

Government of Uttar Pradesh

Standard Operating Procedures

Emergency Support Function - 12

SHELTER

REVISED DRAFT

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DEVELOPED BY

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Preface

Standard Operating Procedures (SOP) for the Emergency Support Function-12: Shelter has been developed based on the guidance available in statutory documents, available worldwide literature on the subject and based on our experience in the field of disaster management.

We believe that the comprehensive SOP should cover the actions to be taken by all agencies that have the primary responsibility as well as secondary responsibility to deal with all stages of disaster management. We consider the disaster management cycle in four stages – **before, during, after, and normal time**. While ‘before’ stage lists the actions for preparedness; ‘during’ stage contains response actions; ‘after’ stage represents recovery and rehabilitation; ‘normal time’ is for taking actions for mitigating disaster impacts.

We recommend that the SOPs should be discussed between the concerned agencies and necessary changes are made as required and adopted for use. The SOPs need to be reviewed annually and updated with the view to improve the performance of all concerned departments.

SEEDS TECHNICAL SERVICES

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Standard Operating Procedures

Emergency Support Function-12: Shelter

Introduction

The High Powered Committee on Disaster Management, 2001 identified 14 Emergency Support Functions (ESFs), which are the essentials of emergency management comprising of various coordinating agencies, which manage and coordinate specific kinds of assistance common to all disaster types. It also introduced a concept of trigger mechanism, which was developed to ensure the smooth flow of response activities after disaster. The trigger mechanism has been envisaged as a preparedness plan whereby the receipt of a signal of an impending disaster would simultaneously energise and activate the mechanism for response and mitigation without loss of crucial time. This would entail all the participating managers to know the task assigned to them and the manner of response. Identification of available resources, including manpower, material, equipment and adequate delegation of financial and administrative powers are prerequisites to the successful operation of the trigger mechanism. Thus, in order to commence activities at various stages of a disaster, Standard Operating Procedures (SOP), which are in essence the trigger mechanisms, need to be developed for each of the 14 ESFs.

This document provides Standard Operating Procedures in respect of the Emergency Support Function: Shelter. [The Standard Operating Procedures mentioned in the document apply to need for shelter during hazards like Earthquakes, Floods, Fire and Waterlogging](#). Role of Primary and Supporting Agencies are listed. Necessary checklists and formats are attached. The actions to be taken by the concerned agencies **before**, **during**, **after** a disaster and **during normal times** are provided in this document.

This document has been developed keeping in view the guidelines provided by the following:

- i. "The Report of High Powered Committee (HPC) on Disaster Management, October 2001
- ii. "National Disaster Response Plan – Building a Culture of Prevention", prepared by the High Powered Committee (HPC) on Disaster Management, October 2001
- iii. "Disaster Management Act" passed by the Indian Parliament on 26 December 2005
- iv. Uttar Pradesh State Disaster Management Act 2005

Primary Agencies

The primary agencies for coordinating the function "Shelter" is:

- Department of Revenue

Supporting Agencies

Agencies supporting the function "Shelter" include:

- Home Department: Police
- Home Department: Fire Service
- Energy Department

- Rural Development Department.
- Public Works Department
- Jal Nigam
- Panchayati Raj Department
- NGOs
- Food and Civil supplies department.
- Health Department.
- Nagar Nigam.
- Animal Husbandry department.
- Irrigation Department.

ESF: Shelter

At the national level, the purpose of ESF 12 is to meet the physical needs of individuals, families and communities for safe, secure and comfortable living space. The ESF should also be able to meet primary social needs of incorporating self- management in the process.

Activation

- Quick assessment of functional and stable building.
- Clearance of the area for establishment of relief camp.
- Set up relief camps and tents using innovative methods that can save time.
- Assist local authorities to set up telecom and other service facilities.

Planning Assumptions

Spaces and necessary services will have to be developed to conform to SPHERE standards for emergency response. In case it is difficult to achieve these standards in a disaster, when large open areas, structures and services may be badly affected, an attempt should be made to reach as close to these norms as possible. Implementation of these space standards may have a lasting impact on affected communities which could be as varied as psycho-social impacts, epidemics, violence, injuries and crimes. Hence it is important that standards are adhered to as far as possible. Detailed checklists have been developed to ensure preparedness. Planning assumptions made are as under:

- Most of the existing structures may be severely damaged.
- Large populations in the affected area may be rendered homeless.
- Some of the open areas which can be used as shelter sites may also be badly affected.
- Heavy machinery for clearance may be required from existing inventories.
- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.

Standard Operating Procedures (SOP) provided in this document cover the following conditions:

- Ensure preparedness of concerned agencies to respond to emergencies.
- Need for space to accommodate the affected population in some form of temporary shelter.
- Provide basic services to the population accommodated in the shelters.
- Disruption of communication and transport facilities as a result of other disasters
- The people accommodated in shelters will have to be kept informed to the disaster situation at all times to avoid spread of rumours and panic.
- It is essential to keep a record of individuals in shelters.
- Disruption of sanitation services and facilities, loss of power and massing of people in shelters may increase the possibility of disease and injury.

Crisis Management Group

It has been envisaged that a Crisis Management Group will be constituted in each department. The meeting of the group will be called every year prior to the flood season or on receipt of warning of disasters. The group will deliberate and make recommendations on necessary action to the state crisis management group. Problems faced by the department will also be brought out and placed before the state crisis management group for solution. The constitution of crisis management group for the shelter SOP shall be as follows:

Relief Commissioner	- Chairman.
Jt. Secretary (Revenue)	- Member.
Chief Engineer, Jal Nigam	- Member.
Chief Engineer, Rural Engineering Services	- Member.
Chief Engineer, PWD	- Member
Senior army official.	- Member

Inter Departmental Coordination Mechanism:

Inter Departmental coordination is important for successful implementation of Disaster Management efforts. The Inter Departmental Coordination will be done through the State Emergency Operations Center (SEOC). The details of functioning of SEOC are as under.

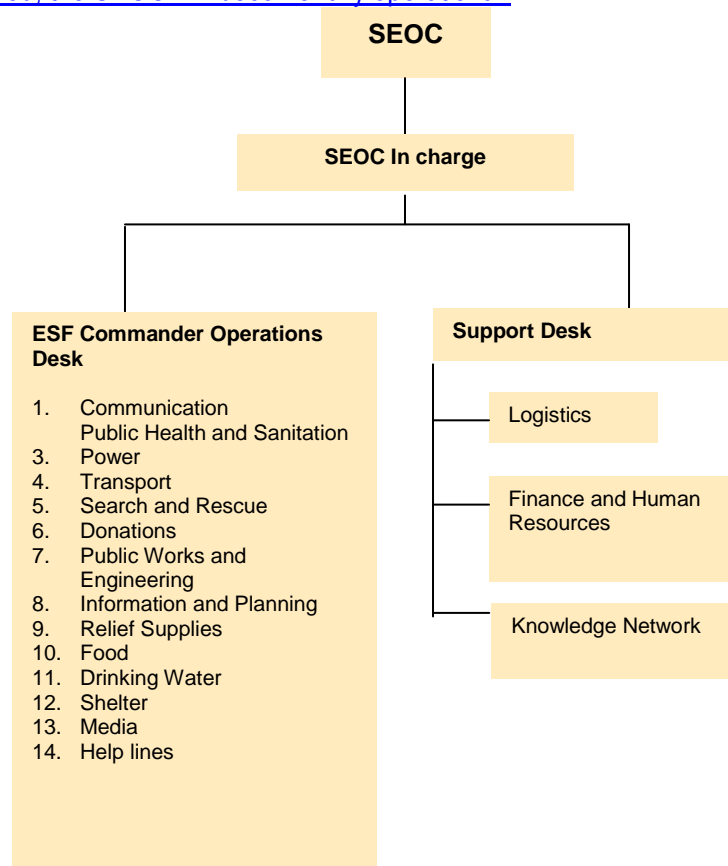
The State Emergency Operation Centre

The State Emergency operation Centre (SEOC) will be hub of all the activities related with disaster response in the state. The primary function of the SEOC is to implement the State Disaster Management Plan, which includes coordination, data collection, operation management, record keeping, public information, and resource management.

For the effective management of resources, disaster supplies and other response activities, focal points or centres will have to be established. These points will have to be well networked starting from the State to the District and finally leading to the disaster site.

Emergency Operations Centres at the State (SEOC) and the District (DEOC) and Incident Command Post (ICP) at the disaster site are the designated focal points that will coordinate overall activities and the flow of relief supplies from the State.

The State Emergency Operations Centre (SEOC) will be maintained and run round the clock which will expand to undertake and coordinate activities during a disaster. Once a warning or a First Information Report is received, the SEOC will become fully operational.



During a disaster situation, the SEOC will be under direct command of the Chief Secretary or the designated person by him as the Chief of Operations.

During non disaster times, the State Emergency Operations Centre stays operational throughout the year in preparedness mode, working during day time in order to take care of the extended preparedness activities of data management, staff awareness and training, which is essential for the smooth functioning of the SEOC during crisis situations and handling of emergency Toll Free Contact Lines. During an emergency, the SEOC will get upgraded and will have all emergency stakeholders manning it round the clock.

The aim of the EOC will be to provide centralized direction and control of all the following functions

- Emergency operations
- Communications and warning, which includes handling of 24 hrs emergency toll free numbers.
- Centralised state level disaster resource database
- Requesting additional resources during the disaster phase from neighbouring districts of the affected area

- Coordinating overseas support and aid.
- Issuing emergency information and instructions specific to departments, consolidation, analysis, and dissemination of Damage Assessment data and preparation of consolidated reports.

Organizational Setup of SEOC

The EOC will comprise the following:

SEOC In-charge

- During non-disaster times, the SEOC will work under the supervision of the relief commissioner.
- In a disaster situation, the SEOC will come under direct control of the Chief Secretary or the person designated by him as the Chief of Operations. He is the primary role player in the EOC, and is responsible for the overall coordination and decision-making. He will also report the status of the SEOC operations and the disaster situation to the Chief Secretary.

Operations Section

The Operations Section will ensure smooth and planned functioning of the SEOC. It will fulfil the following functions:

- Handle requests for emergency personnel, equipment and other resources
- Designate responsibilities and duties for management of the SEOC
- Manage storage, handling and set-up of incoming equipment and personnel
- Ensure medical care, feeding and housing for SEOC personnel
- Maintain documentation of resource inventories, allocation and availability.
- Manage finances for SEOC operations

Representatives in SEOC

Representatives of State Departments of the following departments will be present at the SEOC to take part in the operations and facilitate quick coordination between the SEOC command and their parent departments towards ensuring quick information availability and decision-making:

- Department of Public Works
- Department of Irrigation
- Department of Energy
- Department of Home
- Department of Revenue
- Department of Health
- Department of Agriculture
- Department of Industries

Emergency Support Functions (ESF) have been established, to support the SEOC functions. Each ESF is headed by a lead department for coordinating the delivery of goods and services to the disaster area, and it's supported by various departments and agencies.

During a disaster, the ESFs will be an integral part to carry out response activities.

After a major disaster or emergency requiring State response, primary agencies, when directed by the EOC will take actions to identify requirements and mobilize and deploy resources to the affected area and assist the State in its response actions under fourteen ESFs

Location of SEOC

The SEOC is established in the Department of Revenue. The layout of the SEOC is given below.

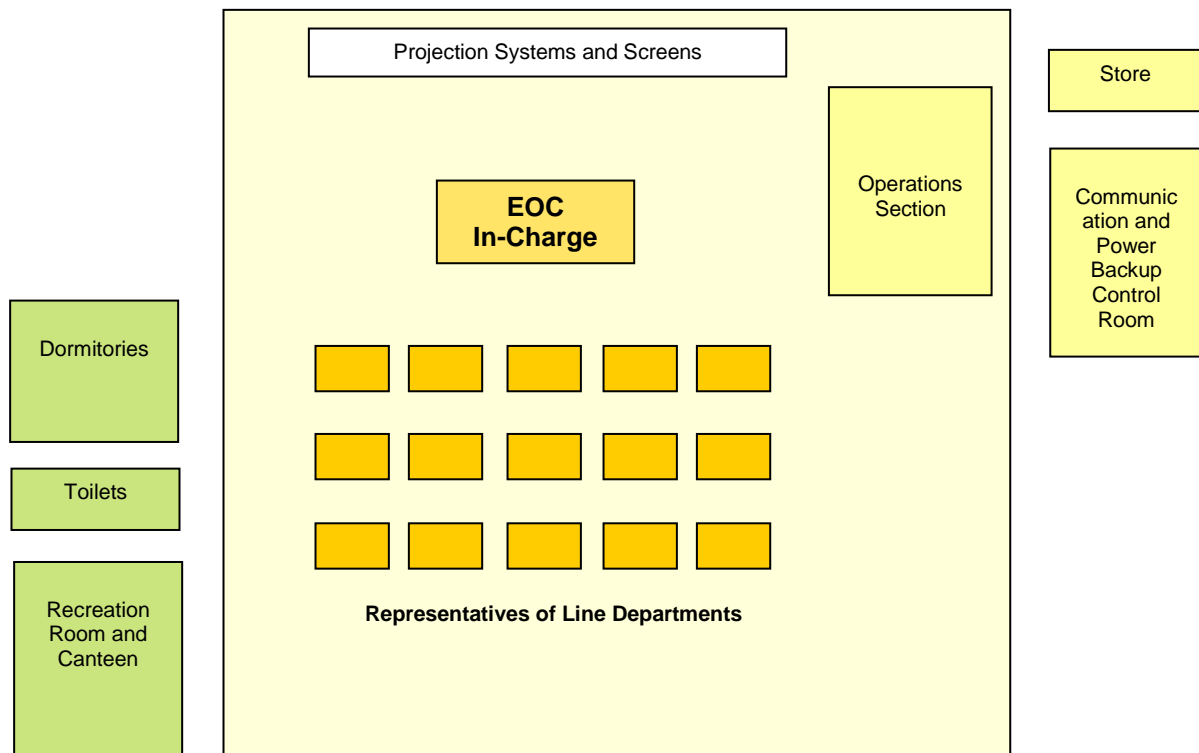
- The Chief of Operations will initiate the activation of emergency services of the SEOC.
- Activation of the SEOC should immediately follow the declaration of a State Level Emergency.
- The Individuals staffing the SEOC are responsible for establishing communications with their respective departments through radio and telephone etc.
- The SEOC Chief or designee will determine what staff he/she deems necessary to effectively operate the SEOC apart from the prescribed staff.
- The designated officers of the Police will provide security at the SEOC.

Back-up SEOC

It is recommended that an alternate SEOC must also be established. It is suggested to setup the backup SEOC within the secretariat building, as most of the departmental heads sits there.

