location (site)

1.1 Is the site easily accessible?

The location should allow for cars and trucks to easily drive up to unload supplies. Persons travelling to the shelter should be able to get to the shelter from their homes with a minimum of difficulty. Access should not have the threat of being blocked by blown down trees or power lines. Streets should be lighted for persons arriving on foot.

1.2 Is there adequate parking space?

There should be sufficient parking space available for the number of vehicles that are expected to be driven to the shelter by the estimated number of potential shelterees. The parking area should not be threatened by overhanging trees or power lines that will block the area if they are blown down. The parking area should be lighted for night access.

1.3 Is the building located in a flood plain?

The potential shelter should not be located in a stream or river drainage that has a history of flooding and should be more than 150 yards from the high water mark. Construction projects can cause diversions that can change the course of waterways. Prevention projects such as retaining walls and/or drains may be necessary.

1.4 Is the building located on landfill, or soft deposits?

Fill and soft deposits can become completely unstable from heavy rains. During earthquakes, fill and soft earth can liquify and cause a building to collapse.

1.5 Is the building located in a coastal plain?

If located near the coast, the site should be more than 40 ft above sea level so that a storm surge will not inundate the shelter.

1.6 Is the building sheltered from high winds?

Protection from the direct force of the potential strong winds can be provided by other buildings, stands of trees or high topography. Avoid structures on hill tops or exposed open areas.

1.7 Is the building threatened by mudslides or landslides?

Avoid slopes and hilly areas where landslides are likely to occur. Look for road cuts and construction above the site. Water seepage and the absence or removal of trees and vegetation can create landslips.

1.8 Is the building threatened by falling trees, boulders, power lines or flying debris?

Look overhead and around for tall trees and power lines that could be blown on to the shelter. Look around for debris that could be blown into or on to the shelter. If below slopes, look up for boulders and rocks that may roll down hill on to the shelter.

1.9 Is the building located close to the source of any potential hazardous materials?

Shelters should not be located in close proximity to gas stations, refineries, fuel storage areas, or warehouses for dangerous chemicals such as solvents and/or paints which can be easily ignited. Consider what hazard a fire in such a structure would be to the shelter. In most cases a distance of a mile or more is needed to be safe.

1.10 Is the building threatened by a dam or reservoir failure?

Consider what is upstream from the shelter. Is there a dam and reservoir that could rupture and flood the shelter? Look at the entire watershed above the shelter area for tanks and pools.

2. Building design and layout

2.1 Is the building regular in shape (square or rectangular)?

Irregular shapes provide places for winds to get under the roof and place increased pressure on walls. Look for potential weak areas.

2.2 Is the building length is no more than 3 times the width?

The important measurement here is the length of unsupported rafter beams. Some experts indicate a maximum distance is 30 feet. This is affected by the width and height of the walls.

2.3 Does the building have at least 2 entrances and exits?

No building should be used that does not have at least two entrance/exits. Entrances should be checked for hazards such as overhangs, cornices, pillars or other hazards that could block the doors

2.4 Is the building height two stories or less?

No structure of more than 2 stories should be used. If a building has a basement, then only one story above ground is considered acceptable.

2.5 Is the ceiling height 10 ft or more?

This is the distance from the floor to the lowest part of the ceiling. This is primarily for comfort. The higher ceilings keep the building occupants from getting too hot. If a building is air-conditioned a lower ceiling would be acceptable if the standby generator is capable of operating the system.

2.6 Are there adequate rooms and space?

Needs for rooms and space vary, depending on the length of time a shelter is to be occupied. In most cases the following are a minimum necessary.

Office - A room available for the shelter manager and staff to operate the shelter. This is an operations area and should be properly equipped and have security.

Treatment area - A separate room or walled off area for use to treat the sick and injured and service the emotional needs of the shelter occupants.

Sleeping area - Adequate provision must be made for both family unit and separate male and female individuals to sleep.

2.7 Laundry area and facilities

If a shelter is to be occupied for more than 2 or 3 days, consideration should be given to allocating space for washing, drying and ironing of clothes. Necessary equipment should be installed like washing machines, dryers or clothes lines.

2.8 Adequate recreation area

An area large enough to accommodate indoor games and activities by children and adults should be designated. Boredom in a shelter can quickly lead to severe problems.

3. Building structure

3.1 Age and History

How old is the structure? Many older structures are much stronger than some more recently constructed. What is the history of the structure? Has it survived previous hurricanes or earthquakes? This might indicate the probability that it will survive a future event.

3.2 Building maintenance

Does the building appear to be in a good state of repair? If it looks good, it probably is. Look at such items as the paint, door and window operation, burned out light bulbs, general cleanliness, etc.

3.3 Building free of hazards

Look for loose or broken stairs, loose floor tiles, doors and windows that are not working properly, overhead objects such as lights and decorations that might fall, and any other object or situation that could result in an occupant being injured.

3.4 Walls (These should conform to the Local Building Code). Possible features include:

3.4.1 External walls at least 8 inches thick.

Walls should be at least 8 inches of masonry construction. If large stones are used they should be in conjunction with concrete and reinforcing rod.

3.4.2 Columns spaced no more than 16 feet apart.

Roof support columns should be no more than 16 feet apart. They may be a part of the wall reinforcing system. They may contain cables or rods used to tie the roof to the foundation.

3.4.3 Generally in good condition and free of large cracks.

Look for evidence of deterioration of the concrete. This usually is indicated by crumbling and cracking. Also look for evidence of rust or corrosion of the reinforcing rod or cable. If sea-sand has been used in the concrete, the concrete will deteriorate much faster.

3.4.3 Ring beam at least 6 inches thick and 12 inches in depth.

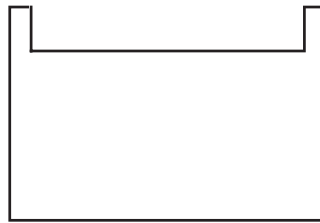
The dimension requirements of the ring beam are dictated by the size and construction of the building. If the structure is old and shows no sign of problems then the beam is probably adequate. A new building should be inspected by an engineer to determine the loads and structural requirements.

3.4.4 Are walls reinforced?

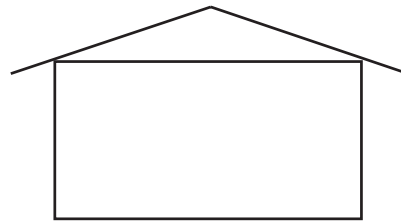
Masonry walls must be reinforced with steel rods. Large "cut" stone masonry should not require internal reinforcing. External reinforcing such as "flying buttresses" may be needed for very large structures.

3.5 Roof

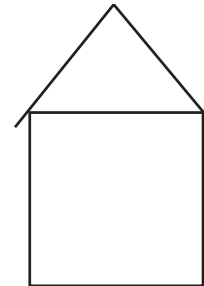
3.5.1 Structure



Flat Roof with
parapets



Hipped Roof



Gabled Roof

The structure of the roof determines the effect the winds of a hurricane will have on the roof. Flat, non-concrete, roofs should have a wall or parapet around the roof to protect the roof covering. A bungalow roof with overhangs allows the wind to get under the roof. A low pitch or low roof is more likely to be lifted off the structure than a high pitch or steep roof.

3.5.2 Type

Tile that is firmly attached, galvanized metal that is securely attached and concrete are the best type roofs. Roofs that are composed of composite shingles, fabric or paper, or tile and galvanized that is not secure, are not good roofs.

3.5.6 Construction

Important items here are how the rafters are attached to the ring beam and walls. The best method is with bolts or cables. Hurricane straps should be used to attach all roof members, and the span and spacing should be within established construction standards. Generally this means that rafters should be no more than 24 inches apart and the span not more than 35 feet.

3.6 Windows and doors

All windows and glass doors should be protected by shutters or have shutters ready to be put in place if needed. The security and thickness of the frames are also important. Frames should be at least 3 inches thick and securely fastened to the walls.

4. Amenities and services

4.1 Electrical

There should be a properly working electrical system. All outlets and switches must be conveniently located. Provision should also be made for the use of a generator or other auxiliary power.

4.2 Water

There must be a reliable water source both in pressure, quantity, and quality. Alternative arrangements for water should be in place. Examples are tanks and containers for storage.

4.3 Sanitary facilities

The sewage disposal system must be functioning well. Leaks and smells should be checked out. It might be well to ascertain how old the system is, when it was last cleaned out and how many people use it normally.

4.4 Food preparation

Rooms for preparation and sharing of food should be of adequate size. There should also be alternative cooking areas, such as outside of the shelter. Cooking equipment should be adequate in number and in good condition.

4.5 Security

Building should be properly secured with night latches for doors, burglar proof bars for windows and lighting around the area to discourage vandalism.

4.6 Contents

All objects should be sufficient in quantity and suitable for use. There should be space for fragile and valuable items to be safely locked away when not in use for protection against damage and vandalism. Buildings commonly used as shelters are schools, churches and commercial buildings. These buildings must be readily available in the event of a sudden disaster.

4.7 Sanitation & vector control

Arrangements should be made for proper disposal of waste. Dustbins should be provided and emptied daily. Breeding grounds for mosquitoes and flies should be eliminated. Drains should be unblocked, containers turned open end down, holes filled.

SHELTER RE-INSPECTION CHECKLIST

The following checklist is for use in conducting a periodic re-inspection of a building and its site for continued use as an emergency shelter. Refer to the guidelines for specific information about each item.

- | | Yes | No |
|--------------------------------------------------------------------------------------------|--------------------------|--------------------------|
| 1. Building location (site) | | |
| 1.1 Is accessibility easy?----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2 Is parking space adequate? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3 Is building threatened by mudslides or landslides?----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4 Is building threatened by falling trees, boulders, power lines or flying debris? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5 Is building located close to the source of any potential hazardous materials? -- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.6 Is building threatened by a dam or reservoir failure? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
|
 | | |
| 2. Building structure | | |
| 2.1 Are two entrances and exits available?----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2 Are walls generally in good condition and free of large cracks? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3 Are windows and glass doors protected by shutters? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4 Are frames properly affixed to walls? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.5 Is roof free of leaks and secure? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.6 Are building contents adequate and secure?----- | <input type="checkbox"/> | <input type="checkbox"/> |
|
 | | |
| 3. Amenities and services | | |
| 3.1 Is there power supply (Mains)? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.2 Is there stand-by power supply? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.3 Is the water system functional? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.4 Are there laundry facilities? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.5 Are sanitary facilities functional?----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.6 Is septic system functioning well? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.7 Are kitchen facilities functional? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.8 Is food storage area clean?----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.9 Is shelter area free of refuse and garbage?----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.10 Is shelter area free of mosquitoes and pests? ----- | <input type="checkbox"/> | <input type="checkbox"/> |

Shelter:
Inspector:

Location:
Date:

SHELTER RE-INSPECTION GUIDELINES

The following guidelines are provided to assist with the use of the Shelter Re-Inspection checklist.