SEOC Layout

A conceptual layout of SEOC is given below.



Equipment Requirements

The SEOC will need to operate round the clock, and may itself be subjected to adverse conditions due to the impact of disaster. It needs to be equipped with the following hardware and software for its efficient functioning:

- Resource Inventories and databank of maps and plans at block, district and state level on a GIS platform for quick retrieval and analysis.
- State-of-art communication equipment for staying linked with the Chief Secretary's office, headquarters of line departments, district collectors, field teams, media, and national and international support agencies.
- A mobile command vehicle with communication equipment.
- Workstations and communication lines for all representatives of the line ministries.
- Radios and television sets tuned to different news channels and coverage.
- Video conferencing facility.
- Projection equipment and screens.
- Emergency power backup.
- Stock of drinking water, food, medicines, bedding and essential items required for personnel manning the SEOC for long time durations.

Resource Inventories

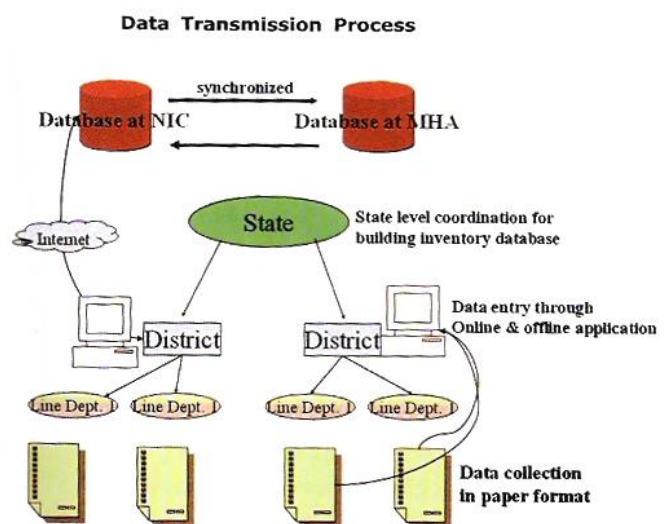
Resource inventories are useful in quick retrieval of vital information regarding availability and sources of rescue and relief material and personnel during times of emergency. Resource inventories are essential elements of EOC operations.

Such inventories will be prepared and maintained through regular updating at the State and District levels. Inventories will include the following basic elements, and other locally relevant information:

- Contact details of all personnel and organisations concerned with emergency management
- List, with specifications and availability procedures, of all equipment that may be useful for responding to an emergency. This will include communication equipment, transport vehicles, earth moving equipment, cranes, and tools etc. that are available with agencies within the jurisdiction.
- List, with specifications and rate schedules, of relief material that can be sourced from local aid agencies and markets. This will include dry rations, tents and bedding, clothing, utensils, first-aid items and other basic necessity items

India Disaster Resource Network (IDRN)

When disasters strike, the disaster managers at the district/ State level respond with the resources at their command. The difficulty is that while the Disaster Manager (District Magistrate/ Collector) is generally aware of the resources at his command in the district, he is not aware of the resources



available in the neighbouring districts within the State or in the neighbouring States. The disaster manager at the State level [the Relief Commissioner] does not have an inventory of resources available within the State. Therefore, all the resources available within the State are not brought to bear for saving lives, and when some specialist equipment is required, there is a lack of knowledge as to the whereabouts of the equipment either in the neighbouring district or in the neighbouring State. Lives can be lost because of such delays/ lack of required resources. The IDRN addresses this lacuna in our disaster management system.

India Disaster Resource Network (IDRN) is one of the initiatives under the GOI-UNDP Disaster Risk Management Programme for disaster reduction. It is a nation-wide electronic inventories of essential and specialist resources for disaster response both specialist equipment and specialist manpower resources. The IDRN lists out the equipment and the resources by type and by the functions it performs and it gives the contact address and telephone numbers of the controlling officers in-charge of the said resources so that the equipment can be promptly mobilized. The IDRN is a live system providing for updating of inventory every year. Entries into the inventory are made at two levels – district and State level. The Objectives of IDRN are:

- To collect and collate information on resources available in the country for emergency response.
- To enhance the decision making capabilities of Government functionaries in quick response to emergencies.

IDRN is accessible to the Emergency officers, District Collectors, Relief Commissioners and other disaster managers at various levels of Government.

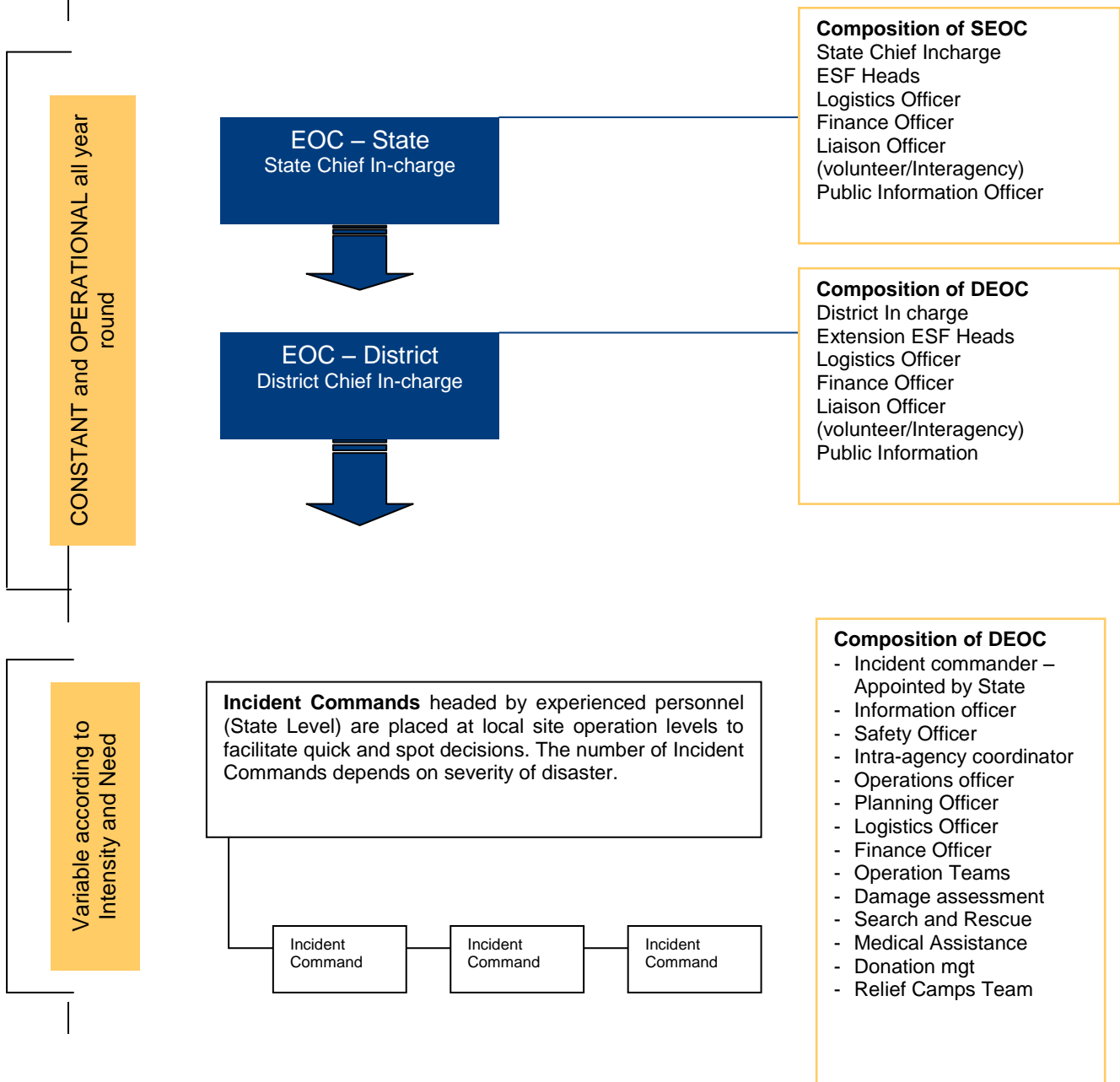
Incident Command System

The SEOC will need to field its own field teams and through them establish an Incident Command System. The system will comprise:

- Field command
- Field information collection
- Inter agency coordination at field level
- Management of field operations, planning, logistics, finance and administration

Rapid Assessment Teams and Quick Response Teams described below will be fielded by the SEC through the SEOC as part of the Incident Command System.

OVERALL COMMAND FLOW CHART (EOC and ICS)



Institutional arrangement of SEOC

Activities of the SEOC

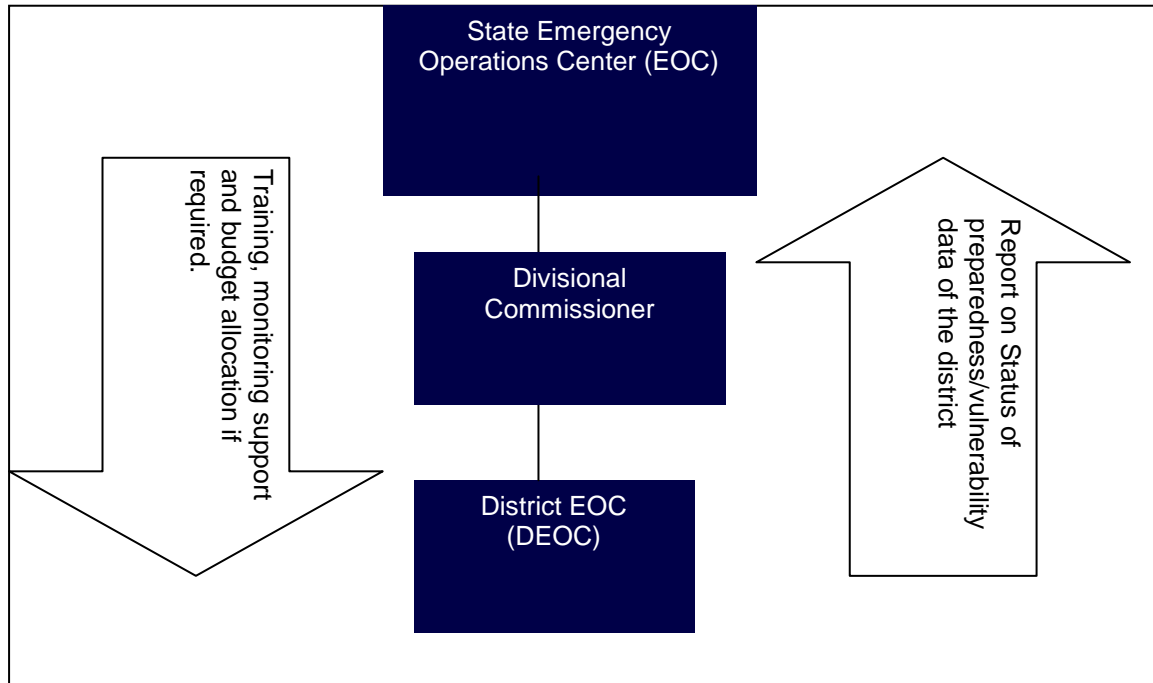
The responsibilities of SEOC at the state level shall be to provide centralized direction and control of the following activities:

Non-disaster time

During non-disaster times, the activities of the EOC will be under the supervision of the relief commissioner. Following are the activities during non-disaster times.

- Ensure that all districts prepare and regularly update the District Disaster Management Plans.
- Encourage districts to prepare area-specific plans for areas prone to specific disasters.
- Monitor training imparted to state level officials, private sector and NGOs in coordination with the HIDM.
- Keep record of the State and district disaster management plans.
- Disseminate information about the State DMP to other departments.
- Ensure that the warning and communication systems and instruments in the SEOC are in working conditions round the clock.
- Keep and update state level disaster resource inventory
- Establish functional facility of Toll free emergency numbers.

Flow of Information between SEOC and DEOC during normal conditions



Activation Procedure of the EOC

Once the Sub-Divisional officer/SDM deems a disaster to be beyond the management capacity of local authorities, the District Disaster Management Authority (DDMA) will declare it as a District Level Disaster and activate the DEOC. Once the DDMA deems a disaster magnitude to be beyond its management capability, it will forward the report to the SEOC for deliberation at the SDMA and subsequent appropriate State intervention. On verification of the magnitude of the disaster, and the scale of response required, the State Emergency Operations Centre will get activated and after declaring a State Disaster, will take control.

- **Step 1:** The State EOC is activated on orders from the SDMA. On receipt of a disaster warning or a FIR, the Chief Minister, after verification that the situation merits declaration of a State Disaster, will convene a meeting of the State Disaster Management Authority. Based on the ratification of the Authority, the Chief Minister, will declare a State Disaster.
- **Step 2:** SEOC is upgraded to emergency mode. The SEOC, till then operating in the preparedness mode, will be upgraded to the emergency mode. Concerned line departments will be informed to post their representatives at the SEOC on a round the clock basis with immediate effect. SEOC will be activated and all community preparedness measures will be put into operation and the ESF to be on full alert and activate their SOPs. The activation of the SEOC should be followed after the DDMA declares a major disaster.
- **Step 3:** Field Assessment Reports. The Chief Secretary/Relief Commissioner will assume the role of the Chief of Operations for Disaster Management. The Chief of Operations of the EOC will coordinate for setting up the ESFs and are asked to prepare and send the Field Assessment Report to the SEOC. The Chief of Operations of the SEOC will spell out the priorities coordinate services of the ESFs, including national and aid agencies.

Quick response teams of specialized personnel will have to be sent for effective management of disaster. Depending on the magnitude of the disaster, two different types of teams will be fielded by the SEOC: (i) Rapid Assessment Teams; (ii) Quick Response Teams

Rapid Assessment Teams

The Rapid Assessment Teams will be multi-disciplinary teams comprising four or five members. They will mainly comprise senior level specialized officers from the field of health, engineering, search and rescue, communication and one who have knowledge of disaster affected area, physical characteristic of the region, language etc. These officials should share a common interest and commitment. There should be a clear allocation of responsibilities among team members. To make a first / preliminary assessment of damage, the assessment report will contain the following basic elements or activities:

- Human and material damage
- Resource availability and local response capacity
- Options for relief assistance and recovery
- Needs for national / international assistance

Quick Response Teams / Rapid Response Teams

Deployment of search and rescue teams can help in reducing the numbers of deaths. A quick response to urgent needs must never be delayed for the reason that a comprehensive assessment has yet to be completed. The following teams must be sent to disaster site or disaster affected area as early as possible, even prior to First Information Report.

- First Aid Team
- Search and Rescue team
- Communication Teams
- Power Team
- Relief Teams
- Rehabilitation teams
- Transport Team

All other focal departments will keep ready their response teams, which may be deployed after receiving the first information report.

Objectives

Department of Revenue

- Meet the needs of population rendered homeless by a disaster.
- Ensure health and security of population living in temporary shelter.
- Ensure coordination between various agencies for shelter.

Actions during normal times

Preparedness activities will be taken up during non-disaster times to ensure smooth flow of activities during disasters. The following activities are prescribed to be taken up during non- disaster time by relevant primary agencies.

Revenue Department

- Form Resource Management Teams.
- Identify nodal officer for “shelter” within the primary agencies as well as support agencies.
- Identify resource management teams with all support agencies for effective management of any emergency. Ideally such teams shall have representatives from energy department, Jal Nigam, Public works department, rural development department and food and civil supplies department. NGOs shall also be made part of these teams.
- Carry out mock drills for personnel entrusted with the responsibility of assembly of the structures to ensure quick assembly in times of disaster.

- Carry out mock drills to familiarize concerned personnel with the access routes, evacuation procedures and sites identified for relief camps.
- Set up central control room for coordination with primary and support agencies during any emergency.
- Identify suitable sites to set up relief camps for temporary shelter.
- Ensure that the sites are free from hazards and are not close to hazardous locations.
- Identify safe access routes to the shelter.
- Ensure that the structures identified for shelters are structurally sound and have disaster resistant features.
- Ensure regular maintenance of the structures.
- Ensure that equipment such as fire extinguishers are installed in the premises.
- These structures shall be a mix of open and covered space
- If required arrange for retrofitting of these structures.
- Ensure that these identified spaces / structures have adequate sanitary facilities for both males and females.
- Ensure that these spaces/ structures have proper water and electricity connections.
- Get innovative designs for emergency shelters developed from architects and engineers.
- Identify resources and material required for shelter during an emergency.
- Identify local bulk suppliers of the shelter materials such as tents, tarpaulins, collapsible and easily assembled shelter units.
- Purchase and store some inventories at convenient locations for easy access in case of an emergency across the state.
- Identify and prepare list of equipments and trained workforce required for setting up relief camps at a short notice.
- Inform all the owners / custodians of the identified safe shelters of their structures being identified as temporary shelter for evacuation in case of an emergency by primary agency for relief in disasters.
- Identify vehicles and vendors for transporting shelter material and workforce required to sites of relief camps in case of an emergency.
- Build up stocks of the necessary items like candles, chlorine tablets, dry food items, medicines.
- Install warning systems and public address systems.
- Prepare emergency evacuation maps and mark shelters and access routes on these maps. Also identify alternate routes for contingency.
- Get layout plans prepared for relief camps required to be set up.

In preparation of the interim Rehabilitation

- Identify land spaces for interim rehabilitation sites

- Develop prototype designs for various types of transitional shelters, using a variety of material such as Tarpaulins, cloth, wood, tube steel, galvanized iron sheets and bamboo.
- Develop working drawings for assembly of the structures.
- Prepare manuals for assembly of the structures including working drawings and detailed instructions for assembly.
- Prepare the trained workforce required for assembly / construction of these shelters

Irrigation department

- Identify Nodal officer with the department.
- Identify the most vulnerable areas in the state for taking up priority maintenance activities before flood season.
- Make a plan for activities to be taken up in such areas.
- Check the bunds for breaches and take up repair of the same.
- Stock materials such as boulders, sandbags etc. in the vulnerable areas.
- Wherever required raise the level of bunds.
- Take up cleaning of trunk drains.
- Advice revenue department about the suitability of relief camp sites and shelter sites if required.
- Inform revenue department and police department in case a road is submerged by flood waters.
- Inform revenue department about any dangerous rise in flood waters.

Panchayati Raj Department / Nagar Niagam.

- Form Resource Management Teams.
- Identify nodal officer for "shelter".
- Ensure regular repair, maintenance and rebuilding of identified structures.
- Ensure that spaces earmarked for relief camps are maintained free from all encumbrances.
- Issue instructions to owners/ custodians of shelter buildings to ensure that the shelter is accessible by concerned agencies at all times.
- Identify spaces, on shelter sites, that can be used for storage of food, medicines etc. during disasters.
- Set up a seasonal maintenance system for the buildings to be used as shelters.
- Ensure water supply, drainage, sewage and electricity connections are maintained in a working condition at all times.
- Take up repairs of damaged doors and windows. Install exhaust fans in the building wherever required.
- Carry out mock drills, involving all concerned personnel, to ensure smooth flow of activities to the shelter during disasters.

- Set up central control room for coordination with primary and support agencies during any emergency.
- Identify sources of support systems required for relief camps including drinking water supply, waste and sewerage disposal, community kitchens and health services required.
- Develop Disaster Management Plan for the Department
- Organise disaster management training for the staff
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carryout safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures.
- Plan and procure necessary equipment for use in disaster management.
- Designate an area, within the office premises to be used as public information centre.

In preparation of any emergency

- Keep the space identified for relief camps free from encroachments.
- Keep the access routes to the shelter sites free from encroachments and obstructions at all times.
- Circulate the maps of identified shelter sites to all officials responsible for provision and management of shelter.
- If required raise the level of water taps to prevent submergence during floods at these identified safe shelters.

Uttar Pradesh Police

- Develop Disaster Management Plan for the Uttar Pradesh Police.
- Organise disaster management training for the staff.
- Ensure that all new structures under the department are designed and constructed disaster-safe.
- Carry out safety audit of all existing structures under the department in the State and identify weak structures.
- Undertake structural retrofitting of weak structures.
- Identify the need and procure necessary equipment for disaster management.
- Designate an area, within the police station to be used as public information centre.
- Maintain a list of disaster prone areas.
- Prepare a traffic management plan for emergencies.
- Train the staff in search and rescue techniques.
- Carry out mock drills involving concerned personnel to ensure quick reaction of staff.

Uttar Pradesh Fire Service

- Develop Disaster Management Plan for the Uttar Pradesh Fire Service.
- Organise disaster management training for the staff.
- Train the staff in search and rescue techniques.
- Carry out mock drills with staff to ensure quick reaction.
- Familiarize the staff with information on vulnerable areas.
- Identify safe access routes to the vulnerable areas.
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carry out safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures.
- Identify the need and procure necessary equipment for fire fighting, and rescue.
- Maintain a list of disaster prone areas
- Designate an area, within the fire station to be used as public information centre.
- Ensure that adequate space for Fire engines is available around the buildings identified as shelters.

Energy Department

- Develop Disaster Management Plan for the Department.
- Organise disaster management training for the staff.
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carryout safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures
- Establish at each sub-station a disaster management tool kit comprising cable cutters, pulley blocks, jungle knives, axes, crowbars, ropes, hacksaws and spanners. Tents for crews should also be in storage.
- Designate an area, within the sub-station to be used as public information centre.
- Brief personnel on emergency procedures to be adopted.
- Carry out mock drills to ensure that the concerned staff is familiar with the procedures.
- Take up shifting/ realignment of H.T. lines and poles near shelter sites.

Rural Development

- Train officials on disaster safe construction.
- Prepare a disaster management plan for the department.

- Familiarise the staff with the plan.
- Prepare a periodic inspection and maintenance schedule for roads, drains and bridges.
- Prepare a list of local suppliers of heavy equipment to be used during operations.
- Prepare plans for immediate deployment of heavy equipment required during disasters.
- Ensure that the heavy equipment available with the department is maintained in good working condition at all times.

Public Works Department

- Develop Disaster Management Plan for the Department
- Organise disaster management training for the staff
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carryout safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures
- Plan and procure necessary equipment for use in disaster management.
- Designate an area, within the office premises to be used as public information centre.
- Maintain an inventory of equipment available with the department for meeting emergencies.
- Ensure that all equipment needed during emergencies is maintained in good working order.
- Ensure that all concerned officials are assigned control room duties on rotational basis to familiarise them with the procedures.

Jal Nigam

- Develop Disaster Management Plan for the Department
- Organise disaster management training for the staff
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carry out safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures
- Plan and procure necessary equipment for use in disaster management.
- Designate an area, within the office premises to be used as public information centre.
- Ensure that proper water connections have been provided to the proposed shelter spaces.
- Prepare a seasonal inspection schedule and carry out necessary repairs if required.
- Maintain a list of suppliers of water tankers for emergency supply of water.
- Maintain and update an inventory of equipment and vehicles available for emergency response.
- Carry out periodic mock drills with emergency response staff to ensure prompt reaction.

Department of Health & Family Welfare

- Plan and implement mass health awareness programmes
- Develop Disaster Management Plan for the Department of Health & Family Welfare
- Include systems for managing health emergencies in shelters in the departmental disaster management plans.
- Organise disaster management trainings for staff of the public health department
- Organise disaster management trainings for hospital staff
- Familiarise staff with safe routes to shelters.
- Identify additional resource needs of the health department to tackle emergencies.
- Carry out mock evacuation drills in hospitals periodically.
- Ensure that hospital staff are aware of the hospital rooms and buildings which are damage proof.
- In the case of hospitals located in proximity to industrial areas obtain Chemical Data Sheet from the different industries.

Department of Animal Husbandry

- Develop Disaster Management Plan for the Department of Animal Husbandry at state level by consolidating the District Level Disaster Management Plans of the Department.
- Officials of the Department of Animal Husbandry should take part in the district level trainings on disaster management along with officials of other concerned departments. This would lead to better coordination between various departments.
- At least five officials from each district should be trained at state level as Master Trainers. Sufficient financial provision should be made for trainings.
- Organise disaster management trainings for hospital staff
- Include training related to managing animal health emergencies in shelters.
- Carryout mock evacuation drills in hospitals periodically
- Identify the need and procure necessary equipment for ensuring safety of health facility structures from disasters
- Identify or create damage proof rooms and buildings within hospitals that can be used as evacuation shelter during an emergency.
- Ensure that hospital staff is aware of the hospital rooms and buildings which are damage proof.

Department of Food and Civil Supplies:

- Develop Disaster Management Plan for the department.
- Train the staff in Disaster Management procedures.
- Maintain a list of suppliers who can supply food items in bulk quantities at short notice.
- Maintain a list of transporters for transportation of food items to shelters..
- Identify additional resources required to tackle disaster situations and obtain the same.

NGOs

- IEC activities on disaster management
- Community mobilization
- Ensure regular meetings of NGO coordination cell
- Disseminate all government aided programmes to the community
- Ensure regular mock drill
- Ensure regular bleaching / use of disinfectants in the drinking water sources
- Organise workshops / seminars / meetings / trainings on community based disaster management
- Long term mitigation strategies.

Actions before Disaster (warning stage)

General Precautions

Warning and evacuation from vulnerable areas will be done at this stage and all preparations necessary to avoid a major catastrophe will be taken by all departments.

The following aspects may be considered for dissemination of warning:

- All warning systems and technologies are maintained in working condition and checked regularly.
- Communities in disaster prone areas are made aware of the warning systems.
- Alternative warning systems must be kept in readiness in case of technical failure.
- Only the designated agencies/ officers will issue the warning.
- All available warning systems should be used.
- The warning should, to the extent possible, be clear about the severity, the time frame, area that may be affected.
- Warning should be conveyed in a simple, direct and non-technical language and incorporate day- to-day usage patterns.
- The do's and don'ts should be clearly communicated to the community to ensure appropriate responses.
- Warning statements should not evoke curiosity or panic behaviour. This should be in a professional language devoid of emotions.
- Rumour control mechanisms should be activated.
- All relevant agencies and organizations should be alerted.
- Whenever possible, assistance of community leaders and organized groups should be sought in explaining the threat.
- Once a warning has been issued it should be followed up by subsequent warnings in order to keep the people informed of the latest situations.
- In the event of a disaster signal tiding away, all clear signals must be given.

Evacuation:

Emergency Evacuations

- Families should be encouraged to take along adequate supplies of water, food, clothing and emergency supplies.
- The families should be encouraged to assemble the following disaster supplies kit.
- Adequate supply of water in closed unbreakable containers.
- Adequate supply of non-perishable packaged food and dry rations.
- A change of clothing and rain gear , blankets and bed sheets, towels, buckets, plates, glasses, mugs made of plastic, soap, toothbrushes, battery-powered radio, torch, lantern, matches, cash and jewellery, personal medicine , a list of important family documents including ration card, passport, bank passbook address/telephone book (of relatives), certificates, driving licence, property documents, insurance documents etc. Special items, including food for infants, elderly or disabled family members should also be included.
- Encourage people to keep fuel in their cars as petrol pumps may be closed during emergencies.
- Ask people to shut off electricity, gas and water at main switches and valves before leaving.
- Ask people to listen to a battery-powered radio and follow local instructions.
- If the danger is a chemical release, then people should be instructed to evacuate immediately.

In other cases, advise people to follow these steps:

- Wear protective clothing
- Secure their homes. Close and lock doors and windows.
- Turn off the main water valve and electricity
- Leave early enough to avoid being trapped.
- Follow recommended evacuation routes.
- Not to move or drive into flooded areas.
- Stay away from downed power lines.
- Animals may not be allowed in public shelters.
- If possible, the community may be advised to carry the livestock along [If the evacuation does not involve transportation by vehicles].

Evacuation of Marooned Persons

- Evacuation must be carried out within the shortest possible time
- The marooned persons must be transferred to transit camps.
- Within the shortest possible time (3 hours of the disaster), marooned people must be provided with
 - Water
 - Medicines.
 - First- aid
 - Cooked food.

[This can continue for 48 hours after the disaster].

- Emergency Transport for the seriously injured by
 - Speed boats.
 - Jeeps.
 - Vans.
 - Ambulance.
- A senior medical officer should accompany the rescue team along with required medical kit and ensure priority for shifting of those seriously injured or requiring immediate medical attention.
- Water supplied must be in accordance with acceptable standards of potable water. It is the responsibility of medical officer to check the water quality.
- The procedures for tagging as given in the standards should be followed.
[Tagging is a process of prioritising transfer of injured based on first hand assessment of chance of survival by the medical officer on the disaster site. The identification of patients is done by attaching a tag to each patient, usually colour coded to indicate a given degree of injury and the priority for evacuation].
- For food supplies, should be provided to the evacuated persons as per standards.