1. Building location (site)

1.1 Is there easy Access?

Check to see that any changes in the roads or new construction in the area has not changed or restricted the accessibility of the shelter area.

1.2 Is there adequate parking space?

Ascertain that there have not been changes in the area that have reduced the available parking area.

1.3 Is the building threatened by mudslides or landslides?

Road construction, vegetation removal or building construction up-slope or upstream from the site may have created a situation favourable for land slippage.

1.4 Is the building threatened by falling trees, boulders, power lines or flying debris?

Look overhead and around for tall trees that have been weakened or new power lines that could be blown on to the shelter. Look around for debris that may have been created that could be blown into or on to the shelter. If below slopes, look up for boulders and rocks that may have been loosened and could roll down hill on to the shelter.

1.5 Is the building located close to the source of any potential hazardous materials?

Check to see if a filling station, refinery, fuel storage area, warehouse for dangerous chemicals of highly flammable materials such as paints has been constructed in the area. Consider what hazard a fire in such a structure would be to the shelter. In most cases a distance of a mile or more is needed to be safe.

1.6 Is the building threatened by a dam or reservoir failure?

Consider what is upstream from the shelter. Is there a dam and reservoir that could rupture and flood the shelter? Look at the entire watershed above the shelter area for tanks and pools.

2. Building structure

2.1 Are two entrances and exits available?

Check all exits to make sure one has not been blocked by changes in building use.

2.2 Are walls in good condition?

Inspect the walls for any new cracks or signs of deterioration. If recently painted, ask what was underneath before painting.

2.3 Are windows and doors protected?

Check all windows and doors for availability of shutters.

2.4 Are frames secured?

Check security of attachment to walls.

2.5 Is roof secure and in good condition?

Inspect roof for leaks and security of rafters and attaching points.

2.6 Are contents adequate and secure?

Ascertain that the contents of the building are still appropriate for the use of the building as a shelter and that security is available for any sensitive items.

3. Amenities and services

3.1/2 Is the electrical system adequate and in good condition?

Check the main power supply and any alternate generator for proper operation. Inspect the electrical system in the building for any hazards or potential problems. Check all fixed electrical appliances such as stoves, hot water heaters, fans, etc. for operation.

3.3 Is the water supply adequate?

Inspect the water system for any problems. Check any storage tank for condition and cleanliness.

3.4 Is there a laundry area?

Check any laundry equipment for condition, operation and laundry area cleanliness.

3.5 Are there sanitary facilities in good condition?

Inspect all sanitary facilities for condition, operation and cleanliness.

3.6 Is there a septic system in good condition?

If a septic system is used, check for condition, function and maintenance. Check septic tank area for surface leakage or signs of system failure.

3.7/8 Is there a kitchen in good condition?

Inspect kitchen area for condition, operation of equipment and cleanliness. Check food storage area for cleanliness and operation of any refrigeration equipment.

3.9/10 Is the shelter exterior area in good condition?

Check the exterior of the shelter area for refuse and garbage, and areas for mosquitoes. Look for evidence of other pests that might become a problem if the shelter is occupied.

SHELTER SITE INSPECTION CHECKLIST

The following checklist is for use in the inspection of a building site under consideration as a location for construction of an emergency shelter. Refer to the guidelines for specific information about each item.

- | | Yes | No |
|----------------------------------------------------------------------------------------|--------------------------|--------------------------|
| 1. Building location (site) | | |
| 1.1 Is access to the site easy? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2 Is there adequate parking space at the site? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3 Is the site located in a flood plain? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4 Is the site located on landfill, or soft deposits? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5 Is the site located in a coastal plain? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.6 Is the site sheltered from high winds? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.7 Is the site threatened by mudslides or landslides? ----- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.8 Is the site threatened by falling trees, boulders, power lines or flying debris? - | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.9 Is the site located close to the source of any potential hazardous materials? --- | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.10 Is the site threatened by a dam or reservoir failure? ----- | <input type="checkbox"/> | <input type="checkbox"/> |

CERTIFICATE OF INSPECTION

This is to certify that the site proposed for the construction of an emergency shelter located at _____, has been inspected by me and meets/does not meet all of the requirements of the building code and is hereby granted/not granted a licence to commence construction.

Date _____

Inspector _____

Comments/Recommendations:

SHELTER SITE INSPECTION GUIDELINES

The following guidelines are provided to assist with the use of the Shelter Site Inspection checklist.

1.1 Easily accessible.

The location should allow for cars and trucks to easily drive up to unload supplies. Persons traveling to the shelter should be able to get to the shelter from their homes with a minimum of difficulty. Access should not have the threat of being blocked by blown down trees or power lines. Streets should be lighted for persons arriving on foot.

1.2 Adequate parking space.

There should be sufficient parking space available for number of vehicles that are expected to be driven to the shelter by the estimated number of potential shelterees. The parking area should not be threatened by overhanging trees or power lines that will block the area if they are blown down. The parking area should be lighted for night access.

1.3 Safe from flooding.

The potential shelter should not be located in a stream or river drainage that has a history of flooding and be more than 150 yards from the high water mark. Construction projects can cause diversions that can change the course of waterways. Prevention projects such as retaining walls and/or drains may be necessary.

1.4 Sited on solid ground.

Fill and soft deposits can become completely unstable from heavy rains. During earthquakes, fill and soft earth can liquify and cause a building to collapse.

1.5 Safe from storm surge.

If located near the coast, the site should be more than 40 ft above sea level so that a storm surge will not inundate the shelter.

1.6 Sheltered from high winds.

Protection from the direct force of the potential strong winds can be provided by other buildings, stands of trees or high topography. Avoid structures on hill tops or exposed open areas.

1.7 Safe from mudslides or landslides.

Avoid slopes and hilly areas where landslides are likely to occur. Look for road cuts and construction above the site. Water seepage and the absence or removal of trees and vegetation can create landslips.

1.8 Safe from falling trees, boulders, power lines or flying debris.

Look overhead and around for tall trees and power lines that could be blown on to the shelter.

Look around for debris that could be blown into or on to the shelter. If below slopes, look up for boulders and rocks that may be loosened and roll down hill on to the shelter.

1.9 Not located close to the source of any potential hazardous materials.

Shelters should not be located in close proximity to filling stations, refineries, fuel storage areas, warehouses for dangerous chemicals or highly flammable materials such as paints. Consider what hazard a fire in such a structure would be to the shelter. In most cases a distance of a mile or more is needed to be safe.

1.10 Not threatened by a dam or reservoir failure.

Consider what is upstream from the shelter. Is there a dam and reservoir that could rupture and flood the shelter? Look at the entire watershed above the shelter area for tanks and pools.

CHECKLIST FOR MAINTENANCE

This checklist is for use in conducting a regular maintenance check of an existing shelter. This inspection may be conducted annually as a preventative measure, after an event to check for damage, and during occupancy to prevent problems from occurring.

<u>ITEM</u>	<u>Yes</u>	<u>No</u>	<u>LOCATION</u>
Bolts and fasteners			
Loose?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Missing?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Corroded?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Windows and doors in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____ _____
Roof and walls in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____ _____
Plumbing			
Water pipes in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Water faucets in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Toilets in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____ _____
Electrical system in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____ _____
Septic tank/soakaway in good condition?-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other problems-----	<input type="checkbox"/>	<input type="checkbox"/>	_____ _____ _____

Shelter:
Inspector:

Location:
Date:

GUIDELINES FOR MAINTENANCE OF SHELTERS

The following are some guidelines that may be used by Shelter Managers and Shelter Inspectors to inspect shelters for maintenance problems and recommendations for action.

Bolts and Fasteners

If the structure has a ring beam with wooden plate anchored on top, check for loose or missing bolts and nuts. Tighten and replace as necessary. Check that all hurricane clips/straps are firmly attached and secure if they are not. If no hurricane clips/straps are present, install such that each rafter has two, one on either side, or one U shaped that goes over the rafter. Check metal parts, bolts, beams, straps, columns, etc. for corrosion. Clean and paint as necessary. Replace where situation is beyond repair.

Windows and doors

Check that there are no broken panes in windows or doors. Check all frames of windows and doors to ensure that they are firmly affixed to the wall. Repair, replace and make good where necessary. All doors and windows should open and close easily and have proper fastening devices to ensure safety.

Roof and Walls

Check to ensure that rafters and ceiling are in good condition and there are no leaks in roof or walls. Repair or replace where necessary. All damaged sheets or shingles should be repaired or replaced. For concrete roofs, check for cracks, leaks, and sagging in roof slab/beam. If any are found, a qualified engineer should be consulted.

Plumbing

Check for leaking pipes on the inside and outside of the building. Check toilets and faucets- bathrooms and kitchens- for leaks and operation. Repair all leaks and faulty faucets.

Electrical System

Check to see that there are no loose or bare electrical wires and that all electrical equipment and fixtures are in good working order. If not, have a qualified electrician check, repair, replace and make good where necessary.

Septic tank/soakaway

Have tank cleaned if full. If effluent is surfacing, have soakaway dug up and redone or relocated.

SHELTER MANAGER

Duties and responsibilities:

Overall responsibility for management of shelter including physical facility and human resources.

Preparation

- Conduct preliminary inspection to determine if the building is fit for use as a shelter.
 - a. Obtain keys.
 - Location of keys must be known and easily accessible.
 - Duplicate keys if possible.
 - Labelling and identification device for keys.
 - Keys must be kept securely-security/storage.
 - b. Determine space available.
 - Identify space to be used for housing shelterees and other activities.
 - Determine/allocate square footage per person.
 - c. Check building for essential facilities in good working condition. (Running water, toilets functioning, power, kitchen, storage).
 - d. Check for any visible defects. (Loose connections, bolts and fasteners, roof, leaks, windows and doors) .
- Mobilise support team.
 - a. Alert support team.
 - Ongoing /periodic contact with support team, especially before hurricane season starts. Provide necessary up-dates.
 - b. Inform members when & where to report.
 - c. Hold meeting.
 - d. Assign duties.
 - Rotate duties. Duties assigned in relation to preparation of shelter.
 - e. Delegate duties and tasks.
- Secure supplies.
 - a. Contact relevant authority.
 - Ensure availability of supplies needed. Make necessary arrangements for receiving.
 - b. Arrange for receipt of supplies.
 - c. Organise proper storage of supplies.
 - Arrange for secured storage-security.
 - d. Check and make a proper inventory of items.
 - Check expiration dates of canned goods. Manufacturers batch numbers. Check for integrity of cans - dents, etc. Proper inventory of items.
- Prepare a management plan.
 - a. Review standard shelter rules and modify as necessary.
 - Annual activity. Modification based on past experience.
 - b. Designate areas for specific activities.
 - c. Assign tasks to support team.

- d. Inform shelterees of ground rules.
Information provided during community meetings. Complete during briefing session.
- e. Prepare check lists for various functions and tasks.
- f. Determine tasks to be performed by shelter residents.
- g. Obtain necessary forms.
- h. Brief support team on specific duties.
- i. Participate in preparedness exercises.
- j. Assist with public information activities.
Provide information to communities on shelters and shelter management programmes.
- k. Identify means of communication..
- l. Prepare list of families – vulnerable families.
- m. Prepare list of recreational activities and equipment.

Opening

Pre-occupancy (Action depends on nature of emergency).

- Co-ordinate activities.

- Open shelter.
 - a. Call staff members to report.
 - b. Obtain keys and open shelter.
 - c. Prepare shelter to receive shelterees.
 - d. Check building for facilities.

Occupancy.

- Registration of staff and residents.
 - a. Secure and designate area.
 - b. Secure supplies and equipment.
 - c. Assign registrar and assistant.
 - d. Complete forms.
 - e. Assign allocation of space – family units.
 - f. Determine interest and capabilities.

- Assign duties.
 - a. List duties.
 - b. Determine interest and capabilities of occupants and support persons for various duties.
 - c. Make assignments.
 - d. Inform occupants and support staff of assigned duties.

- Conduct briefing/information sessions.
 - a. Review duties, rules, areas and staff introduction.
 - b. Review liability and responsibilities, i.e..., breakage, damage, willful destruction.
 - c. Daily meetings with shelterees.

- Establish areas for various activities (use handbooks and guidelines).
 - a. Determine activity.
 - b. Survey area.
 - c. Allocate areas.
 - d. Mark designated areas.
 - e. Inform shelter residents of areas - use notice board.

- Communicate with EOC, NDO, etc.
 - a. Determine available means.
 - b. Establish effective channel.
 - c. Prepare and send daily report.
 - d. Utilise available means.

- Maintain discipline.
 - a. Post rules.
 - b. Inform occupants.
 - c. Appoint monitors.
 - d. Enforce ground rules.
 - e. Inform occupants of liability.

- Distribution of supplies.
 - a. Appoint store keeper.
 - b. Establish inventory.
 - c. Identify needs.
 - d. Appoint person(s) to distribute and retrieve supplies.
 - e. Daily stock taking.
 - f. Daily inventory reports.
 - g. Requisition of supplies.

- Preparation and distribution of meals.
 - a. Develop simple basic menu.
 - b. Identify persons to prepare and distribute meals.
 - c. Secure food items and utensils.
 - d. Set meal times.
 - e. Prepare and post distribution roster.
 - f. Cleanup meals area.

- Recreation.
 - a. Identify and select persons to co-ordinate activities.
 - b. Prepare list of items for recreation.
 - c. Acquire equipment.

- Religious activities.
 - a. Identify and select persons to co-ordinate activities.
 - b. Acquire equipment.

- Security.
Identify, select and appoint persons to perform security functions-badges.

De-activation.

- Arrange for proper evacuation of shelter.
 - a. Conduct a head count.
 - b. Obtain 'All Clear' signal.
 - c. Retrieve supplies.
 - d. Request necessary transportation for those in need (aged, disabled).
 - e. Organise residents leaving by area.
 - f. Arrange for continued accommodation for those unable to return home.

Post-activation

- Organise cleanup & secure building.
 - a. Assign and activate cleanup teams.
 - b. Arrange for collection and disposal of waste.
 - c. Inspect building (evaluation of building).
 - d. Restore arrangement of building.
 - e. Close up building and return keys.

- Prepare reports.
 - a. Gather information.
 - b. Call staff meeting.
 - c. Obtain reports from staff (Team leaders).
 - d. Update list of staff and volunteers.
 - e. Submit report final to EOC, NDC, etc.

SHELTER SUPPORT PERSONNEL

Duties and responsibilities:

Preparation

- Security forces.
 - a. Assign officer for shelter security.
 - b. Request appropriate vehicles.

- Welfare.
 - a. Arrange for designated persons to liaise with shelter managers.

Opening

- Security forces (police, military) – help with evacuation, transport and maintain law and order.
 - a. Delegate responsibility for pick up.
 - b. Pick up and transport persons to designated shelter.

- Welfare – contacts relatives (if possible), counselling, organise and implement appropriate activities, distribution of food and other supplies.
 - a. Determine (identify) welfare needs.
 - b. Provide counselling and reassurance.
 - c. Respond to needs as appropriate i.e.; contact with relatives.
 - d. Implement activities to keep persons occupied.

- Public works clears roads, clean up. Fire provides safety information for shelters.
 - a. Remove debris to keep access open.
 - b. Check shelter for fire safety.

- Health, nutrition and sanitation.
 - a. Provide medical treatment where necessary.
 - b. Check water supply for quantity and quality.
 - c. Maintains records on health problems.
 - d. Check toilets for condition and proper use.
 - f. Check shelter surroundings for health hazards.
 - g. Provide for necessary supplies.
 - h. Conduct necessary health and sanitation training.
 - i. Monitor cleaning of facilities.
 - j. Ensure removal of waste.

PROGRAMME MANAGERS

Duties and responsibilities

- Establish district committees.
 - a. List all organisations/agencies (convene meeting with group).
 - b. Educate on national disaster plan (inform re: roles and responsibilities).
 - c. Select shelter committee.
 - d. Prepare shelter plan (training).
 - e. Attend meetings.

- Organise training.
 - a. Identify needs and prioritise.
 - b. Develop test and revise training materials /courses.
 - c. Identify and secure facilitators/trainers.
 - d. Identify and secure training facilities.
 - e. Secure funding.
 - f. Identify target audience.
 - g. Implement training programme.
 - h. Evaluate training programme.

- Provide equipment and supplies.
 - a. Identify need.
 - b. Take inventory of existing equipment and supplies-public and private.
 - c. Establish memorandums of understanding.
 - d. Purchase/acquire items.
 - e. Arrange storage.

- Liaise with support agencies.
 - a. Identify agencies.
 - b. Establish contact.
 - c. Identify and delegate responsibilities.
 - d. Develop operational procedures.
 - f. Establish memorandums of understanding.

- Organise selection, designation, maintenance and inspection of shelters.
 - a. Identify possible shelters (including alternates).
 - b. Select shelters using guidelines.
 - c. Submit selection to public works for inspection.
 - d. Effect repairs/retrofit.
 - e. Designate and mark shelters.
 - f. Categorise shelters.

- Conduct exercises.
 - a. Identify areas for test.
 - b. Establish test type.
 - c. Arrange for test sites.
 - d. Prepare scenarios.
 - e. Identify observers/evaluators.
 - f. Notify agencies/organisations/departments.
 - g. Carry out exercise.
 - h. Evaluate.
 - i. Revise/modify and update plans.

- Develop, review, print forms, handbooks and other printed materials.
 - a. Identify information needs.
 - b. Develop forms to meet requirements:
 - Registration, daily reports, supplies and equipment
 - General shelter information, daily inventory
 - Health, welfare enquiries
 - Shelter use/liability
 - Supplies issues and receipts
 - Shelter maintenance and upkeep
 - Equipment log
 - c. Identify shelter procedures.
 - d. Prepare and print shelter handbook.
 - e. Develop applicable database files.

- Maintain EOC in constant state of readiness.
 - a. Identify information necessary for status boards for shelters.
 - b. Prepare and install status boards in EOC.
 - c. Deliver all forms to Chief Shelter Warden/Officer.
 - d. Compile list of alternative shelters.

- Regular communication with shelter committees.
 - a. Convene regular meetings.
 - b. Obtain information/update via telephone/mail/written.
 - c. Compile, print and distribute leaflets/news letters, posters and other materials. e.g. questions.
 - d. Provide information to Shelter Managers re: activation, current status, all clear, close shelter.

- Shelter plans, revision and update.
 - a. Identify areas covered in plan.
 - b. Invite agencies/participants to outline responsibilities and tasks of areas identified in a.
 - c. Write plan to include annexes e.g. forms, procedures, regulations, etc.
 - d. Test plan.
 - e. Review, modify, update plan.

- Community awareness and education regarding shelters.
 - a. Identify and prepare public education materials.
 - b. Disseminate via mass media.
 - Door to door
 - Community meetings
 - Workshops
 - Individuals/companies
 - c. Conduct special workshops for:
 - Agencies/shelter personnel re: roles and responsibilities
 - Media workers
 - Police
 - Health & welfare
 - NGO's/PVO's

- Relocation and rehabilitation shelters.
 - a. Survey areas served by shelters.
 - b. Collate and evaluate data to determine R&R needs.
 - d. Categorise according to needs.
 - e. Identify sources and direct shelterees for appropriate assistance.
 - Establish closure dates and advise shelterees and relevant personnel/agencies.

- Enter shelter information into database.

- Liability programme for private shelters.
 - a. Identify government's responsibility.
 - b. Identify private liability in shelters.
 - c. Identify liability of shelters.
 - d. Define liability policy.

- Public education and media education.

- Organise/secure warehouse.
 - a. Establish national policy.
 - b. Develop guidelines to establish warehouse.
 - c. Determine security needs.
 - d. Develop guidelines for inventory/stocking/access supplies requisitions.
 - e. Develop warehouse forms (inventory, requisition, stock taking).
 - f. Disseminate through training.

- Identification of workers.

- Co-ordinate with private industry disaster preparedness programmes.

SENIOR SHELTER WARDENS/OFFICERS

Duties and responsibilities

- Selection, appointment and training of shelter managers.
- Supervise shelter managers.
- Open and close shelters/directs (responsible for).
- Effect maintenance and inspection of shelters.
- Collate shelter data and prepare and update shelter database.
- List and publicize shelters.
- Prepare substitute shelter list.
- Prepare final report.
- Prepare request and account for supplies and equipment.
- Give directives for marking shelters and ensure completion.
- Liaise with support agencies.
- Secure relevant supplies and equipment

MINISTRY OF EDUCATION

(see liaise support agencies)

Duties and responsibilities

- Identify Chief Shelter Warden and Shelter Wardens based on criteria outlined.
- Outline duties and responsibilities of Senior Shelter Wardens and Shelter Managers.
- Make buildings available.
- Release Chief Shelter Warden/Shelter Managers for training.
- Implement maintenance programmes for schools.