Departmental Actions

Revenue department:

- Appoint one Nodal officer- Shelter- at State level.
- District Magistrate will act as “officer in charge”- Relief Services- at District Level.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with

- Emergency Operations Centre
- Divisional Commissioner
- District Control Room
- Leaves of all concerned staff shall be cancelled and outstation officials shall revert to their duty station.
- In case of unsafe office buildings assist local authorities to establish and house important telecom equipment and officials at the earliest.
- Coordinate with Nagar Nigam/ Nagar Panchayat/ local body to receive information on population living in unsafe structures and vulnerable areas of the city.
- Develop alternative arrangements for population living in unsafe structures that might be affected by disasters.
- Issue instructions to the public over public address systems and through media to evacuate to the nearest shelter from vulnerable areas.
- Install Public address systems in the shelter buildings and shelter sites for issuing information to the inhabitants of the shelter and to convey information to them from time to time.
- Coordinate with Nagar Nigam/ Nagar Panchayat/ Local body and PWD to ensure that access routes to shelter are cleared of all obstructions.
- Coordinate with Jal Nigam, Jal Sansthan, Nagar Nigam and energy department to ensure water, electricity supply, sewage age and drainage arrangements have been made on shelter sites and are available in shelter buildings.
- Check the services in the shelters ~~should be carried out~~ and if required carry out necessary repairs.
- Request for deployment of police personnel close to the shelter sites.
- Ensure that vehicles meant for transport of material and evacuation of people to shelter sites are available and refuelled. If required requisition additional vehicles from other government departments.
- Set up a registration desk at the shelter.
- Keep a supply of halogen tablets for disinfecting drinking water in the shelter building or with personnel deployed on shelter sites.
- Make arrangements, like temporary sheds, for providing shelter to animals on the shelter sites or shelter buildings. In case adequate space on the premises of shelter buildings or shelter sites is not available then arrangement should be made on a nearby site.
- Make arrangements for procuring and stocking fodder and water for animals.
- Store candles and kerosene lamps in the shelter as a provision against power cuts.
- Obtain adequate stocks of building material required for the relief camps, from existing inventories or local suppliers, based on the design of shelters and number of shelters required in the camps.
- Prepare sites identified for relief camp by clearing the debris, bushes and garbage on sites, if required.
- Assemble temporary shelters on sites identified for relief camps according to pre- approved designs and layout.

- Clean up and prepare shelter buildings and remove any debris or garbage, which may obstruct free movement of people and vehicles, from shelter building premises.

Floods & Water logging:

- Prepare the shelter sites by levelling and filling up pits and ditches and on the site.
- Clear the drainage channels around the sites.
- Locate shelters on sites located on raised ground.
- In case adequate sites on raised ground are not available then construct temporary shelters at raised level.
- Make adequate arrangements for sandbags and plastic sheets on the shelter sites.
- Make arrangements for pumping water out of shelter sites and shelter premises.
- Identify possible safe routes for evacuation of people and issue instructions for their protection.

Fire:

- Ensure that there is proper access for emergency vehicles such as fire engines and ambulances to shelter sites.
- Ensure availability of fire extinguishers on site and ensure that they are in working order.
- Clear all inflammable material around shelter sites or develop proper fire breaks in case of sites close to vegetation while developing sites for temporary shelters.
- Identify proper escape routes from shelter sites and buildings themselves.

Panchayati Raj/ Urban Local Bodies.

- Establish Contact with district control room.
- Designate an officer as “officer in- charge” for shelter.
- Ensure that shelter buildings are open and accessible to the evacuees.
- Clean and prepare the shelter buildings to accommodate the evacuated population.
- Identify separate sanitary facilities for men and women on shelter sites and in shelter buildings.
- Check all electricity points in shelter buildings to see that they are in working order. All exposed electrical connections should be covered.
- Ensure that all garbage/ debris on shelter premises is cleared up.
- Prepare trench lavatories on shelter sites.
- Install drinking water facilities, such as water tanks, on the relief camp sites.
- Clear the access routes to the shelter, in case they are blocked by fallen trees, poles etc. and carry out necessary road repairs.
- Brief designated maintenance staff, within the department, on emergency maintenance procedures that may be required in the shelter buildings or on relief camp sites.

- Display information on contact persons and their phone numbers for use in an emergency at a prominent place in the shelter building through wall writing or notice boards.
- Ensure that the fire fighting equipment on shelter premises is working. If required procure and install necessary equipment.
- Ensure that movement of fire engines is not restricted by obstructions on the premises of shelter buildings.

• Floods & Water logging:

- Carry out necessary repairs, if required, to plug cracks, leakages, broken doors, windows and any other structural repairs that may be required to prevent entry of water into the premises.
- Ensure that water supply, electricity, sewage and drainage are in working order. Get the service connections repaired if required.
- Prepare drainage channels around shelter sites and ensure that storm water drains on shelter premises are clear.
- If required move mobile toilets close to relief camp sites to meet the needs for such facilities.
- Place drinking water tanks on raised levels to prevent entry of contaminated water into the tanks.
- Drain the existing water logged pockets existing on relief camp and shelter building sites to prevent spread of diseases.
- Carry out activities like drainage and fogging to prevent breeding of disease vectors on relief camp sites or shelter buildings.

- ~~Ensure that shelter buildings have the necessary fire fighting equipment.~~
- ~~Ensure that movement of fire engines is not restricted by obstructions on the premises of shelter buildings and relief camps. Remove any such obstruction if required.~~
- ~~Prepare drainage channels and trench lavatories on relief camp sites.~~
- ~~If required move mobile toilets close to relief camp sites to meet the needs for such facilities.~~
- ~~Install drinking water facilities, such as water tanks, on the relief camp sites.~~
- ~~Make arrangements for drainage of waste water through proper drainage channels.~~
 - ~~Drain the existing water logged pockets existing on relief camp and shelter building sites to prevent spread of diseases.~~
 - ~~Carry out activities like drainage and fogging to prevent breeding of disease vectors on relief camp sites or shelter buildings.~~
 - ~~Clear the access routes to the shelter, in case they are blocked by fallen trees, poles etc. and carry out necessary road repairs.~~
 - ~~Brief designated maintenance staff, within the department, on emergency maintenance procedures that may be required in the shelter buildings or on relief camp sites.~~
 - ~~Display information on contact persons and their phone numbers for use in an emergency at a prominent place in the shelter building through wall writing or notice boards.~~

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Uttar Pradesh Police

- Within the affected district all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out of station officers or those on leave may be recalled.
- Establish radio communications (and assist in precautionary evacuation activities) with
 - Emergency Operations Centre
 - Divisional Commissioner / Collector
 - District control room and
 - Departmental offices within the division.
- All district level officials of the department would be asked to report to the DM/SP
- Appoint one officer as "NODAL OFFICER - Police" at the State Level.
- Appoint one officer as "Officer-in-Charge - Police" at the District Level.
- Review and update precautionary measures and procedures and, review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Fill departmental vehicles with fuel and park them in a protected area.
- Deploy police personnel for security of relief camps and shelter sites.
- Divert general traffic from the routes used as evacuation routes to the shelters.
- Provide guards, as needed for supply depots such as cooperative food stores and distribution centres.
- Brief the police personnel on any crowd control methods that may need to be adopted in an emergency.
- Provide convoys for transport of relief materials to shelter sites.
- Identify anti-social elements and take necessary precautionary measures for confidence building.
- Ensure safety of relief material on shelter sites.
- Prevent entry of unauthorized persons on shelter sites.
- Set up communication facilities on shelter building and relief camp sites to receive information on any incident requiring police intervention.
- Ensure Priority access to emergency vehicles.
- Law and order on shelter sites or premises will be maintained and action will be taken against anti- social elements.

Floods and Water Logging:

- Assist the administration in carrying out evacuation from flood prone or water logged areas.
- Guard shelter sites and shelter premises to prevent pilferage and theft. Set up a patrolling schedule around such areas.

- [Set up registration desks close to or within shelter sites to record lost or drowned relatives of people moving into shelters.](#)
- [Provide people with situation updates in the city.](#)

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Uttar Pradesh Fire Service

- Within the affected district all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out of station officers or those on leave may be recalled.
- Establish radio communications (and assist in precautionary evacuation activities) with
 - Emergency Operations Centre
 - Divisional Commissioner / Collector
 - District control room and
 - Departmental offices within the division.
- All district level officials of the department would be asked to report to the DM/SP
- Appoint one officer as "NODAL OFFICER – Fire Service" at the State Level
- Appoint one officer as "Officer-in-Charge – Fire Service" at the District Level
- Review and update precautionary measures and procedures and, review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Fill tanks of fire engines with water and keep in readiness.
- Assign and brief personnel for quick response to complaints of fire from shelter sites.
- Coordinate with local bodies to ensure fire fighting arrangements, such as fire extinguishers, fire hydrants and water tanks, are available in shelter buildings and relief camp sites.
- Depute personnel to check availability of fire fighting equipment and fire fighting facilities at shelter sites.
- Fill department vehicles with fuel and park them in a protected area.
- Ensure fire engines are in good running condition.
- Assign duties to fire personnel for shelter sites and shelter buildings.

Energy Department

- Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.
- All district level officials of the department would be asked to report to the workstation.
- Appoint one officer as "NODAL OFFICER - Power Supply" at the State Level.

- Appoint one officer as "Officer-in-Charge - Power Supply" at the District Level.
- Review and update precautionary measures and procedures and review with staff, the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Assist the authorities to make arrangements for stand by generators in the shelters.
- Check emergency tool kits, assembling any additional equipment needed.
- Immediately undertake inspection of the following near shelters:
 - High tension lines.
 - Towers
 - Substations
 - Transformers
 - Insulators
 - Poles and
 - Other equipment.
- Undertake necessary repairs of the above to ensure that there are no short circuits, breakdown of supply, electrocution or fire incidents at shelter sites.
- Provide temporary connections to relief camp sites if required.
- Ensure that streetlights on evacuation routes to the shelter are in working condition.
- On the recommendations of the Collector / District Control Room / "Officer-in-Charge- Power Supply" of the department in the district, instruct district staff to disconnect the main electricity supply for the area likely to be affected by disaster.
- Keep emergency repair gangs ready with food, bedding, tents and tools.
- Make arrangements for quick transportation of emergency repair personnel to the incident site.

Floods and waterlogging:

- Ensure that all overhanging wires and cables near shelter sites are properly repaired to prevent snapping.
- Make arrangements for alternate power supply to shelter sites in case of disruption.
- Provide emergency repair staff with adequate waterproof clothing and equipment to carry out repairs in flood affected areas.
- Make provisions to transport equipment to flood affected areas if required.

Rural Development/ Local Bodies

- Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.
- All district level officials of the department would be asked to report to the Collector.

- Appoint one officer as "NODAL OFFICER- Rural Development" at the State Level.
- Appoint one officer as "Officer-in-Charge- Rural Development" at the District Level.
- The Officer-in-Charge will be responsible for mobilising staff and volunteers to clear the rural roads in his section, should a disaster strike.
- The NODAL OFFICER should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- All technical officers should be notified and should meet the staff to review emergency procedures.
- Review and update precautionary measures and procedures, and review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.
- Vehicles should be inspected, fuel tanks filled.
- Heavy equipments, such as front-end loaders, should be moved from areas likely to be damaged and secured in a safe place.
- Identify sites for dumping debris cleared from disaster sites.
- Inspect all roads, road bridges by a bridge engineer, including underwater inspection of foundations and piers. A full check should be made on all concrete and steelworks.
- Inspect all buildings and structures by a senior engineer and identify structures, which are endangered by the impending disaster.
- Inspect all trunk services, such as water supply, drainage and sewage, to ensure that repairs of the same are not needed.
- The designation of routes strategic to evacuation and relief should be identified and marked, in close coordination with police and district control room.
- Establish a priority listing of rural roads, which will be opened first. Among the most important are the roads to hospitals and main routes to shelter.
- Give priority attention to urgent repair works that need to be undertaken in disaster affected areas.
- Arrange for emergency inspection by mechanical engineer of all plant and equipment in the district workshops.
- If people are evacuating an area, the evacuation routes should be checked and people assisted.
- Carry out necessary repairs to the evacuation route if required.
- Make provisions, such as stacking of sandbags, to protect evacuation routes.

Floods and waterlogging:

- Carry out an inspection of roads in flood prone areas to ensure that no repairs are required.
- Check the drainage system and if required dig additional drains to ensure quick drainage of flood water.
- Check to see that the designated access routes to shelter sites are have been properly protected with sandbags and all pits and potholes have been filled.

- [Check all services around shelter sites to ensure that they are functioning.](#)

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Public Works Department

- Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.
- All district level officials of the department would be asked to report to the Collector.
- Appoint one officer as "NODAL OFFICER-PWD" at the State Level.
- Appoint one officer as "Officer-in-Charge - PWD" at the District Level.
- The Officer-in-Charge - PWD" will be responsible for mobilising staff and volunteers to clear the roads and highways in his section, should a disaster strike.
- The NODAL OFFICER-PWD" should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- All technical officers should be notified and should meet the staff to review emergency procedures.
- Review and update precautionary measures and procedures, review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.
- Vehicles should be inspected, fuel tanks filled and batteries and electrical wiring covered as necessary.
- Extra transport vehicles should be dispatched from headquarters and stationed at safe strategic spots along routes likely to be affected.
- Heavy equipments, such as front-end loaders, cranes and back- hoe loaders (eg. JCBs) should be moved from areas likely to be damaged and secured in a safe place.
- Identify sites for dumping debris cleared from disaster sites.
- Inspect all roads, road bridges by a bridge engineer, including underwater inspection of foundations and piers. A full check should be made on all concrete and steelworks.
- Ensure that adequate measures, like stacking of sandbags along the road, have been taken to protect the roads.
- Ensure that all necessary road repairs have been carried out including patching of potholes.
- Give priority attention to urgent repair works that need to be undertaken in disaster affected areas.
- Emergency tool kits should be assembled for each division, and should include:
 - Crosscut saws
 - Axes
 - Power chain saw with extra fuel, oil

- Sharpening files
- Chains and tightening wrenches
- Pulley block with chain and rope.
- The designation of routes strategic to evacuation and relief should be identified and marked, in close coordination with police and district control room.
- Establish a priority listing of roads, which will be opened first. Among the most important are the roads to hospitals and shelters.
- Work under construction should be secured with ropes, sandbags, and covered with tarpaulins if necessary.
- Issue necessary instruction to staff for responding to need for road clearance on an emergency basis.
- Prepare plans for developing alternate access routes in case main approach routes to shelter are blocked or damaged.

Floods and Water logging:

- Take necessary repair and protection measures on the main access highways and roads to ensure smooth flow of emergency, relief and evacuation vehicles.
- Make arrangements for alternate routes to shelters wherever the main access routes are likely to get submerged.
- Make arrangements for boats for transport of men and equipment to required areas.
- Ensure that all heavy equipment is adequately protected from water by storing in covered areas.