**RED CROSS/SALVATION ARMY/OTHER NGOs
& VOLUNTARY AGENCIES**

Duties and responsibilities

- Develop shelter plans (part of national plan).
- Train volunteers.
- Liaise with NDCs.
- Select appropriate volunteers.
- Assign volunteers as appropriate.
- Identify welfare/shelter needs.

SHELTER STAFFING AND SUPPORT

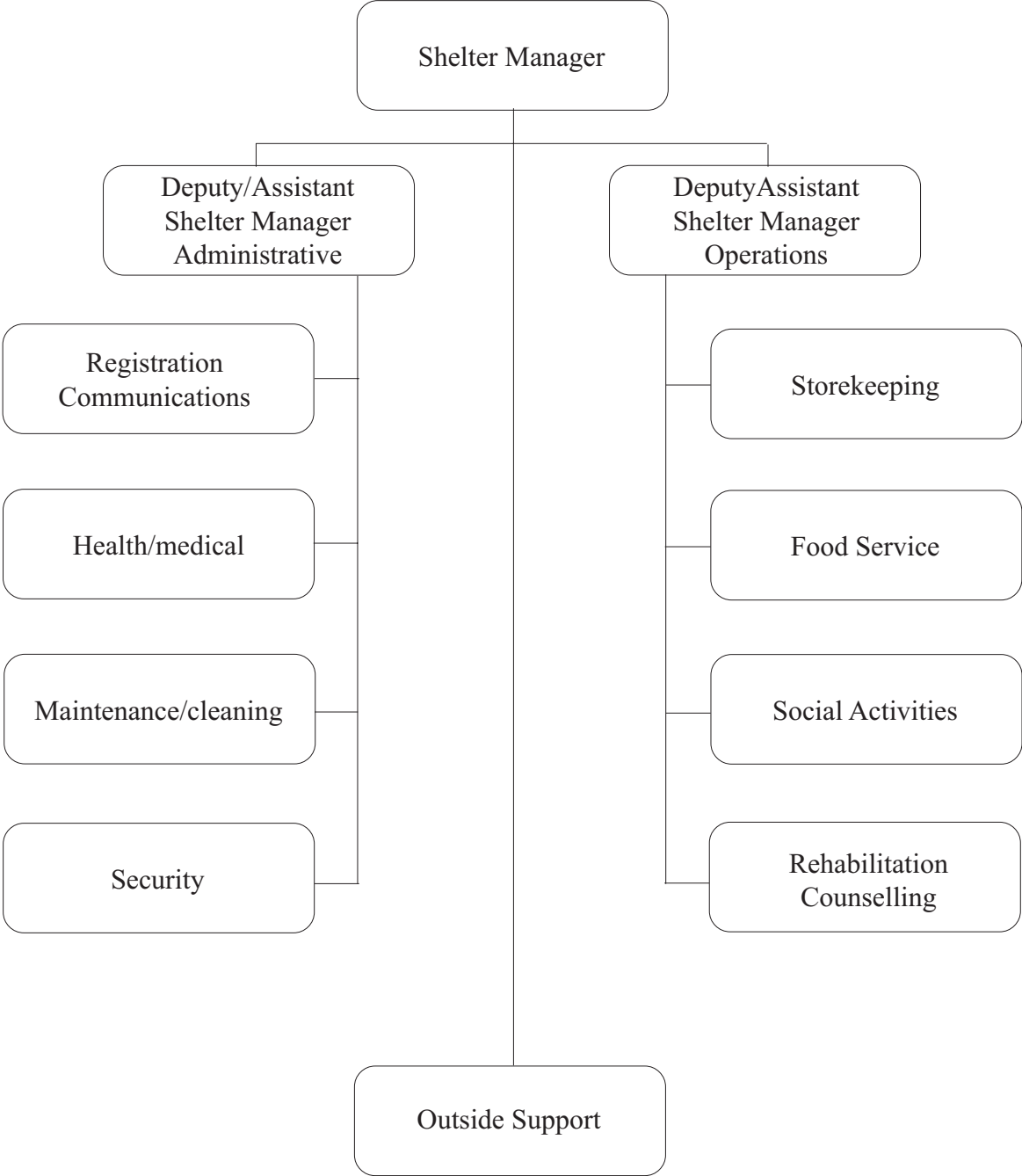
Administrative staff

1. Shelter manager
2. Deputy shelter manager
3. Registrar
4. Cooks
5. Storekeeper
6. Secretary
7. Nurse
8. Driver
9. Cleaners

Support staff

1. Member of the Red Cross
2. Minister of Religion
3. Doctor
4. Psychiatrist
5. Nurse
6. Chauffer
7. Security officer
8. Veterinarian
9. Dietitian
10. Fire officer
11. Plumber
12. Electrician/Technician
13. Carpenter
14. Maintenance person
15. Psychologist
16. Damage assessment evaluator

Responsibility Chart



GUIDELINES FOR SHELTER CAPACITY

Shelters are places of refuge and must not result in disaster to the occupants. Care must be taken to minimize overcrowding and occurrences of unhealthy environments. The following guidelines are provided to ensure basic levels of comfort and safety:

Sleeping accommodation

The occupancy load for the building and each floor should be obtained and must never be exceeded.

Minimum floor space of 3.5 sq. metres (40 sq. ft.) per person.

Minimum distance of 75 cm (2.5 ft.) between beds.

The number of persons to be supported by the shelter must be determined from the occupancy load and the minimum floor space.

Washing facilities

Privies for male and female must be separate.

1 water closet per 25 females.

1 water closet and 1 urinal per 35 males.

Toilets should be at a maximum distance of 50 m (150 ft.) from building.

One (1) hand wash basin per 10 persons.

One (1) shower per 30 persons.

Local public health authority requirements may be more stringent and would therefore supersede these guidelines.

Water requirements (per day)

30 litres (7 gals) per person for feeding centres.

20 litres (4 gals) per person for shelters/camps.

35 litres (8 gals) per person for washing/cleansing purposes.

EQUIPMENT AND SUPPLIES FOR EMERGENCY SHELTERS

Some situations will dictate needs that are unique. Most shelter situations will have a number of requirements that are the same. The following list is not all inclusive but does cover the basics.

EQUIPMENT

1. Communications – telephones, radios, facsimile machine.
2. Transportation – vehicles for people and for cargo.
2. Power – portable standby generator and necessary batteries.
3. Lighting – portable lights, lanterns, flashlights and batteries.
4. Tools – cutlasses, spade, fork, hammer, saw, screwdrivers, nails, etc.
5. Cooking – stoves, table models and/or other types, gas, coal, kerosene or oil.
6. Water – storage containers.
7. Furniture – tables and chairs, storage cabinets, cots.
8. Emergency – fire extinguishers and a First-Aid kit designed for emergency situations in a disaster shelter.

SUPPLIES

1. Sleeping – cots, mattresses, bedding and blankets, mats, rugs, foams or rubbers.
2. Food – canned and dry packaged food for 3 days, cooking oils and condiments.
3. Cooking and eating – cots, pans and tools, can openers, knives, forks and spoons, plates, cups and glasses.
4. Water – an amount to last for 3 days at a minimum and water purification tablets or chemicals.
5. Cleaning – brooms, mops, buckets, soap and disinfectant and rags.
6. Sanitation – garbage bags and dustbins.
7. Sanitary supplies – toilet paper, paper towels, napkins, soap, feminine hygiene supplies.
8. Miscellaneous – kerosene and matches. Rope to hang heavy clothes and blankets on a line.
9. New and used articles of clothing.
10. Office – file folders, pens and pencils, rubber bands, forms and paper and a bulletin board for notices.

SAMPLE SHELTER RULES AND REGULATIONS

LAW AND ORDER

1. All existing laws of the country will be enforced.
2. Shelterees shall use the shelter areas as assigned by the shelter manager.
3. Personal conflicts shall be resolved by shelter group leaders if possible.
4. Minor violations, such as loud noise at night, shall be handled by group leaders.
5. Any necessary restraint and serious disciplinary action will be ordered only by the shelter manager in consultation with his/her advisory committee.
6. Serious violations, such as wounding, stealing or rape shall be dealt with quickly and forcefully by the shelter authority (on which the police is represented).

HEALTH AND SANITATION

1. Shelterees with contagious disease shall be isolated immediately.
2. Shelter floors and yard area shall be swept free of waste materials.
3. Sleeping areas shall be kept clean and tidy at all times.
4. Waste containers shall be disposed of as soon as filled.
5. Personal hygiene must be observed (bathing, laundering and toilet duties, etc.).
6. No pets will be allowed inside the main shelter area.

SAFETY AND FIRE

1. No dangerous weapons, liquids, or other safety hazards shall be kept by shelterees.
2. Smoking will be permitted only in designated areas.
3. Matches and cigarettes will be extinguished in a suitable receptacle.
4. No alcoholic beverages will be consumed within the shelter area.
5. Shelterees shall watch for and report any potential fire hazard, such as careless use of combustible materials.
6. Do NOT tamper with fire extinguishers and/or other safety equipment.

SHELTER MANAGER CHECKLIST

The following checklists are for use by the Shelter Manager in preparing for shelter activation, during shelter occupation and to deactivate a shelter. Refer to the Shelter Manager's Guidelines for details of each task.

Shelter Preparation (Pre-activation)

- | | Completed |
|------------------------------------------------------------|--------------------------|
| 1. Prepare a management plan | |
| 1.1 Building inspected ----- | <input type="checkbox"/> |
| 1.2 Rooms allocated for special activities ----- | <input type="checkbox"/> |
| 1.3 Receipt and storage of supplies ----- | <input type="checkbox"/> |
| 1.4 Support team mobilised ----- | <input type="checkbox"/> |
| 1.5 Relevant authority and interest groups contacted ----- | <input type="checkbox"/> |
| 1.6 Staff meetings held ----- | <input type="checkbox"/> |
| 1.7 Meetings arranged with prospective shelterees ----- | <input type="checkbox"/> |
| 1.8 All necessary forms obtained ----- | <input type="checkbox"/> |
| 1.9 List of shelterees needs and priorities prepared ----- | <input type="checkbox"/> |
| 1.10 Shelter prepared ----- | <input type="checkbox"/> |

SHELTER MANAGER GUIDELINES

Shelter Preparation (Pre-activation)

The following guidelines are provided to assist with the use of the Shelter Management checklist.

1. Prepare a management plan

This plan will give an overview of the entire shelter management operation from the preparation stage to the recovery stage. It will reflect the role and activities of the principal actors – management personnel and shelterees.

1.1 Building inspected

Periodic checks should be made to ensure essential facilities and equipment are in place and functioning (running water, toilets, communication system, electricity, standby generator). Also check for defects in the building (loose bolts/nuts, connections, leaks, windows and doors). Ensure proper security; keys should be held in a place of safety and easily obtained.

1.2 Rooms allocated

Determine and allocate space for shelterees according to square foot per person (40 square feet per person). Adequate room space should be provided for sleeping, dining, recreation, storage, special needs, cooking, veterinary activities (pets) and other necessary activities.

1.3 Receipt and storage of supplies

A system should be devised for obtaining, transporting, receiving and storing of food and other supplies. Proper inventory and careful checking for expiration dates and defects in canned food items are very necessary.

1.4 Support team mobilised

Periodic contact with support team, especially before the hurricane season, is very necessary to update them on their roles.

1.5 Relevant authorities contacted

It is extremely important to be in constant contact with the appropriate authorities such as NGO's, PVO's, CSM, the Red Cross, EOC and other relevant government departments and agencies.

1.6 Staff meetings held

Meetings with the shelter management staff at regular intervals is crucial to the success of shelter operation. Duties and specific tasks could be assigned to members. They can help to prepare lists of potentially vulnerable families for the shelter, prepare forms such as registrations, inventory, requisitions, and food menus. The staff can also help to draw up rules and regulations for shelterees and prepare a list of activities and equipment for the shelter and delegate tasks to shelterees.

1.7 Meetings held with shelterees

It is necessary to communicate with shelterees before a disaster occurs. Helpful information on rules, regulations and other pertinent matters could be provided so that the shelterees would be better prepared to enter the shelter.

1.8 All necessary forms obtained

All relevant forms to be used in the shelter should be obtained. Such forms include inventory, registration and requisition forms.

1.9 List of shelterees needs and priorities prepared

Attention must be paid to the various needs and priorities of shelterees. These needs could be emotional, physical, psychological, recreational and spiritual. Priorities could include preferences for a shelter adjacent to place of employment, taking pets to shelters and remaining close to their damaged homes.

1.10 Shelter prepared

All necessary tasks have been completed to prepare the shelter for occupancy.

Intentionally left blank.

**SHELTER MANAGER CHECKLIST
Shelter Opening (Activation)**

- | | Completed |
|----------------------------------------------|--------------------------|
| 2. Prepare for occupancy of shelter. | |
| 2.1 Staff alerted ----- | <input type="checkbox"/> |
| 2.2 Shelter opened and checked ----- | <input type="checkbox"/> |
| 2.3 Staff registered ----- | <input type="checkbox"/> |
| 2.4 Staff assigned and deployed ----- | <input type="checkbox"/> |
| 2.4 Communications established ----- | <input type="checkbox"/> |
| 2.5 Necessary supplies ordered ----- | <input type="checkbox"/> |
| 3. Shelter occupied. | |
| 3.1 Shelteree registration established ----- | <input type="checkbox"/> |
| 3.2 Shelter work plan implemented ----- | <input type="checkbox"/> |
| 3.3 Shelterees briefed ----- | <input type="checkbox"/> |
| 3.4 Relevant authorities contacted ----- | <input type="checkbox"/> |
| 3.5 Additional staff recruited ----- | <input type="checkbox"/> |
| 3.6 Supplies distributed ----- | <input type="checkbox"/> |
| 3.7 Duty rosters posted ----- | <input type="checkbox"/> |
| 3.8 Staff meetings held ----- | <input type="checkbox"/> |
| 3.9 Necessary records prepared ----- | <input type="checkbox"/> |
| 3.10 Shelter rules enforced ----- | <input type="checkbox"/> |
| 3.11 Food prepared and distributed ----- | <input type="checkbox"/> |
| 3.12 Emergency clinic established ----- | <input type="checkbox"/> |
| 3.13 Shelter activities reviewed ----- | <input type="checkbox"/> |
| 3.14 Shelter safety checks performed ----- | <input type="checkbox"/> |
| 3.15 Problems identified and resolved ----- | <input type="checkbox"/> |

SHELTER MANAGER GUIDELINES

Shelter Opening (Activation)

2. Prepare for occupancy of shelter.

2.1 Staff alerted

Staff should be summoned to the shelter as soon as possible when the decision to open shelters is made by the programme manager.

2.2 Shelter opened and checked

The shelter must be opened immediately and remain open to allow occupants to enter. A last minute check of the shelter and its contents should be made to ensure everything is in place.

2.3 Staff registered

For the records, all staff members must complete a registration upon arrival at the shelter.

2.4 Staff assigned and deployed

The staff should be deployed to their planned assignment. A quick review of their tasks will facilitate a smooth flow of shelter operation and elimination of some future problems.

2.4 Communications established

Ensure that telephones, hailers, radios and any other communication equipment are operating and establish contact with appropriate EOC and appropriate officials.

2.5 Necessary supplies ordered

Prepare requisitions for, purchase, or ask for donations of necessary supplies for shelter operation. Use pre-planned lists for initial orders.

3. Shelter occupied.

3.1 Shelteree registration established

Every shelteree must be registered to ensure that everyone is accounted for within the shelter. If possible, elicit from them additional information regarding health, diet, interests and capabilities or skills.

3.2 Shelter work plan implemented

The operations plan that was prepared in the Pre-Activation stage is now implemented. It is important to maintain flexibility since the circumstances of the real event may not be exactly as planned. Staff should be continuously alert to any deviations and inform others so that appropriate changes are made. The plan should be revised as the operation unfolds and needed changes noted for future revisions.

3.3 Shelterees briefed

When shelterees are registered, they should be briefed on the shelter operation and rules. Regular meetings should be held to inform and update the shelterees on the ground rules, regulations and any new information that is available. Shelteree input should be encouraged to facilitate smooth operation of the shelter.

3. Shelter in use (continued)

3.4 Relevant authorities contacted

Regular verbal and written reports must be made to appropriate authorities to update them on how things are progressing in the shelter and to inform them of any needs and problems.

3.5 Additional staff recruited

Additional staff may be needed because of the situation. You may want to recruit them from the shelterees to assist the staff in certain chores like washing dishes, cleaning and sharing meals. Make use of any special skills that the shelterees may have such as carpentry, plumbing or masonry.

3.6 Supplies distributed

Essential supplies need to be distributed to shelterees and staff. Staff members assigned this task should see that the needs of the shelter occupants are met insofar as possible with the resources available in the shelter. Records should be kept of what is received in the shelter, what is given to whom and what is destroyed or used.

3.7 Duty rosters posted

Rosters should be posted in strategic places where they can be easily seen by shelterees and staff. Rosters such as organisation charts, staff duties, and information such as a meal time schedule, food menu and activities schedule should also be posted.

3.8 Staff meetings held

Periodic staff meetings are very helpful to see how the operation plan is working, get progress reports, be updated on the situation, be informed about problems and solutions, and future plans

3.9 Necessary records prepared

Daily inventory records must be prepared so that a proper account can be given of all supplies. A log of all actions taken and any problems and solutions should be kept.

3.10 Shelter rules enforced

Security personnel and appointed monitors should be able to ensure that rules are followed by shelterees enforce liabilities on defaulters. Discipline must be maintained at all times in the shelter.

3.11 Food prepared and distributed

Meals should be prepared on time and an orderly but speedy system of distribution implemented. Consideration should be given to occupants with special diet requirements such as diabetes.

3.12 Emergency clinic established

A special room, indoor or outdoor, should be provided for attention to the injured, sick and elderly. A well-equipped First-Aid kit that would anticipate injury patterns should be on hand. Doctors and nurses will attend to such cases. A special room for treatment to occupants with psychological, emotional and social problems can also be provided. Specially qualified members of the support staff should deal with these cases. It may be useful to provide a separate room for pets, healthy and injured, and assign someone to feed and care for them.

3.13 Shelter activities reviewed

Avoid boredom as much as possible. Ensure that the activity schedule is varied and fully functional. Ensure that the varied interests of the shelterees are satisfied. Make use of resource persons in the shelter to help in the recreational, social and spiritual activities.

3.14 Shelter safety checks performed

The continued safety of shelter residents is extremely important. Check furniture, electrical appliances and equipment on a regular basis to ensure they are not hazardous. Carry out maintenance exercises as necessary.

3.15 Problems identified and resolved

Problems will occur. Such problems could be medical, social, mental, physical, financial or interpersonal. Address them immediately. Seek help within the shelter and outside the shelter if the problem is beyond you. Try and solve the problem in such a way that the result would be to the best interest of all concerned. Use your staff to consult with to try out your ideas and alternatives.

SHELTER MANAGER CHECKLIST
Shelter Closing (De-activation/Post-activation)

4. Evacuation of Shelter Completed
- 4.1 Rehabilitation arrangements completed for shelterees -----
 - 4.2 Necessary transportation arranged -----
 - 4.3 Shelterees signed out -----
5. Administrative details completed
- 5.1 Staff meeting held -----
 - 5.2 All forms completed (Registrations, requisitions, inventories) -----
 - 5.3 Activity log completed -----
 - 5.4 Final reports written -----
6. Shelter building cleaned and restored
- 6.1 Remaining supplies and equipment returned -----
 - 6.2 Shelter inspected -----
 - 6.3 Damage to structure repaired -----
 - 6.4 Shelter cleaned -----
 - 6.5 Keys returned -----

SHELTER MANAGER GUIDELINES
Shelter Closing (De-activation/Post-activation)

4. Evacuation of shelter

The process of evacuation and recovery of shelterees should be gradual and orderly. Relevant authorities and services should be contacted and informed of any situations needing their attention.

4.1 Rehabilitation arrangements completed for shelterees

It is important for shelterees to have arrangements made for accommodations when they leave the shelter. It will be difficult to force shelterees to leave when they have no place to go. The shelter manager should work with the social service representatives to solve this issue.

4.2 Necessary transportation arranged

Assist the shelterees to make transportation arrangements so they can leave the shelter and travel to their new accommodation. This is especially important for the elderly.