Jal Nigam/ Local Bodies

- Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.
- Appoint one officer as "NODAL OFFICER" at the State Level.
- Appoint one officer as "Officer-in-Charge at the Local Level.
- The Officer-in-Charge will be responsible for mobilising staff and volunteers to clear the roads in his section, should a disaster strike.
- The NODAL OFFICER should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- All technical officers should be notified and should meet the staff to review emergency procedures.
- Review and update precautionary measures and procedures, review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.

- Check all installations for water treatment plants, water supply systems including water tanks, pumping stations, sewage treatment plants, and drains are in working conditions. Take action to rectify any damages and repairs.
- Prepare plans for water distribution to all transit and relief camps and shelter buildings.
- Organise water supply and sanitary requirements for transit and relief camps.
- Make provisions to acquire containers and storage tanks on an emergency basis for transit camps.
- Continuously monitor wells and pumping mains to ensure continuous water supply to shelters.
- Provide standby water arrangements, by means like water tankers, to prepare for damage of water mains and saline intrusion or pollution of regular water supply in the shelters.
- Make sure auxiliary generators and engines, associated with the pumping equipment, is in good working order.
- Keep extra stocks of fuel for generators.
- Ensure that water is available in fire hydrants for fire fighting.

Floods and Waterlogging:

- Ensure that drinking water containers on shelter sites are placed at an elevated level.
- Carry out maintenance of trunk supply lines to ensure that all leakages have been repaired.
- Ensure that water supply lines are properly covered to prevent ingress of contaminated water.
- Clean the storm water drains to ensure that they function properly.
- Make arrangements for supply of packaged water to shelter sites in case of disruption of supply.

Fire:

- Ensure that water is available in fire hydrants for fire fighting.
- Ensure that separate arrangements for water supply have been made on shelter sites for fire fighting.

NGOs

- Facilitate that medical and paramedical staffs are available in the villages.
- Provide information to people about shelter sites.
- Assist authorities in management of shelters and relief camps by helping with activities like stocking of essential items like food, water and medicines in the shelter.
- Help the authorities in setting up and manning a information desk in shelters and relief camps.
- Inform the people about safe access routes to shelter.
- Provide the people with information regarding important telephone numbers and contact addresses.
- Inform people about evacuation arrangements of the authorities.
- Explain the steps that people require to take for readiness such as stocking of blankets, medicines, dry ration, torches etc.

- Inform the people about assembly points for evacuation to shelter.

Department of Animal Husbandry

Within the affected district all available personnel-Department of Animal Husbandry

- Within the affected district all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with
 - Emergency Operations Centre
 - Divisional Commissioner
 - District Control Room and
 - Veterinary aid Centres and Hospitals (including private practitioners) within the division.
- Appoint one officer as "Nodal Officer - Veterinary Services" at the State Level.
- The District Animal Husbandry Officer will act as "Officer-in-Charge - Veterinary Services" at the District Level.
- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipments and the post-disaster procedures to be followed.
- Fill department vehicles with fuel and park them in a protected area.
- Stock emergency medical equipments, which may be required after a disaster.
- Determine what injuries illnesses may be expected, and what drugs and other medical items will be required, in addition to requirements of setting up cattle camps, and accordingly ensure that extra supplies of medical items and materials can be obtained quickly.
- Ensure that arrangements of fodder and water for animals have been made on shelter sites.
- Store necessary medicines for treating common ailments of animals on shelter sites.
- Ensure that shelters for animals have been constructed at or near the shelter sites.
- ~~will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.~~
- ~~All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).~~
- ~~Establish radio communications with~~
 - ~~Emergency Operations Centre~~
 - ~~Divisional Commissioner~~
 - ~~District Control Room and~~
 - ~~Veterinary aid Centres and Hospitals (including private practitioners) within the division.~~
- ~~Appoint one officer as "Nodal Officer - Veterinary Services" at the State Level.~~

- ~~The District Animal Husbandry Officer will act as "Officer in Charge Veterinary Services" at the District Level.~~
- ~~Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipments and the post-disaster procedures to be followed.~~
- ~~Fill department vehicles with fuel and park them in a protected area.~~
- ~~Stock emergency medical equipments, which may be required after a disaster.~~
- ~~Determine what injuries illnesses may be expected, and what drugs and other medical items will be required, in addition to requirements of setting up cattle camps, and accordingly ensure that extra supplies of medical items and materials can be obtained quickly.~~
- ~~Ensure that arrangements of fodder and water for animals have been made on shelter sites.~~
- ~~Store necessary medicines for treating common ailments of animals on shelter sites.~~
- ~~Ensure that shelters for animals have been constructed at or near the shelter sites.~~

~~Floods and waterlogging:~~

- ~~Make transport arrangements through trucks and boats for evacuation of animals from affected areas.~~
- ~~Ensure that shelters for animals at shelter sites are constructed at a raised level.~~
- ~~Ensure that proper arrangements have been made to prevent entry of contaminated water into the fodder and water for animals.~~

~~Fire:~~

~~Make arrangements for quick evacuation of animals to shelters to prevent panic and stampede. Identify quick escape routes and vehicles for~~ Floods and waterlogging:

- Make transport arrangements through trucks and boats for evacuation of animals from affected areas.
- Ensure that shelters for animals at shelter sites are constructed at a raised level.
- Ensure that proper arrangements have been made to prevent entry of contaminated water into the fodder and water for animals.

~~Fire:~~

- Make arrangements for quick evacuation of animals to shelters to prevent panic and stampede. Identify quick escape routes and vehicles for quick transportation of animals.
- Keep necessary medicines ready to treat burn injuries of animals.
- ~~r quick transportation of animals.~~
- ~~Keep necessary medicines ready to treat burn injuries of animals.~~

Department of Health & Family Welfare

- Within the affected district / local govt. all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officers or those on leave may be recalled.
- All personnel required for disaster management should work under the overall supervision and guidance of the District Collector.
- Establish radio communications with Emergency Operations Centre, district and divisional commissioner, district control room and hospitals (including private) within the division.
- Ensure that personnel working within the district come under the direction and control of the Collector / Civil Surgeon.
- Appoint one person as "NODAL OFFICER – Health Services at the State Level.
- The Civil Surgeon will act as "Officer-in-Charge – Health Services at the District Level.
- All district level officials of the department would be asked to report to the District Collector.
- The District Collector will provide Officer-in-Charge – Health Services, or the field staff as the need be, with all relevant authorisations with respect to the following:
 - Recruiting casual labourers
 - Procuring locally required emergency tools, equipment and materials
 - Expending funds for emergency needs
- The Officer-in-Charge – Health Services will ensure that all field staff and other officers submit the necessary reports and statement of expenditure in a format as required by the collector.
- Review and update precautionary measures and procedures, and review with staff, the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Fill department vehicles with fuel and park them in a protected area.
- Stock emergency medical equipments, which may be required after a disaster.
- Determine type of injuries illnesses expected and drugs and other medical items required, and accordingly ensure that extra supplies of medical items can be obtained quickly.
- Provide information to all hospital staff about the disasters, likely damages and effects, and information about ways to protect equipment and property.
- Check stocks of equipments and drugs, which are likely to be most needed after the disaster. These can be categorized generally as:
 - Drugs used in treatment of cuts and fractures, such as tetanus toxoid, analgesics and antibiotics
 - Drugs used for the treatment of diarrhoea, water-borne diseases and flu (including oral rehydrating supplies)
 - Drugs required to treat burns and fight infections
 - Drugs needed for detoxication including breathing equipments.Ensure that above are stocked in the shelter buildings or on shelter sites to provide preliminary treatment to patients.
- Assess the level of medical supplies in stock, including:
 - Fissure materials
 - Surgical dressings

- Splints
- Plaster rolls
- Disposable needles and syringes
- Local antiseptics.
- Water purification tablets should be stocked
- Make arrangements to transfer patients with serious injuries to hospital from shelter sites.

~~Department of Health & Family Welfare~~

- ~~Within the affected district / local govt. all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officers or those on leave may be recalled.~~
- ~~All personnel required for disaster management should work under the overall supervision and guidance of the District Collector.~~
- ~~Establish radio communications with Emergency Operations Centre, district and divisional commissioner, district control room and hospitals (including private) within the division.~~
- ~~Ensure that personnel working within the district come under the direction and control of the Collector / Civil Surgeon.~~
- ~~Appoint one person as "NODAL OFFICER — Health Services at the State Level.~~
- ~~The Civil Surgeon will act as "Officer in Charge — Health Services at the District Level.~~
- ~~All district level officials of the department would be asked to report to the District Collector.~~
- ~~The District Collector will provide Officer in Charge — Health Services, or the field staff as the need be, with all relevant authorisations with respect to the following:~~
 - ~~Recruiting casual labourers~~
 - ~~Procuring locally required emergency tools, equipment and materials~~
 - ~~Expending funds for emergency needs~~
- ~~The Officer in Charge — Health Services will ensure that all field staff and other officers submit the necessary reports and statement of expenditure in a format as required by the collector.~~
- ~~Review and update precautionary measures and procedures, and review with staff, the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.~~
- ~~Fill department vehicles with fuel and park them in a protected area.~~
- ~~Stock emergency medical equipments, which may be required after a disaster.~~
- ~~Determine type of injuries illnesses expected and drugs and other medical items required, and accordingly ensure that extra supplies of medical items can be obtained quickly.~~
- ~~Provide information to all hospital staff about the disasters, likely damages and effects, and information about ways to protect equipment and property.~~
- ~~Check stocks of equipments and drugs, which are likely to be most needed after the disaster. These can be categorized generally as:~~
 - ~~Drugs used in treatment of cuts and fractures, such as tetanus toxoid, analgesics and antibiotics~~
 - ~~Drugs used for the treatment of diarrhoea, water-borne diseases and flu (including oral rehydrating supplies)~~

- ~~Drugs required to treat burns and fight infections~~
- ~~Drugs needed for detoxication including breathing equipments.~~

~~Ensure that above are stocked in the shelter buildings or on shelter sites to provide preliminary treatment to patients.~~

- ~~Assess the level of medical supplies in stock, including:~~
 - ~~Fissure materials~~
 - ~~Surgical dressings~~
 - ~~Splints~~
 - ~~Plaster rolls~~
 - ~~Disposable needles and syringes~~
 - ~~Local antiseptics.~~
- ~~Water purification tablets should be stocked~~
- ~~Make arrangements to transfer patients with serious injuries to hospital from shelter sites.~~

Department of Food and Civil Supplies:

Department of Food and Civil Supplies:

- Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.
- Appoint one officer as "NODAL OFFICER" at the State Level.
- Appoint one officer as "Officer-in-Charge at the Local Level.
- The Officer-in-Charge will be responsible for mobilising staff and volunteers to clear the roads in his section, should a disaster strike.
- The NODAL OFFICER should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- All technical officers should be notified and should meet the staff to review emergency procedures.
- Review and update precautionary measures and procedures, review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.
- Stock food items in warehouses for supply to shelters.
- Keep adequate stocks on shelter sites.
- Identify and list transporters for emergency supply of food items to shelter sites.
- Keep a list of bulk suppliers ready to supply food items urgently.
- ~~Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.~~

- ~~All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).~~
- ~~Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.~~
- ~~Appoint one officer as "NODAL OFFICER" at the State Level.~~
- ~~Appoint one officer as "Officer in Charge at the Local Level.~~
- ~~The Officer in Charge will be responsible for mobilising staff and volunteers to clear the roads in his section, should a disaster strike.~~
- ~~The NODAL OFFICER should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.~~
- ~~All technical officers should be notified and should meet the staff to review emergency procedures.~~
- ~~Review and update precautionary measures and procedures, review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.~~
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- ~~Keep adequate stocks on shelter sites.~~
- ~~Identify and list transporters for emergency supply of food items to shelter sites.~~
- ~~Keep a list of bulk suppliers ready to supply food items urgently.~~

Naga Naqar Niqam:

- Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).
- Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.
- All district level officials of the department would be asked to report to the Collector.
- Appoint one officer as "NODAL OFFICER" at the State Level.
- Appoint one officer as "Officer-in-Charge" at the Local Level.
- The Officer-in-Charge "will be responsible for mobilising staff and volunteers to clear the roads in his section, should a disaster strike.
- The NODAL OFFICER" should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- All technical officers should be notified and should meet the staff to review emergency procedures.
- Review and update precautionary measures and procedures, and review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.

- Vehicles should be inspected, fuel tanks filled amid batteries and electrical wiring covered as necessary.
- Extra transport vehicles should be dispatched from headquarters and stationed at safe strategic spots along routes likely to be affected.
- Check main drains along access routes to ensure that they are clean and are functioning.
- Take up repairs of main roads in the city wherever required.

r-Nigam:

- ~~Within the affected district, all available personnel will be made available to the District Disaster Manager (District Magistrate). If more personnel are required, then out-of-station officers or those on leave may be recalled.~~
- ~~All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager (District Magistrate).~~
- ~~Establish radio communications with Emergency Operations Centre, District Magistrate, District Control Room and departmental offices within the division.~~
- ~~All district level officials of the department would be asked to report to the Collector.~~
- ~~Appoint one officer as "NODAL OFFICER" at the State Level.~~
- ~~Appoint one officer as "Officer in Charge" at the Local Level.~~
- ~~The Officer in Charge "will be responsible for mobilising staff and volunteers to clear the roads in his section, should a disaster strike.~~
- ~~The NODAL OFFICER" should be familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.~~
- ~~All technical officers should be notified and should meet the staff to review emergency procedures.~~
- ~~Review and update precautionary measures and procedures, and review with staff the precautions that have been taken to protect equipment, and the post-disaster procedures to be followed.~~
- ~~Vehicles should be inspected, fuel tanks filled amid batteries and electrical wiring covered as necessary.~~
- ~~Extra transport vehicles should be dispatched from headquarters and stationed at safe strategic spots along routes likely to be affected.~~
- ~~Check main drains along access routes to ensure that they are clean and are functioning.~~
- ~~Take up repairs of main roads in the city wherever required.~~

During the Disaster:

Revenue Department

- Evacuate people and livestock from affected/ vulnerable areas to the shelters.
- All evacuations will be ordered only by the District Collector, Police, Fire Brigade, Health Department or by the Industries Security Officer.

- For appropriate security and for maintaining law and order, evacuation should be undertaken with assistance from community leaders.
- All evacuations should be reported to Divisional Commissioner and District Magistrate or Superintendent of Police immediately.
- Determine area to be evacuated by readily identifiable boundaries, such as streets or landmarks.
- Keep the animals in sheds or in the area prepared for them and make arrangements for water and fodder of these animals.
- Conduct search and rescue operations to locate victims of the disaster.
- Compile damage assessment and need analysis report and identify areas where major damage has occurred.
- Ensure that personnel entrusted with responsibility of managing the shelter are available at the shelters.
- Coordinate with police to ensure that evacuation vehicles and emergency vehicles are not obstructed.
- Coordinate with agencies owning the shelter buildings to keep the shelter ready to accommodate the evacuated people.
- Make an attempt to keep families together while moving to the shelter and also within the shelter.
- Register details of persons moving into the shelter.
- Monitor disaster management teams engaged in evacuation in different parts of the disaster hit community.
- Coordinate Evacuation activities with all line departments.
- Set up temporary kitchens and food stores on the temporary shelter sites.
- Coordinate access and perimeter control with Police Department.
- Inform appropriate authorities about the sick and the injured and arrange for their evacuation to hospitals.
- Ensure that proper first aid is provided to the injured before transferring to the hospital.
- Ensure that people do not wander out of the shelter near dangerous areas.
- If possible, provide door-to-door checks to confirm completeness of evacuation.
- Ensure security of evacuated area in conjunction with Police Department.
- Make quick assessments of the damage and assess amount of relief required.
- Start dispersing immediate relief to the community in the form of food, medicines and other essential items required by the community in the shelters.
- Coordinate with other agencies/entities to obtain required resources and to fulfil unmet resource needs. In the event that local resources are depleted or committed, request additional resource assistance from other agencies.
- Maintain records of resources requested, committed, or expended in the course of the emergency.
- If needed, arrange for essential goods such as food or medicine to be stockpiled.
- Periodically report to the control room Coordinator on resource status and expenditures.
- Provide resource and logistics management related expenses to the Finance and Administration Officer for potential post-emergency reimbursement.
- Be prepared to provide information for the After-Action Report.
- Set up community kitchens to feed people living in the emergency shelters.

For Floods & Waterlogging:

- Arrange for evacuation of people to shelter sites from flooded areas.

- Monitor evacuated area for safe re-entry.
- Arrange for boats to move people and supplies from flooded areas for transportation to shelter sites.
- Carry out immediate pumping operation from shelter sites wherever possible.

Fire:

- Ensure quick evacuation of people to shelter sites from affected area.
- Ensure that the pre-decided access routes are clear for quick passage of emergency vehicles.
- Move seriously injured people directly to the hospitals.
- Take the help of police to ensure that evacuation is done in a peaceful and orderly manner.

For Floods & Waterlogging:

- ~~Arrange for evacuation of people to shelter sites from flooded areas.~~
- ~~Monitor evacuated area for safe re-entry.~~
- ~~Arrange for boats to move people and supplies from flooded areas for transportation to shelter sites.~~
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Fire:

- ~~Ensure quick evacuation of people to shelter sites from affected area.~~
- ~~Ensure that the pre-decided access routes are clear for quick passage of emergency vehicles.~~
- ~~Move seriously injured people directly to the hospitals.~~
- ~~Take the help of police to ensure that evacuation is done in a peaceful and orderly manner.~~

Jal Nigam/Local bodies.

- Activate central control room and activate disaster management teams.
- Ensure supply of drinking water to the emergency camps, shelter buildings and emergency services including all support agencies
- Ensure damaged service lines are repaired promptly to prevent wastage and pollution of water supply.
- Supply water through alternate sources like tankers or water pouches, in case of repairs to supply lines are difficult or would take long time.
- In case of disruption of regular supply, transport water to the shelter sites and fill water tanks in the shelter premises.
- Clear all damaged infrastructure and ensure water supply lines are not infiltrated by sewage other waste.
- Coordinate with energy department for alternate source of electricity in case electric supply to pumping stations is disrupted.

Flood and Waterlogging:

- Carry out immediate disinfection measures in case of contamination of drinking water sources.
- Warn people of contaminated water sources which might pose health hazards.
- Wells in shelter premises, which have been contaminated, should be emptied immediately.
- Tropical chlorinated lime or bleaching powder should be used added to all wells to avoid further contamination.

- All debris in the wells such as leaves, sticks, silt, mud etc. should be removed after water has been pumped out of the wells.

Fire:

- Dispatch additional tankers to shelter sites for fire fighting if required.
- Ensure that the supply of water to fire hydrants is not affected.

Flood and Waterlogging:

- ~~Carry out immediate disinfection measures in case of contamination of drinking water sources.~~
- ~~Warn people of contaminated water sources which might pose health hazards.~~
- ~~Wells in shelter premises, which have been contaminated, should be emptied immediately.~~
- ~~Tropical chlorinated lime or bleaching powder should be used added to all wells to avoid further contamination.~~
- ~~All debris in the wells such as leaves, sticks, silt, mud etc. should be removed after water has been pumped out of the wells.~~

Fire:

- ~~Dispatch additional tankers to shelter sites for fire fighting if required.~~
- ~~Ensure that the supply of water to fire hydrants is not affected.~~

-Rural Development Department / Public Works Department

- Activate central control room and activate disaster management teams
- Immediately take up clearance of blocked access routes to shelter sites.
- Repair damaged access routes and critical connections like bridges and roads. Maintain a current inventory of all emergency resources, including personnel, vehicles, and equipment.
- Take up emergency repair of public utilities and buildings to ensure continuity of supply.
- Ensure that all work teams have two-way communication link.
- Provide a work team carrying emergency tool kits, depending on the nature of the disaster, essential equipments such as
 - Towing vehicles
 - Earth moving equipments
 - Cranes etc.
- Each unit should mobilise a farm tractor with chain, cables and a buffer stock of fuel.
- Adequate road signs should be installed to guide and assist the drivers.
- Assemble casual labourers to work with experienced staff and divide into work gangs.
- Mobilise community assistance for road clearing by contacting community organisations.
- Undertake cleaning of ditches, grass cutting; burning or removal of debris, and the cutting of dangerous trees along the roadside in the affected area.
- Undertake repair of all paved and unpaved road surfaces including edge metalling, pothole patching and any failure of surface / foundations in the affected areas by maintenance engineer's staff and keep monitoring their conditions.

- Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims if required.
- An up-to-date report of all damage and repairs should be kept in the district office report-book and communicate the same to the District Control Room.
- If possible, a review of the extent of damage should be arranged for the field Officer-in-Charge, in order to dispatch most efficiently road clearing crews, and determine the ~~equipment~~equipment needed.

Floods and Waterlogging:

- Identify and clear alternate routes for emergency and evacuation vehicles in case main roads are flooded.
- Pile additional sandbags along important roads if required.
- Drain out water from the access roads wherever possible to make them accessible.

~~Floods and Waterlogging:~~

- ~~Identify and clear alternate routes for emergency and evacuation vehicles in case main roads are flooded.~~
- ~~Pile additional sandbags along important roads if required.~~
- ~~Drain out water from the access roads wherever possible to make them accessible.~~

Uttar Pradesh Police

Evacuation

- All evacuations will be ordered only by the SP / Dy. SP, police, Fire Brigade or by the Industries Security Officer.
- For appropriate security and law and order evacuation should be undertaken with assistance from community leaders.
- All evacuations should be reported to Superintendent of Police immediately.
- Ensure that all evacuations are carried out in an orderly manner.

Relief

- Immediately after the disaster, dispatch officers to systematically identify and assist people and communities in life-threatening situations.
- Help identify the seriously injured people, and assist the community in organising emergency transport of seriously injured to medical treatment centres.
- Ensure that there is no violence or chaos while moving persons into relief camps and shelter buildings.
- Ensure that the police stations are functioning immediately after the disaster at all required locations, as may be requested by the district control room, and that staff are available for the variety of needs that will be presented.
- Assist and encourage the community in road-cleaning operations.

- Identify roads to be made one-way, to be blocked, alternate routes and other access roads to Disaster site.
- Provide security in transit and relief camps, affected villages, hospitals and medical centres and identify areas to be cordoned off.
- Transport carrying transit passengers (that is, passengers travelling through trains or buses and passing through the district), should be diverted away from the disaster area.
- Provide security arrangements for visiting VVIPs and VIPs.
- Assist district authorities to take necessary action against black marketers and those found manipulating relief material.
- In conjunction with other government offices, activate a public information centre to:
 - Respond to personal inquiries about the safety of relatives in the affected areas.
 - Statistics about affected communities, deaths, complaints and needs
 - Respond to the many specific needs that will be presented
 - Serve as a rumour control centre
 - Reassure the public.
- Make officers available to inquire into and record deaths, as there is likely to be neither time nor personnel available, to carry out standard post-mortem procedures.
- Monitor the needs and welfare of people sheltered in relief camps.
- Coordinate with military service personnel in the area.
- Take immediate action against black marketers and hoarders.
- Deal swiftly with anti- social elements.
- Provide assistance to emergency vehicles so that they can get through unobstructed.
- Patrol the areas where shelters and relief camps have been set up to ensure their security.
- Ensure that incidents of crime or unrest on the shelter sites are dealt with promptly and strictly.

Uttar Pradesh Fire Service

Evacuation

- All evacuations will be ordered only by the SP / Dy. SP, police, Fire Brigade or by the Industries Security Officer.
- For appropriate security and law and order evacuation should be undertaken with assistance from community leaders.
- All evacuations should be reported to Superintendent of Police immediately.

Relief

- Immediately on getting the information of fire, dispatch Fire Brigades to the shelter building or relief camp sites for fire control.
- Help identify the seriously injured people, and assist the community in organising emergency transport of seriously injured to medical treatment centres.

- Ensure that the fire stations are functioning immediately after the disaster at all required locations, as may be requested by the district control room, and that staff are available for the variety of needs that will be presented.
- Launch search and rescue operations immediately in affected areas.
- Keep staff on standby to attend to incidents of law and order disturbance in shelter and relief camps.
- Assist people stranded in flooded areas in reaching shelters.

Energy Department

- Activate central control room and emergency repair teams.
- Ensure non-stop supply of power to the shelter buildings, emergency camps and emergency services including and all support agencies.
- Despatch emergency repair teams for immediate repair of damaged service lines as soon as report of the same is required.
- Make arrangements for alternate source of energy, like generators, in case of repairs are difficult or would take long time.
- Clear all damaged infrastructure and salvage electric conductors and transformers near the shelters.
- Ensure there are no chances of damages due to short circuit or incidents of fire in oil spill from transformers.
- Arrange to cordon off and repair areas where damaged electricity lines pose a risk to the general public.
- Restore the power supply and ensure uninterrupted power to all shelter buildings and relief camps.
- Arrange personnel on an emergency basis for clearing of damaged poles and salvage of conductors and insulators.
- Assist shelters in establishing an emergency supply by assembling generators and other emergency equipments, if necessary.
- Establish temporary electricity supplies for other key public facilities, public water systems, etc.
- Establish temporary electricity supplies for transit camps, feeding centres, relief camps and sac, district control room and on access roads to the same.
- Establish temporary electricity supplies for relief material warehouses.
- Compile an itemised assessment of damage, from reports made by various electrical receiving centres and sub-centres.
- Report all activities to the head office.
- Plan for emergency accommodations for staff from outside the area.

Floods and waterlogging:

- Arrange to cordon off areas where overhead wires have broken and are submerged in water.
- Wherever possible drain the water and take up repairs.
- Take up repairs of electrical faults around shelter sites on topmost priority.

Floods and waterlogging:

- ~~Arrange to cordon off areas where overhead wires have broken and are submerged in water,~~
- ~~Wherever possible drain the water and take up repairs.~~
- ~~Take up repairs of electrical faults around shelter sites on topmost priority.~~

Head office priorities

On the recommendations of the EOC (Nodal Officer-Power Supply)/District Collector/district control room at the district level, energy department will

- Send cables, poles, transformers and other needed equipment
- Send vehicles and any additional tools needed.
- Provide additional support as required.

NGOs

- ~~Facilitate and coordinate village task forces / CBOs reach the spot without any bottleneck~~
- ~~Disseminate all government aided programmes to the community~~
- ~~Help the community for taking precaution needed for water and proper health and sanitation measures~~
- ~~Provide information of evacuees sheltered in different locations to the medical teams~~
- ~~Ensure medicines reach the affected areas with the help of volunteers.~~
- ~~Ensure proper treatment of the victims or injured.~~
- ~~Facilitate charitable organisations to work hand in hand with the government medical teams~~
- ~~Arrange transport – both road and water ways – to the outside medical teams and volunteers, if required, for shelter.~~
- ~~In case people are stranded in flooded areas help them evacuate to the shelters.~~
- ~~Keep people in shelters informed of the situation.~~
- ~~Carry out rescue operations wherever possible.~~
- Facilitate and coordinate village task forces / CBOs reach the spot without any bottleneck
- Disseminate all government aided programmes to the community
- Help the community for taking precaution needed for water and proper health and sanitation measures
- Provide information of evacuees sheltered in different locations to the medical teams
- Ensure medicines reach the affected areas with the help of volunteers.
- Ensure proper treatment of the victims or injured.
- Facilitate charitable organisations to work hand in hand with the government medical teams
- Arrange transport – both road and water ways – to the outside medical teams and volunteers, if required, for shelter.
- In case people are stranded in flooded areas help them evacuate to the shelters.

- Keep people in shelters informed of the situation.
- Carry out rescue operations wherever possible.

Department of Health & Family Welfare

Evacuation

- All evacuations will be ordered only by the District Collector, Police, Fire Brigade, Health Department or by the Industries Security Officer.
- For appropriate security and for maintaining law and order, evacuation should be undertaken with assistance from community leaders.
- All evacuations should be reported to Divisional Commissioner and District Collector, or Superintendent of Police immediately.
- For evacuation follow the evacuation procedures as outlined in "Operating Procedures for Evacuation".
- For Marooned Persons
 - A senior medical officer will ensure that water supplied is in accordance with acceptable standards of potable water and is packed under appropriate conditions and containers.
 - A senior medical officer should accompany the rescue team along with required medical kit and ensure priority for shifting of those seriously injured or requiring immediate medical attention (the procedure for tagging as given in the Annexure should be followed).

Relief

- Transport should be arranged for the transfer of seriously injured patients from shelters, villages and peripheral hospitals to general hospitals. If roads are blocked, a method should be established to request helicopter transport.
- Establish health facility and treatment centres near shelter and disaster sites.
- The provision of medical services should be coordinated by the District Medical Officer (DMO) with district control room.
- Procedures should be clarified between
 - Peripheral hospitals
 - Private hospitals
 - Blood banks
 - General hospitals and
 - Health services established at transit camps, relief camps and affected villages.
- An injury and disease monitoring system should be developed to ensure that a full picture of health risks is maintained. Monitoring should be carried out for epidemics, water and food quality and disposal of waste in transit and relief camps, feeding centres and affected villages.
- Plan for emergency accommodations for auxiliary staff from outside the area.
- Information formats and monitoring checklists should be used for programme monitoring and development, and for reporting to Emergency Operations Centre. This is in addition to existing reporting system in the department.