4.3 Shelterees signed out

Establish a check-out point for the shelterees so they are “signed out” of the shelter. Make sure they take all of their belongings with them.

5. Administrative details completed

5.1 Staff meeting held

At this final meeting, a review should be made of the entire shelter operation making note of what worked well and what needs improvement the next time. Observations and suggestions should be recorded and included in the final report. Staff members should receive an evaluation of their performance during the operation.

5.2 All forms completed

Registrations, inventories of supplies and equipment left, requisitions and receipts should be checked for completion and accuracy. They will become a part of the final report

5.3 Activity log completed

The daily log of shelter activities should be reviewed for accuracy and completed for submission as part of the final report.

5.4 Final reports written

A detailed final report to the EOC, NDO and CSM should be prepared. This should include the items listed above. A list of any outstanding obligations, a list of the staff and volunteers with any evaluations or recommendations and a report on the building with inspections should also be a part of the report.

6. Shelter building cleaned and restored

6.1 Remaining supplies and equipment returned

All supplies and equipment that are not to be retained at the shelter should be returned to the proper authority. It is important to contact the Chief Shelter Manager or the National Disaster Coordinator to arrange the transfer.

6.2 Shelter inspected

The shelter should be thoroughly inspected for any damage that might have occurred as a result of its use as a shelter. An inventory of the contents to verify that all is still there that was there before should be made. It may be useful to have the building's owner present when this inspection is made.

6.3 Damage to structure repaired

Contact the appropriate authority (National Disaster Coordinator or Chief Shelter Manager) with the information about any damage and the costs to repair. Obtain approval to have the necessary repairs completed. Paint where necessary.

6.4 Shelter cleaned

The staff and a few shelterees should be retained to carry-out a general cleaning both inside and outside. Replace the furniture and other building contents that may have been stored. Arrange for the collection and disposal of waste. Have the building owner check to see if the cleaning is satisfactory.

6.5 Keys returned

Turn out the lights, lock the doors and return the keys to the proper place.

Intentionally left blank.

SHELTEREES

Preferences and Needs

The preferences and needs of shelterees in relation to a disaster will vary depending on their personal state of affairs at the time. There are, however, some general statements which can be made that have been learned from past experiences.

Preferences

Well managed shelters are appreciated by all people no matter where in the world they may be. In addition to this, the people of the Caribbean who have been affected by a disaster have been found to prefer to:

1. Remain as close as possible to their damaged or destroyed home or to the homes of their relatives and friends.
2. Move temporarily into homes of families and friends.
3. If possible, improvise temporary shelters as close as possible to their ruined homes, even if these shelters evolve into rebuilt homes.
4. Put up a tent near to their ruined home rather than go to a “tent city”.
5. Occupy a shelter that is close to their usual home, work place and place of worship.
6. Evacuate to distant locations only if evacuation is necessary.

There are three key factors at work here.

- To want to stay on ones own piece of land and to protect their property.
- To be with those who would normally support them in time of need.
- Not wanting others to know that they are not able to cope with the situation or are in need.

Needs

These factors are further at work when we look at the needs of the shelterees.

1. Physical – Shelter residents need as much privacy as possible at the shelter. Family units will not want to be in separate rooms. Sanitation facilities should be adequate. The meeting area should be spacious enough to permit a fair degree of freedom of movement.
2. Social – Families will be anxious to maintain their interpersonal relationship links. There will be general desire for social interaction among the shelter population.
3. Security – People will be reluctant to move to a shelter if their property and personal effects are not secured. They will also be concerned about their pets which are not allowed into the shelter. In a shelter, they will want to be assured that they and their possessions are secure.
4. Information – Shelter residents will want to be able to communicate with relatives and friends while in the shelter. Before they move to the shelter, they would need to receive clear, definitive information and instructions on what to do and what to take with them to the shelter. The shelter manager will also need to brief the shelter residents on the latest information on the disaster and relevant situation reports as they become available.
5. Self esteem – Shelter occupants will want to maintain their self-respect. They will expect to be treated with respect and not considered as unimportant. Many will want to be a part of the shelter operations activities.
6. Recreation – Physical exercises will serve as a therapy for those who may be stressed, worried, frustrated, tense or bored. Activities must be geared towards relieving these emotions.
7. Emotional – There will be a need to deal with shelterees feelings of fear, anger and depression. There may be a need for counselling and support groups. Professionals in the field should be used to help with this need.
8. Spiritual – Opportunities should be provided for religious activities as one's religion may provide a strong support mechanism. Religious leaders who may be in the shelteree group should be encouraged to take the lead in these activities provided religious diversity of the community is considered and taken into account. Outside support may also be needed.
9. Cultural – If shelter is provided by donors from outside the country, there may be a problem with cultural practices. The shelteree will want to maintain his/her cultural patterns of food, dress, music and relationships while in the shelter.

DISASTERS AND MENTAL HEALTH

How do people react?

Most people show signs of emotional stress as an immediate reaction to a disaster. Different people react differently and most recover spontaneously or with the help of others. Information on disasters and mental health can assist relief workers to identify and communicate better with affected persons and be alert for abnormal behaviour. It can also assist in early treatment, thereby increasing chances of recovery.

People who survive a disaster are strongly motivated not only to repair the damage done, but to bring something positive out of the ruins.

Phases of reactions

Pre-impact – The period when a disaster is known to be impending. Behaviour patterns vary but may include:

- Under activity.
- Refusal to prepare for disaster impact.
- Tendency to adopt an attitude that a disaster will not occur.
- Anxiety.

Warning – That period when a disaster is imminent and warnings are posted and announced. Some behaviour patterns may include:

- Frantic search for information on what to do to evade the impact.
- Over acting, sometimes described as panic.
- Restlessness.
- Calmness.

Impact – The period during which the disaster event occurs. Some behaviour patterns are:

- A large portion of the population may be stunned, but most recover quickly.
- A small portion show confusion, paralysis and anxiety.
- There is a hard core of survivors who retain their awareness, appraise the situation and decide on actions. This last group provides the leadership, helps relieve distress and organises rescue services and communications.

Recovery - Immediately after impact when individuals have had time to take stock of the situation. Some reactions are:

- Gradual return to awareness, recall and emotional expression.
- Emotions of fear, anger, loss of trust, dependency, and anxiety.
- Alternative periods of crying and laughing.
- Child-like dependency.
- Positive and immediate actions.

How to manage

Preparation is the key. Reactions to disaster are largely influenced by the psychological state of the individual before the disaster. The stability of the home, community and country is also a very important factor influencing the type of personal reaction. Preparation of the individual, long before disaster strikes, is the best form of boosting the mental state to cope with emergencies.

Measures before disasters

Provide as much information on disasters at the family level:

- Which hazards are likely to result in disasters.
- Possible effects.
- How to cope.
- Rehearsal of survival techniques.
- Family discussions of past disasters and their effects.
- Develop personal/family plan for dealing with disasters.
- Organise group training sessions to demonstrate to the individual that he/she is not alone in the impending danger.

Treatment after disasters

Relief workers, friends and family can assist the individual by:

- Allowing rest for a few hours.
- Establishing close personal contact.
- Encouraging emotional expression and airing of experiences.
- Catering to need for affected person to be given something - food, a blanket, clothing or simply a holding of hands.
- Organising survivors into support groups for treatment, encouragement and activity in relief programmes. Do not underestimate the power of prayer in the Caribbean Society.
- Explain what has happened and the steps being taken.
- Provide centralised treatment with other victims near disaster site. This assists individuals to feel part of group and enhances recovery.

The emotionally wounded

People can be emotionally upset for long periods after disasters.

Seriousness is affected by such factors as:

- Seriousness of disaster.
- Degree of disruption of personal connections.
- Extent of disruption of pre-existing way of life.

Responses to disfigurement, dismemberment or mutilation may also add to reactions. Some reactions are relief, reflecting a feeling of good fortune. This is soon replaced by a sense of exasperation, frustration or anger, especially in those losing family, property or belongings.

Managing the emotionally wounded

Management usually involves social, psychological and spiritual support with ample opportunity for expression.

- Supportive relationships which will allow feelings of anxiety to be tested.
- Maintaining contact of individuals with their primary groups and other familiar links.

Children's reaction to disasters

Children show remarkable resilience in the face of disasters. Those affected, however, show temporary emotional upsets manifested by insomnia, clinging to parents, dependency and fear.

After disasters, children usually fear:

- Recurrence, injury or death.
- Being separated from parents.
- Being left alone.

How to cope

These steps can help:

- Keep the family together. Avoid leaving the child alone.
- Give assurance by word and deed.
- Listen to what a child says about his/her fears.
- Encourage the child to talk about his/her reactions to the disaster.
- Include children in cleaning up and other activities.
- Parents must control their own fears and seek professional help if a child's:
 - Sleeping problem is prolonged.
 - Clinging behaviour does not diminish.
 - Fears become worse.

NOTES FOR MANAGEMENT TEAM

Following are some notes from the publication Psychological reactions at times of disaster by B.E. Fisher.

EXPECTED REACTION

During impact and immediately following some people may be:

- Stunned
- Show confusion; chaotic behaviour
- Anxiety
- Paralysis
- Some will not react and show signs of motionless behaviour

Suggested Response by Management Team

- Provide leadership and direction
- Identify persons with leadership qualities - use them to assist
- Encourage these persons to lie and rest; a close eye should be kept on them by Management Team
- Persons should be encouraged to talk
- Affected persons must never be left alone

DELAYED RESPONSE

Reactions

- Insomnia
- Digestive upsets
- Nervousness
- Emotional Tension
- Might create practical problems
- Incapable of speaking or carrying on a conversation
- Anger and resentment especially if a loved one is lost – blame emergency services for their misfortune
- May want to direct anger towards those who have escaped the disaster – this can be management staff

NORMAL REACTION

Some individuals will remain remarkably calm but most will initially show obvious signs of disturbance or weakness. Such reactions are quite normal and most persons regain their composure fairly soon after the disaster. The depressed:

- Will be numbed and confused
- Gaze vacantly into space
- When spoken to they do not reply or simply shrug their shoulders
- They appear to be unaware of their situation and unable to help themselves without assistance
- Cannot carry out a job which requires initiative

Suggested Response by Management Team

Spend time with individual or group – response may be positive when victims find someone is taking an interest in them. Simple routine tasks should be suggested.

OVER REACTION

Especially emergency services personnel and survivors:

- persons may explode emotionally.
- persons may display a flurry of activity which at first might seem purposeful but will soon be seen to be largely useless.
- persons may talk too rapidly.
- persons may joke inappropriately.
- persons may spread rumours.
- persons may make endless suggestions and demands which are of little real value.
- persons may jump from job to job.
- persons may be unable to resist the slightest distraction.
- persons may be intolerant of any ideas but their own.