- Establishment of a public information centre with a means of communication to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations in disaster situations.
- The local police, rescue groups and ambulance teams should be aware of the resources of each hospital.
- On the recommendations of the EOC ("NODAL OFFICER-Health Services") Collector / District Control Room / Public Health Department will
 - Send required medicines, vaccines, drugs, plasters, syringes, etc.
 - Arrange for additional blood supply.
 - Provide for sending additional medical personnel equipped with food, bedding, tents, etc.
 - Send vehicles and any additional medical equipment.
- In case people carrying infectious diseases are detected in shelters they should be isolated and if possible shifted to the hospital.
- Inform people in shelters of precautions to be taken to prevent spread of infectious diseases.

Flooding and waterlogging:

- Make arrangements for treating outbreaks of water borne diseases in shelters.
- In case of possible water contamination in relief camps and shelter sites inform the authorities and make alternate arrangements for water supply.

Department of Animal Husbandry

- Organise transfer of seriously injured livestock from villages to veterinary aid centres wherever possible.
- The provision of medical services should be coordinated by the District Animal Husbandry Officer with District Control Room, SOC's and cattle camps.
- Establish cattle camps and additional veterinary aid centres at shelter areas and disaster sites and designate an Officer-in-Charge for the camp.
- Estimate the requirement of water, fodder and animal feed, for cattle camps and organise the same.
- Ensure that adequate sanitary conditions are maintained through cleaning in order to avoid outbreak of any epidemic.
- Carryout culling of birds if necessitated.
- Plan for emergency accommodations for veterinary staff from outside the area.
- Information formats and monitoring checklists as given in Annexure should be used for programme monitoring and development and for reporting to Emergency Operations Centre. This is in addition to existing reporting system in the department.
- Establishment of a Public Information Centre with a means of communication, to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations, in disaster situations.
- The local police and rescue groups should be aware of the resources of each veterinary aid centres and hospital.

Floods and Waterlogging:

- Arrange to shift animals out of waterlogged areas to safe shelters.
- Attend to problems of water borne diseases in animals.
- Ensure that fodder and water provided to animals is not contaminated by flood waters.
- In case of contamination of drinking water make alternate arrangements for water.

Local Self Governments

- Provide vehicles and volunteers for transporting disaster victims or evacuating affected people.
- Allocate suitable land or buildings that can be used as temporary relief camps and feeding centres.
- Allocate sites for dumping debris cleared from disaster areas.
- Organise removal and disposal of carcasses of dead animals.
- Organise removal and mass cremation of unclaimed dead bodies.

Department of food and civil supplies:

- Transport dry food materials to those shelter and relief camps where it is required.
- Procure additional stocks from identified suppliers if required.
- Provide dry rations to shelters in case of flooding or waterlogging.
- Replenish stocks in warehouses in case of increased demand due to severity of disaster.

Department of Health & Family Welfare**Evacuation**

- ~~All evacuations will be ordered only by the District Collector, Police, Fire Brigade, Health Department or by the Industries Security Officer.~~
- ~~For appropriate security and for maintaining law and order, evacuation should be undertaken with assistance from community leaders.~~
- ~~All evacuations should be reported to Divisional Commissioner and District Collector, or Superintendent of Police immediately.~~
- ~~For evacuation follow the evacuation procedures as outlined in "Operating Procedures for Evacuation".~~
- ~~For Marooned Persons

 - ~~A senior medical officer will ensure that water supplied is in accordance with acceptable standards of potable water and is packed under appropriate conditions and containers.~~
 - ~~A senior medical officer should accompany the rescue team along with required medical kit and ensure priority for shifting of those seriously injured or requiring immediate medical attention (the procedure for tagging as given in the Annexure should be followed).~~~~

Relief

- ~~Transport should be arranged for the transfer of seriously injured patients from shelters, villages and peripheral hospitals to general hospitals. If roads are blocked, a method should be established to request helicopter transport.~~

- Establish health facility and treatment centres near shelter and disaster sites.
- The provision of medical services should be coordinated by the District Medical Officer (DMO) with district control room.
- Procedures should be clarified between
 - Peripheral hospitals
 - Private hospitals
 - Blood banks
 - General hospitals and
 - Health services established at transit camps, relief camps and affected villages.
- An injury and disease monitoring system should be developed to ensure that a full picture of health risks is maintained. Monitoring should be carried out for epidemics, water and food quality and disposal of waste in transit and relief camps, feeding centres and affected villages.
- Plan for emergency accommodations for auxiliary staff from outside the area.
- Information formats and monitoring checklists should be used for programme monitoring and development, and for reporting to Emergency Operations Centre. This is in addition to existing reporting system in the department.
- Establishment of a public information centre with a means of communication to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations in disaster situations.
- The local police, rescue groups and ambulance teams should be aware of the resources of each hospital.
- On the recommendations of the EOC ("NODAL OFFICER-Health Services") Collector / District Control Room / Public Health Department will
 - Send required medicines, vaccines, drugs, plasters, syringes, etc.
 - Arrange for additional blood supply.
 - Provide for sending additional medical personnel equipped with food, bedding, tents, etc.
 - Send vehicles and any additional medical equipment.
- In case people carrying infectious diseases are detected in shelters they should be isolated and if possible shifted to the hospital.
- Inform people in shelters of precautions to be taken to prevent spread of infectious diseases.

Flooding and waterlogging:

- Make arrangements for treating outbreaks of water borne diseases in shelters.
- In case of possible water contamination in relief camps and shelter sites inform the authorities and make alternate arrangements for water supply.

Department of Animal Husbandry

- Organise transfer of seriously injured livestock from villages to veterinary aid centres wherever possible.
- The provision of medical services should be coordinated by the District Animal Husbandry Officer with District Control Room, SOC's and cattle camps.
- Establish cattle camps and additional veterinary aid centres at shelter areas and disaster sites and designate an Officer in Charge for the camp.

- Estimate the requirement of water, fodder and animal feed, for cattle camps and organise the same.
- Ensure that adequate sanitary conditions are maintained through cleaning in order to avoid outbreak of any epidemic.
- Carryout culling of birds if necessitated.
- Plan for emergency accommodations for veterinary staff from outside the area.
- Information formats and monitoring checklists as given in Annexure should be used for programme monitoring and development and for reporting to Emergency Operations Centre. This is in addition to existing reporting system in the department.
- Establishment of a Public Information Centre with a means of communication, to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations, in disaster situations.
- The local police and rescue groups should be aware of the resources of each veterinary aid centres and hospital.

Floods and Waterlogging:

- Arrange to shift animals out of waterlogged areas to safe shelters.
- Attend to problems of water borne diseases in animals.
- Ensure that fodder and water provided to animals is not contaminated by flood waters.
- In case of contamination of drinking water make alternate arrangements for water.

Local Self Governments

- Provide vehicles and volunteers for transporting disaster victims or evacuating affected people.
- Allocate suitable land or buildings that can be used as temporary relief camps and feeding centres.
- Allocate sites for dumping debris cleared from disaster areas.
- Organise removal and disposal of carcasses of dead animals.
- Organise removal and mass cremation of unclaimed dead bodies.

Department of food and civil supplies:

- Transport dry food materials to those shelter and relief camps where it is required.
- Procure additional stocks from identified suppliers if required.
- Provide dry rations to shelters in case of flooding or waterlogging.
- Replenish stocks in warehouses in case of increased demand due to severity of disaster.

Actions after Disaster

Department of Revenue.

- Issue information about deactivation of emergency procedures to various agencies through control room.
- Inform the public about the end of disaster situation through public address systems and media.
- Determine the extent of damage to various areas.
- Provide information about the damage to the residents of shelters so that residents from areas which have not suffered substantial damage can return to their residences.
- Provide assistance to people in returning to their original residence.
- Clean up and disinfect premises used as shelter.
- Dismantle relief camps wherever these are not required.
- Return the relief camp sites to their original condition by carrying out repair and cleaning operations.
- Ensure that garbage and debris on relief camp site is cleared in such a way that it does not pose a health hazard to residents living in surrounding areas.
- Hold meetings with various departments' to assess problems and performance.
- Draw lessons from the performance and identify actions to be taken for future improvement.
- Implement action plan for improving future performance.

Flood and waterlogging:

- Obtain a status report on areas where flood waters have receded.
- Coordinate with PWD, Nagar Nigam and Rural development to identify roads that can be used.
- Identify shelters that can be cleared and people can be sent back to their homes.
- Coordinate drainage and cleaning of relief camp and shelter sites.
- Direct concerned departments of take charge of left over stocks of food and medicine in the shelter.
- Restore services in shelters.

Fire:

- Provide information to residents of severely damaged areas to continue in relief camps and shelters.
- Coordinate operations for removal of debris from affected area.
- Coordinate restoration of services affected in the incident.

Flood and waterlogging:

- Obtain a status report on areas where flood waters have receded.

- ~~Coordinate with PWD, Nagar Nigam and Rural development to identify roads that can be used.~~
- ~~Identify shelters that can be cleared and people can be sent back to their homes.~~
- ~~Coordinate drainage and cleaning of relief camp and shelter sites.~~
- ~~Direct concerned departments of take charge of left over stocks of food and medicine in the shelter.~~
- ~~Restore services in shelters.~~

Fire:

- ~~Provide information to residents of severely damaged areas to continue in relief camps and shelters.~~
- ~~Coordinate operations for removal of debris from affected area.~~
- ~~Coordinate restoration of services affected in the incident.~~

Uttar Pradesh Police

- Obtain information on vacating of shelter buildings and relief camps.
- Recall staff assigned for duty in these areas.
- Instruct staff to assist authorities in vacating relief camps and shelter buildings in an orderly manner.
- Ensure that valuables left behind by shelter residents are kept in safe custody for returning to the rightful owners as and when claimed.
- Remove the traffic restrictions imposed before and during disaster.
- Hold meetings with staff and discuss the departments' performance
- Assess the well being of the departmental staff who participated in action and provide medical, and psycho-social counselling as needed
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.

Floods and waterlogging:

- Register cases of drowning.
- Make arrangements for protection of areas where flood waters have receded but people have not returned.

Floods and waterlogging:

- ~~Register cases of drowning.~~
- ~~Make arrangements for protection of areas where flood waters have receded but people have not returned.~~

Uttar Pradesh Fire Service

- Hold meetings with staff and discuss the departments' performance
- Assess the well being of the departmental staff who participated in action and provide medical, and psycho-social counselling as needed
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.
- Carry out necessary repairs to vehicles and equipment damaged in the disaster.

Energy Department.

- Ensure removal of temporary connections from relief camps.
- Hold meetings with staff and discuss the departments' performance.
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance.
- Assess the condition of power installations and organise their repair and maintenance.
- Restore power supply to areas where it was disconnected during disaster.
- Remove generators from shelter buildings and utility buildings if installed.
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.

Rural Development

- Hold meetings with staff and discuss the departments' performance
- Assess the condition of roads, bridges and other structures under department's jurisdiction and carryout repairs as needed.
- Carry out repairs of drains wherever they are damaged.
- Remove the road protection arrangements made before the disaster.
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance.
- Return the vehicles to their workshops.
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance

Public Works Department

- Hold meetings with staff and discuss the departments' performance
- Assess the condition of roads, and other structures under department's jurisdiction and carryout repairs as needed.

- Remove the road protection arrangements put in place before the disaster.
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance.
- Return the vehicles to the departmental workshops.
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance

Nagar Nigam Naqar Niqam / Panchayti Raj department.

- Hold meetings with staff and discuss the departments' performance
- Assess the condition of structures under department's jurisdiction and carry out repairs as needed.
- Take up cleaning of drains and sewage systems.
- Take up repairs of services that might have been damaged during the disaster.
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance.
- Draw lessons from the performance and identify actions to be taken for future improvement.
- Implement action plan for improving future performance.
- Clean up left over stocks of food and medicine.
- Carry out measures to disinfect areas within the shelters.
- Report any left- over belongings to the police.

Jal Nigam

- Hold meetings with staff and discuss the departments' performance.
- Assess the condition of structures under department's jurisdiction and carry out repairs as needed.
- Dismantle temporary water supply tanks installed in relief camps.
- Clean and disinfect the tankers used for supply of water to relief camps and shelter buildings.
- Wherever alternate power supply arrangements, such as generators, were made these should be returned to the energy department.
- Assess the condition of departmental vehicles and equipment and organise their repair and maintenance
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.

Department of Health & Family Welfare

- Disinfect shelter premises and public areas
- Collect surplus medicine stocks from shelters and return them to hospitals.
- Replenish stock of medicines, tools and accessories in hospitals

- Hold meetings with staff and discuss the departments' performance
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.

Department of Animal Husbandry

- Disinfect Animal shelters.
- Arrange to have surplus fodder stocks collected from shelter sites.
- Safe disposal of scattered animal carcasses
- Replenish stock of medicines, tools and accessories in hospitals
- Hold meetings with staff and discuss the departments' performance
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.

Department of Food and Civil Supplies:

- Take charge of left over stocks of food and supplies.
- Identify shelters where food stocks are required to be supplied and maintained.
- Hold meetings with staff and discuss the departments' performance
- Draw lessons from the performance and identify actions to be taken for future improvement
- Implement action plan for improving future performance.

Department of Health & Family Welfare

- ~~Disinfect shelter premises and public areas~~
- ~~Collect surplus medicine stocks from shelters and return them to hospitals.~~
- ~~Replenish stock of medicines, tools and accessories in hospitals~~
- ~~Hold meetings with staff and discuss the departments' performance~~
- ~~Draw lessons from the performance and identify actions to be taken for future improvement~~
- ~~Implement action plan for improving future performance.~~

Department of Animal Husbandry

- ~~Disinfect Animal shelters.~~
- ~~Arrange to have surplus fodder stocks collected from shelter sites.~~
- ~~Safe disposal of scattered animal carcasses~~
- ~~Replenish stock of medicines, tools and accessories in hospitals~~
- ~~Hold meetings with staff and discuss the departments' performance~~
- ~~Draw lessons from the performance and identify actions to be taken for future improvement~~
- ~~Implement action plan for improving future performance.~~

Department of Food and Civil Supplies:

- ~~Take charge of left over stocks of food and supplies.~~
- ~~Identify shelters where food stocks are required to be supplied and maintained.~~
- ~~Hold meetings with staff and discuss the departments' performance~~
- ~~Draw lessons from the performance and identify actions to be taken for future improvement~~
- ~~Implement action plan for improving future performance.~~

NGOs

- Assist the affected population in rebuilding their homes.
- Prepare to provide transit shelters to needy population.
- Assist with provision of food and clothing to the affected population.
- Assist the community in finding whereabouts of lost family members.
- Assist affected community in getting compensation for damage or loss.
- Disseminate information in the community about post disaster health and hygiene issues.