These persons can become a disturbing influence on all around them.

Suggested Response by Management Team

It will be difficult to persuade this type of individual to listen to suggestions but you have to look for opportunities to do this and try to divert their actions to something useful. Overactive people:

- Have great confidence in themselves.
- Will criticise the stupidity of authority and may well be outspoken as to whom to blame.
- Have activity that is contagious and can lead to serious crisis.

Every effort must be made to stop their activity, not by arguing with them as to rights and wrongs but by assuring them that their grievances can be considered later and that at present they should help to resolve the situation.

COMMON HYSTERIA

Most Serious Problem

Person becomes convinced that some part of his body has ceased to function when in fact there is nothing physically wrong with him. Such a person is not faking or malingering but is completely unaware that no physical basis exists for his symptoms.

Suggested Response by Management Team

Talk to him calmly.

Make him feel as though someone is interested in him. Bypass his apparent disability to some degree and find them a small job to do in spite of his symptoms. This will help him to gradually regain his composure .

ROLE OF THE HEALTH DEPARTMENT IN DISASTER PREPAREDNESS AND RESPONSE

INTRODUCTION

The resources for the provision of primary health care are limited and Health Departments can not afford to set up systems at local level for responding to disasters which are different from those which it has in place for responding to the routine needs of communities. The Department must work through and strengthen the existing structures while preparing and responding to disasters. The guiding philosophy and strategy in all the activities of the Health Department is Primary Health Care. In this way the system which has to deal with daily individual disasters is strengthened through being prepared for major community disasters.

BASIC PRINCIPLES OF PREPARATION AND RESPONSE AT LOCAL LEVEL

Preparing for and responding to disasters is really not different from preparing for and responding to any other type of health problem:

Recognise that events are unpredictable

In addition to the normal problems associated with planning and responding to health priorities, disasters are usually unpredictable. This makes planning in disasters more difficult and since there is a need for rapid action, decisions are also to be taken quickly. To facilitate this process, anything that can help to minimise the impact of unexpected disasters e.g. early warning systems, hazard mapping, protocols which facilitate a rapid and appropriate response, sometimes against media or political pressure for immediate but inappropriate action, will help to ensure that the priority problems caused by disasters are met.

Learn from the experiences of the past

Although problems after a disaster will differ depending on for example the severity of the disaster event, time of day, the population density, the existing health infrastructure, the priority needs remain fairly constant to different disasters and these need to be known and understood if responses to disasters are to be efficient and effective. Experiences from the past are included in protocols for disasters as well as in simulation exercises.

Build on the strengths of communities

Primary health care involves the community and its resources in achieving its goals and an effective response to a disaster must do the same. It is the affected families and communities who respond initially to mitigate the effects of a disaster. Some vulnerable communities have learned their own strategies for survival. A health department must respect, support and strengthen these initiatives.

Strengthen intersectoral collaboration

By involving the communities in disaster preparedness and response, intersectoral collaboration, not only at parish level but also at district and community level, is a necessity for proper and efficient functioning. Exchange of information, planning of common strategies, and simulation exercises with communities and all relevant agencies, will enhance intersectoral collaboration and facilitate intersectoral action during disasters.

ACTIONS TO BE TAKEN IN THE DIFFERENT PHASES OF AN IMPACT:

I. Pre-Impact Phase This can be short or long term depending on the type of hazard; for example, hurricanes, earthquakes, fires, transportation accidents such as airplane and automobile crashes (some are natural, others are man made).

Put in place pertinent and appropriate systems according to the Disaster Preparedness Plan, such as:

- a. Emergency education – this includes appropriate warnings, instructions on safety precautions, the storage of water and food.
- b. Identification of suitable shelters – buildings should be in good condition with sanitary conveniences, facility for storage of water and food and ideally some standby equipment.
- c. A source of safe water should be identified.
- d. Storage of medical supplies and food.
- e. Identify alternative site for additional persons.
- f. Be aware of all other agencies involved in disaster preparedness and communicate when necessary.
- g. Have staff alerted and on standby for action.
- h. Have emergency supplies ready, e.g. medical equipment and supplies, first aid kits, etc.

II During the impact

Listen to the radio and stay in a secure place.

- a. Assist with evacuations
- b. Rescue of injured and stranded
- c. Medical care – first aid, hospitalisation, etc.
- d. Assist with proper utilisation of shelters

III Post-impact (post-emergency) phase

Work to return all systems to normal.

- Shelter management
 - a. Assist with establishing shelters
 - b. Check on the quantity and quality of water
 - c. Check on the quality of food

- Collect data on:
 - a. Number of shelters in use
 - b. Number of persons in each shelter
 - c. Persons missing or injured
 - d. Illness, if any, e.g. fever, diarrhoea, vomiting
 - e. Number of houses destroyed
 - d. Animals destroyed
 - e. Medical supplies needed

- Co-ordinate with shelter managers on his/her daily recording of events.
- Prepare and submit relevant reports to the Ministry of Health or Head Office.
- Work with all other agencies such as Office of Disaster Preparedness, Local Government, Parish Council, Fire, etc. to have persons return to their normal way of life.
- Mobilize community to dispose of liquid, solid waste and dead bodies, etc., bury and burn – provide latrines, etc.
- Check food handling and storage establishment to ensure food safety.
- Institute a vector control programme.
- Continue health education.
- Collect and submit relevant reports and data to Ministry of Health.
- The Ministry of Health will analyse data and develop action in co-ordination with other agencies and the communities and also make requests for assistance where necessary.
- The Ministry of Health will also liaise with Secondary care, Senior Medical Officer of Health in the hospital for further treatment or admission of sick and injured persons.

GLOSSARY OF TERMS

The following definitions are presented here for use specifically with this course. These definitions come from the UNDHA/UNDP and OFDA. Other authors and organisations may have different variations on definitions of these terms.

ACID RAIN

A washout of an excessive concentration of acidic compounds in the atmosphere, resulting from chemical pollutants such as sulphur and nitrogen compounds. When deposited these increase the acidity of the soil and water causing agricultural and ecological damage.

ACTIVATION

The period when a shelter is open for occupancy by shelterees.

AFTERSHOCK

A smaller earthquake that follows the main shock and originates close to its focus. Aftershocks generally decrease in number and magnitude over time. Aftershocks that follow the main shock have to be considered as the same event as the main earthquake.

ALARM

The warning or signal given of the actual or imminent presence of a dangerous event so that specific instructions for emergencies can be followed.

ALERT

The notice or signal issued indicating specific precautions should be taken because of the probability or proximity of a dangerous event.

ATMOSPHERE POLLUTION

Contamination of the atmosphere by large quantities of gases, solids and radiation produced by the burning of natural and artificial fuels, chemicals and other industrial processes and nuclear explosions.

BUDGET

A statement of resources (people, time and money) allocated to particular activities with a specific time frame. A statement of plans and expected results in numerical terms.

BUILDING COLLAPSE

Entails the sudden falling apart of a building in the absence of any outside force.

CHLOROFLUORO-CARBONS (CFC)

A group of chemical compounds used in industry and in the household, of which the excessive and universal use is believed to be one of the causes of ozone depletion, with resulting environmental damage.

CONTINGENCY PLAN

A plan for possible future situations which are not expected to occur but which may occur. Commonly called a “What if...” plan.

CO-ORDINATION

The process of integrating the objectives and activities of separate work units or functional areas in order to realise the organisation’s goals effectively.

DAMAGE

Unwanted changes or losses resulting from a natural or man-caused event.

DE-ACTIVATION

The process of relocating shelterees and returning a shelter to its original state.

DECLARATION OF DISASTER

Official declaration by the authorities of a political-management jurisdiction due to the need for extraordinary action.

DEVELOPMENT

The cumulative and lasting increase, tied to social changes, in the quantity and quality of a community's goods, services and resources, with the purpose of maintaining and improving the security and quality of human life.

DISASTER

A natural or man-caused event which causes intense negative impacts on people, goods, services and/or the environment, exceeding the affected community's capability to respond.

DISASTER MANAGEMENT

A collective term encompassing all aspects of planning for and responding to disasters, including both pre- and post-disaster activities. It refers to both the risk and consequences of a disaster.

DISASTER MANAGER

The person having the capacity, responsibility and authority to make decisions in any of the disaster cycle stages.

DISASTER WARNING SYSTEM

Methods to alert the community in case of a disaster.

DROUGHT

Period of deficiency of moisture in the soil such that there is inadequate water required for plants, animals and human beings. A drought causes malnutrition, epidemics and displacement of populations from one area to another.

EARTHQUAKE

Sudden break within the upper layers of the earth, sometimes breaking the surface, resulting in the vibration of the ground, when strong enough will cause the collapse of buildings and destruction of life and property. There are two scales for measuring the impact of an earthquake: the Richter scale and the Mercalli scale.

EMERGENCY PLAN

A definition of the policies, organisation and procedures for confronting disasters in all phases.

EMERGENCY

Situation generated by the real or imminent occurrence of an event, requiring immediate attention.

EXPLOSIONS

Disasters will only be classified as explosions when the explosion is the actual disaster. If the explosion is the cause of another disaster, the event will be classified as the resulting disaster.

EXPOSED POPULATION

The total population potentially susceptible to the effects of a hazard.

FAMINE

Catastrophic food shortage affecting large numbers of people due to climatic, environmental and socio-economic reasons. The cause of the famine may produce great migrations to less-affected regions.

FIRES

Usually caused by man but may occasionally occur through natural causes; for example, forest fires can be caused by lightning in thunderstorms. Note: when a fire is a result of a natural cause, it will be classified under the natural cause.

FLOOD

Significant rise of water level in a stream, lake reservoir or a coastal region. A flood is a harmful inundation of property and land utilised by man and may be of two types:

Slow flood – An increase in the volume of water produced by rain in rivers and lakes over a long period, days or weeks, mainly affecting property such as houses and cattle, and displacing the inhabitants from their usual dwelling places.

Flash flood – A sudden and extreme volume of water that flows rapidly causing deaths, injuries and violent destruction of property and inundation, and because of its nature is difficult to forecast.

FOREST/GRASSLAND FIRE

Fires in forest or bush grasslands that cover extensive areas and usually do damage. They may start by natural causes such as volcanic eruptions or lightning, or they may be caused by arsonists or careless smokers, by those burning wood or by clearing a forest area.

HAILERS (Bull Horn)

Portable battery operated loud speaker used for speaking or calling from a distance.

HAZARD

The potential for a natural or man-caused event to occur with negative consequences.

HURRICANE/CYCLONE

A large-scale closed circulation system in the atmosphere with low barometric pressure and strong winds that rotate counter clockwise in the northern hemisphere and clockwise in the southern hemisphere. Hurricanes are large atmospheric vortices with wind speeds of more than 100 kph; they develop in the doldrums of the tropics and move in an often erratic way towards higher latitudes.

INJURED

People with physical injuries/trauma/illness requiring medical treatment (therapeutic feeding included) as a direct result of a disaster. Comments: This category will include the severely malnourished as well as victims of radiation exposure and chemical intoxication. The injured are always part of the primary affected population.

LANDSLIDE

Downhill sliding or falling movement of dry soil and rock. Landslides are difficult to estimate as an independent phenomenon. It seems appropriate, therefore, to associate landslides with other hazards such as tropical cyclones, severe local storms and river floods. The term "landslide" is used in its broad sense to include downward and outward movement of slope-forming materials (natural rock and soil). It is caused by

heavy rain, soil erosion and earth tremors and may also happen in areas under heavy snow (avalanches).

MEETING

The gathering of 2 or more persons for the purpose of sharing information or taking action.

MITIGATION

Measures taken to reduce the loss of life, livelihood and property by disasters, either by reducing vulnerability or by modifying the hazard, where possible.

NATURAL DISASTERS

Events of natural causes that result in a disaster. Examples are: hurricanes, tropical storms, floods, erosion, landslides, earthquakes, tidal surges/tsunami and volcanoes.

OIL POLLUTION

Pollution of oceans, lakes or rivers. This results from the discharge of hydrocarbons (often petroleum or crude oil) from tanks, tankers or pipelines during transportation or storage. Oil spills are accidental discharge often resulting from storms or collisions. Oil pumping is intentional discharge from flushing the holds of tankers. Oil slicks are generally small discharges on the water's surface. Black tide are substantial deposits on tidelands from oil spills or dumping.

ORGANISATION

Two or more persons who work together in a structured way to achieve a specific goal or set of goals.

ORGANISATIONAL CHART

A chart which illustrates organizational levels, the name of the units of each level and the relationships to each other.

ORGANISATIONAL STRUCTURE

The way in which an organisation's activities and resources are divided, organised and coordinated.

ORGANISING

Establishing an intentional structure of roles for persons to fill in an organisation.

PARAPET

A low protective wall or railing along the edge of a roof.

POLLUTION

Degradation of one or more elements or aspects in the environment by noxious industrial, chemical or biological wastes, from debris or man-made products and from mismanagement of natural and environmental resources.

POPULATION AT RISK

Population whose life, property and livelihood are directly threatened by a hazard.

POST-ACTIVATION

The period of time after the last shelteree leaves until the shelter is returned to pre-activation status.

PRE-ACTIVATION

The period prior to the opening of a shelter for occupancy by shelterees.

PREPAREDNESS

Measures taken to reduce to the minimum level possible, the loss of human lives and other damage, through the organising of prompt and efficient actions of response and rehabilitation.

PREVENTION

Measures taken for the purpose of preventing natural or man-caused phenomena from causing or giving rise to disasters or other emergency situations.

RECEIVING AREA

An area of a shelter designated for shelterees who are waiting to be registered and assigned.

RECONSTRUCTION

The medium and long term repair of physical, social and economic damage and the return of affected structures to a condition equal to or better than before the disaster.

REFUGEES

According to international legislation, persons having a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion mostly outside the country of nationality and unable to return or avail themselves of the protection of that country. Includes mass exodus of peoples for reasons of conflict and natural disasters moving outside their country of origin.

REHABILITATION (community)

The restoration of basic services and the beginning of the repair of physical, social and economic damages.

REHABILITATION (individual)

The process of restoring victims to normal life through education, therapy and assistance.

RESPONSE

Actions carried out in a disaster situation with the objective to save lives, alleviate suffering and reduce economic losses

RETROFIT

Major repairs to a structure for the purpose of changing or modifying the construction to withstand the effects of a potential hazard.

RISK ASSESSMENT

Determining the probability that a disaster will occur.

RISK MAP

A graphic representation of the distribution of the types and intensity of effects a particular event may cause in relation to the degree of vulnerability.

RISK

The probability that a disaster will occur given the hazard and vulnerability.

SEA DISASTERS

Ships may sink in a storm, explode, burn, crash into each other, crash into an iceberg or rock, capsize, or vanish without explanation. Note: sea disasters caused by conflict are classified under Conflict. Oil slicks are classified under Industrial/technological accident.

SHELTER

A facility set up to provide temporary housing for persons unable to continue their living arrangement in separate family units.

SHELTER DESIGNATION

The formal designation of a facility as an official disaster shelter and the notification of the designation to the potential users of the shelter.

SHELTER IDENTIFICATION

A process whereby structures with the potential to be used as temporary shelters are identified.

SHELTER MANAGER

A staff member assigned overall responsibility for managing a shelter utilising available resources

SHELTER SELECTION

A formal determination that a facility is suitable for designation as an official temporary disaster shelter.

SHELTER – LONG-TERM SHELTER

A shelter used for a longer period of time as temporary housing.

SHELTER – SHORT-TERM SHELTER

A shelter that will be occupied for no more than 72 hours.

SHELTEREE

A person, who as a result of an emergency situation, requires temporary shelter.

STORM SURGE

A sudden rise of sea as a result of high winds and low atmosphere pressure; sometimes called a storm tide, storm wave or tidal wave (this name indicates waves caused by the tidal action of the moon and the sun in the same way as regular ocean tides. It is often erroneously given to tsunamis). Generally affects only coastal areas but may intrude some distance inland.

TARGET POPULATION

The group of people to whom relief services and supplies are provided.

THUNDERSTORM

A large cumulus cloud on which localised centres of electrical charge have developed.

TORNADO

Localised and violently destructive windstorm occurring over land. Characterised by a long funnel shaped cloud composed of condensation and debris extending to the ground and marking a path of greatest destruction.

TROPICAL STORM

Formed over open seas and is characterised by extreme wind damage, intense downpours of rain, wave storms at sea, severe coastal wave action, marine flooding, riverine flooding, lightning and thunderstorms.

TSUNAMI/TIDAL WAVE

Series of large sea waves generated by sudden displacement of sea water (caused by earthquake, volcanic eruption or submarine landslide); capable of propagation over large distance.

URGENCY

The relative imperativeness, pressing importance, or need to respond to a situation.

VETERINARIAN

A person trained and authorised to treat animals medically.

VICTIM

A person who has suffered great harm to his/her physical or psychic integrity, goods and/or individual and collective services.

VOLCANIC ERUPTION

Discharge of fragmentary ejecta, lava and gases from a volcanic vent. The most common consequences are displacement of population, temporary food shortage and volcanic ash landslides called lahar.

VULNERABILITY ANALYSIS

The process through which the values at risk and/or the susceptibility level of elements exposed to a specific hazard is determined.

VULNERABILITY

The extent to which a community's structure, services or environment is likely to be damaged or disrupted by the impact of a hazard.

SAMPLE SHELTER INFORMATION FORM

Parish/District: _____ Shelter name: _____

Shelter address/location: _____ Telephone: _____

Community served: _____ Community population: _____

Capacity of shelter: _____ Expected shelterees: _____

Shelter owner: _____

Owner's consent: Y N

Person in charge/contact:

Name: _____ Title: _____

Address: _____

Telephone: _____

Location of key:

Name: _____

Address: _____

Telephone: _____

General description of building (sketch on back)

Length _____ Width _____ Square feet _____ Rooms _____

Facilities: Cooking Y N Storage: Y N Refrigerated: Y N

Sanitary adequate Y N Utilities adequate: Y N

Normal use of building: _____ Age of building: _____

Past disaster history of building: _____

Last building inspection: _____ Inspector: _____

Needs re-inspection: Y N Needs maintenance: Y N

Shelter Manager: _____

Contact at: _____

Assistant Shelter Manager: _____

Contact at: _____

Information recorded by: _____ Current to date: _____

SHELTER REGISTRATION

Name of shelter: _____ Date _____

Location of shelter: _____

INITIAL INFORMATION

Surname: _____ Other names: _____

Name commonly used: _____ Date of Birth: _____ M F

Address: _____

Next of kin: _____

Address: _____

FOLLOW-UP INFORMATION

Date of arrival in shelter:

Family Group:
Names

Health Status

Occupation

D.O.B.

Sex

Family Group: Names	Health Status	Occupation	D.O.B.	Sex

General health conditon: _____

Unique or emergency health needs: _____

Damage to home/crops: _____

Possibility of going to home of friends or family: Y N

Name and address: _____

Date of leaving shelter: _____

Destination: _____

Recorder: _____ Date: _____

SUPPLIES AND EQUIPMENT ACCOUNTING
Non-Relief/Non-Food

Parish/District _____ Shelter _____ Date _____
 District Chairman/Shelter Manager _____

Type of report (periodic/event) _____

Equipment

Item	Received	Turned-in	On-hand
Vehicle	_____	_____	_____
Generator	_____	_____	_____
Radio	_____	_____	_____
Telephone/Fax	_____	_____	_____
Kitchen			
Stove	_____	_____	_____
Pots	_____	_____	_____
Utensils	_____	_____	_____
Other			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supplies

Item	Received	Issued	On-hand
Cots	_____	_____	_____
Blankets	_____	_____	_____
Sheets	_____	_____	_____
Sleeping bags	_____	_____	_____
Torches (Battery)	_____	_____	_____
Other			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Report prepared by: _____

SUPPLIES ACCOUNTING
Relief/Food

Parish/District _____ Shelter _____ Date _____
District Chairman/Shelter Manager _____

Type of report (periodic/event) _____

Relief

Item	Received	Turned-in	On-hand
Tents	_____	_____	_____
Plastic sheets	_____	_____	_____
Blankets	_____	_____	_____
Sheets	_____	_____	_____
Kitchen			
Stove	_____	_____	_____
Pots	_____	_____	_____
Utensils	_____	_____	_____
Other	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Food

Item	Received	Issued	On-hand
Flour	_____	_____	_____
Rice	_____	_____	_____
Beans	_____	_____	_____
Coffee	_____	_____	_____
Tea	_____	_____	_____
Canned meat	_____	_____	_____
Canned vegetables	_____	_____	_____
Other	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Report prepared by: _____