Actions during normal times

Preparedness activities will be taken up during non-disaster times to ensure smooth flow of activities during disasters. The following activities are prescribed to be taken up during non-disaster time by relevant primary agencies.

Revenue Department

- Form Resource Management Teams.
- Identify nodal officer for “shelter” within the primary agencies as well as support agencies.
- Identify resource management teams with all support agencies for effective management of any emergency. Ideally such teams shall have representatives from energy department, Jal Nigam, Public works department, rural development department and food and civil supplies department. NGOs shall also be made part of these teams.
- Carry out mock drills for personnel entrusted with the responsibility of assembly of the structures to ensure quick assembly in times of disaster.
- Carry out mock drills to familiarize concerned personnel with the access routes, evacuation procedures and sites identified for relief camps.
- Set up central control room for coordination with primary and support agencies during any emergency.
- Identify suitable sites to set up relief camps for temporary shelter.
- Ensure that the sites are free from hazards and are not close to hazardous locations.
- Identify safe access routes to the shelter.
- Ensure that the structures identified for shelters are structurally sound and have disaster resistant features.
- Ensure regular maintenance of the structures.
- Ensure that equipment such as fire extinguishers are installed in the premises.
- These structures shall be a mix of open and covered space
- If required arrange for retrofitting of these structures.
- Ensure that these identified spaces / structures have adequate sanitary facilities for both males and females.
- Ensure that these spaces/ structures have proper water and electricity connections.
- Get innovative designs for emergency shelters developed from architects and engineers.
- Identify resources and material required for shelter during an emergency.
- Identify local bulk suppliers of the shelter materials such as tents, tarpaulins, collapsible and easily assembled shelter units.
- Purchase and store some inventories at convenient locations for easy access in case of an emergency across the state.

- Identify and prepare list of equipments and trained workforce required for setting up relief camps at a short notice.
- Inform all the owners / custodians of the identified safe shelters of their structures being identified as temporary shelter for evacuation in case of an emergency by primary agency for relief in disasters.
- Identify vehicles and vendors for transporting shelter material and workforce required to sites of relief camps in case of an emergency.
- Build up stocks of the necessary items like candles, chlorine tablets, dry food items, medicines.
- Install warning systems and public address systems.
- Prepare emergency evacuation maps and mark shelters and access routes on these maps. Also identify alternate routes for contingency.
- Get layout plans prepared for relief camps required to be set up.

In preparation of the interim Rehabilitation

- Identify land spaces for interim rehabilitation sites
- Develop prototype designs for various types of transitional shelters, using a variety of material such as Tarpaulins, cloth, wood, tube steel, galvanized iron sheets and bamboo.
- Develop working drawings for assembly of the structures.
- Prepare manuals for assembly of the structures including working drawings and detailed instructions for assembly.
- Prepare the trained workforce required for assembly / construction of these shelters

Panchayati Raj Department / Nagar Nigam.

- Form Resource Management Teams.
- Identify nodal officer for "shelter" as well as with support agencies.
- Ensure regular repair, maintenance and rebuilding of identified structures.
- Ensure that spaces earmarked for relief camps are maintained free from all encumbrances.
- Issue instructions to owners/ custodians of shelter buildings to ensure that the shelter is accessible by concerned agencies at all times.
- Identify spaces, on shelter sites, that can be used for storage of food, medicines etc. during disasters.
- Set up a seasonal maintenance system for the buildings to be used as shelters.
- Ensure water supply, drainage, sewage and electricity connections are maintained in a working condition at all times.
- Take up repairs of damaged doors and windows. Install exhaust fans in the building wherever required.
- Carry out mock drills, involving all concerned personnel, to ensure smooth flow of activities to the shelter during disasters.

- ~~Set up central control room for coordination with primary and support agencies during any emergency.~~
- ~~Identify sources of support systems required for relief camps including drinking water supply, waste and sewerage disposal, community kitchens and health services required.~~
- ~~Develop Disaster Management Plan for the Department~~
- ~~Organise disaster management training for the staff~~
- ~~Ensure that all new structures under the department are designed and constructed disaster safe~~
- ~~Carry out safety audit of all existing structures under the department in the State and identify weak structures~~
- ~~Undertake structural retrofitting of weak structures.~~
- ~~Plan and procure necessary equipment for use in disaster management.~~
- ~~Designate an area, within the office premises to be used as public information centre.~~

In preparation of any emergency

- ~~Keep the space identified for relief camps free from encroachments.~~
- ~~Keep the access routes to the shelter sites free from encroachments and obstructions at all times.~~
- ~~Circulate the maps of identified shelter sites to all officials responsible for provision and management of shelter.~~
- ~~If required raise the level of water taps to prevent submergence during floods at these identified safe shelters.~~

Uttar Pradesh Police

- ~~Develop Disaster Management Plan for the Uttar Pradesh Police.~~
- ~~Organise disaster management training for the staff.~~
- ~~Ensure that all new structures under the department are designed and constructed disaster safe.~~
- ~~Carry out safety audit of all existing structures under the department in the State and identify weak structures.~~
- ~~Undertake structural retrofitting of weak structures.~~
- ~~Identify the need and procure necessary equipment for disaster management.~~
- ~~Designate an area, within the police station to be used as public information centre.~~
- ~~Maintain a list of disaster prone areas.~~
- ~~Prepare a traffic management plan for emergencies.~~
- ~~Train the staff in search and rescue techniques.~~
- ~~Carry out mock drills involving concerned personnel to ensure quick reaction of staff.~~

Uttar Pradesh Fire Service

- ~~Develop Disaster Management Plan for the Uttar Pradesh Fire Service.~~
- ~~Organise disaster management training for the staff.~~
- ~~Train the staff in search and rescue techniques.~~
- ~~Carry out mock drills with staff to ensure quick reaction.~~
- ~~Familiarize the staff with information on vulnerable areas.~~
- ~~Identify safe access routes to the vulnerable areas.~~
- ~~Ensure that all new structures under the department are designed and constructed disaster safe~~
- ~~Carry out safety audit of all existing structures under the department in the State and identify weak structures~~
- ~~Undertake structural retrofitting of weak structures.~~
- ~~Identify the need and procure necessary equipment for fire fighting, and rescue.~~
- ~~Maintain a list of disaster prone areas~~
- ~~Designate an area, within the fire station to be used as public information centre.~~
- ~~Ensure that adequate space for Fire engines is available around the buildings identified as shelters.~~

Energy Department

- ~~Develop Disaster Management Plan for the Department.~~
- ~~Organise disaster management training for the staff.~~
- ~~Ensure that all new structures under the department are designed and constructed disaster safe~~
- ~~Carryout safety audit of all existing structures under the department in the State and identify weak structures~~
- ~~Undertake structural retrofitting of weak structures~~
- ~~Establish at each sub-station a disaster management tool kit comprising cable cutters, pulley blocks, jungle knives, axes, crowbars, ropes, hacksaws and spanners. Tents for crews should also be in storage.~~
- ~~Designate an area, within the sub-station to be used as public information centre.~~
- ~~Brief personnel on emergency procedures to be adopted.~~
- ~~Carry out mock drills to ensure that the concerned staff is familiar with the procedures.~~
- ~~Take up shifting/ realignment of H.T. lines and poles near shelter sites.~~

Rural Development

- ~~Train officials on disaster safe construction.~~
- ~~Prepare a disaster management plan for the department.~~

- Familiarise the staff with the plan.
- Prepare a periodic inspection and maintenance schedule for roads, drains and bridges.
- Prepare a list of local suppliers of heavy equipment to be used during operations.
- Prepare plans for immediate deployment of heavy equipment required during disasters.
- Ensure that the heavy equipment available with the department is maintained in good working condition at all times.

Public Works Department

- Develop Disaster Management Plan for the Department
- Organise disaster management training for the staff
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carry out safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures
- Plan and procure necessary equipment for use in disaster management.
- Designate an area, within the office premises to be used as public information centre.
- Maintain an inventory of equipment available with the department for meeting emergencies.
- Ensure that all equipment needed during emergencies is maintained in good working order.
- Ensure that all concerned officials are assigned control room duties on rotational basis to familiarise them with the procedures.

Jal Nigam/ Local Bodies

- Develop Disaster Management Plan for the Department
- Organise disaster management training for the staff
- Ensure that all new structures under the department are designed and constructed disaster-safe
- Carry out safety audit of all existing structures under the department in the State and identify weak structures
- Undertake structural retrofitting of weak structures
- Plan and procure necessary equipment for use in disaster management.
- Designate an area, within the office premises to be used as public information centre.
- Ensure that proper water connections have been provided to the proposed shelter spaces.
- Prepare a seasonal inspection schedule and carry out necessary repairs if required.
- Maintain a list of suppliers of water tankers for emergency supply of water.
- Maintain and update an inventory of equipment and vehicles available for emergency response.
- Carry out periodic mock drills with emergency response staff to ensure prompt reaction.

NGOs

- ~~IEC activities on disaster management~~
- ~~Community mobilization~~
- ~~Ensure regular meetings of NGO coordination cell~~
- ~~Disseminate all government aided programmes to the community~~
- ~~Ensure regular mock drill~~
- ~~Ensure regular bleaching / use of disinfectants in the drinking water sources~~
- ~~Organise workshops / seminars / meetings / trainings on community based disaster management~~
- ~~Long term mitigation strategies.~~

Annexure

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Annexure 1.1: Preparedness Checklist for Public Works Department

(to be filled in by the Department Head and submitted to the District Collector)

Preparedness Measures taken	Details / Remarks
The department is familiar with disaster response plan and disaster response procedures <u>are clearly defined</u>	
Orientation and training for disaster response plan and procedures undertaken	
Special skills required during emergency operations imparted to the officials and the staff	
Reviewed and updated: <ul style="list-style-type: none"> • Precautionary measures and procedures • The precautions to be taken to protect equipment • The post-disaster procedures to be followed 	
All officers are familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.	
An officer has been designated as Nodal Officer for Disaster Management	
Sources of materials required for response operations have been identified	
<u>Heavy equipment such as cranes, loaders and forklifts have been checked.</u>	
<u>Vehicles for transportation have been checked and serviced.</u>	
<u>Measures to be taken for protection of transport routes have been taken.</u>	
<u>Alternate transport routes have been identified for emergency vehicles.</u>	

Reported By:

Signature: _____

Date: _____

Designation: _____

Place: _____

Annexure 1.2: Preventive Maintenance Checklist for Fork Lift

S.NO.	CHECK POINTS	RECOMM VALUE	STATUS			REMARKS
			OK	NOT OK	IF NOT OK THEN ACTION	
A	CLEAN					
1	<u>forklift outer surfaces for any oil or grease</u>	-	-	-	-	-
2	<u>Crank case breather</u>	-	-	-	-	-
3	<u>Drain and clean radiator.</u>	-	-	-	-	-
4	<u>Battery terminals.</u>	-	-	-	-	-
5	<u>Fuel injection pump strainer.</u>	-	-	-	-	-
B	LUBRICATE & GREASE					
1	<u>check oil level of injector pump</u>	-	-	-	-	-
2	<u>Brake pedal linkage.</u>		-	-	-	-
3	<u>Hoist and tilt control linkage.</u>		-	-	-	-
4	<u>Inching pedal linkage.</u>		-	-	-	-
5	<u>Accelerator linkage.</u>		-	-	-	-
6	<u>Hand brake linkage.</u>		-	-	-	-
7	<u>Mast clamp.</u>		-	-	-	-
8	<u>Tilt cylinder end pin.</u>		-	-	-	-
9	<u>Tie rods ends & steer axle.</u>		-	-	-	-
10	<u>Lift chain.</u>		-	-	-	-
11	<u>Propeller shaft, king pin & centre pin.</u>		-	-	-	-
12	<u>Greasing all points.</u>		-	-	-	-
C	CHANGE					
1	<u>Primary fuel filter.</u>	-	-	-	-	-
2	<u>Engine oil.</u>	-	-	-	-	-
3	<u>Air cleaner filter checked.</u>	-	-	-	-	-
4	<u>Engine oil filter as per required</u>	-	-	-	-	-
5	<u>Fuel filter as per required.</u>	-	-	-	-	-

Note : Frequency Quarterly is advisable to follow this checklist

Reported By:

Signature:

Date:

Designation:

Place:

Approved By:

Signature:

Date:

Designation:

Place:

Annexure 1.3: Preventive Maintenance Checklist for Crane

Inspection Schedule: Half Yearly

<u>S.NO</u>	<u>CHECK POINTS</u>	<u>RECOMM VALUE</u>	<u>OK</u>	<u>NOT OK</u>	<u>REMARKS</u>
<u>1</u>	<u>Replace oil filter</u>	-	-	-	-
<u>2</u>	<u>Replace engine oil</u>	-	-	-	-
<u>3</u>	<u>pre-clean air filter</u>	-	-	-	-
<u>4</u>	<u>clean air filter</u>	-	-	-	-
<u>5</u>	<u>Clean Suction Filter element(in hyd.tank)</u>	-	-	-	-
<u>6</u>	<u>Adjust brakes</u>	-	-	-	-
<u>7</u>	<u>Wheel nuts tightness</u>	-	-	-	-
<u>8</u>	<u>clean all the air breather</u>	-	-	-	-
<u>9</u>	<u>clutch pedel free play</u>	-	-	-	-
<u>10</u>	<u>Clean hyd.return filter by air, change if required.</u>	-	-	-	-
<u>11</u>	<u>Replace fuel filter-primary</u>	-	-	-	-
<u>12</u>	<u>Replace oil filter-secondary if required</u>	-	-	-	-
<u>13</u>	<u>Check and apply gease to front wheel bearings</u>	-	-	-	-
<u>14</u>	<u>Replace hyd.oil, if required</u>	-	-	-	-
<u>15</u>	<u>Replace gear box oil,if required</u>	-	-	-	-
<u>16</u>	<u>Replace reduction oil, If required</u>	-	-	-	-
<u>17</u>	<u>Engine /axle mounting bolts for tightness</u>	-	-	-	-
<u>18</u>	<u>Check tightness of rear and front wheel bolt</u>	-	-	-	-
<u>19</u>	<u>Check tightness of coupling of GB</u>	-	-	-	-
<u>20</u>	<u>Check tightness of Engine coupling</u>	-	-	-	-
<u>21</u>	<u>Check tightness of winch bolt</u>	-	-	-	-
<u>22</u>	<u>Check all pins and split pins(stearing cylinder, pulley, boom jack, center pin,break paddle)</u>	-	-	-	-
<u>23</u>	<u>Change oil of fuel injection pump</u>	-	-	-	-

Tool's Required:

- D & Ring spanner : 10-11,12-13,14-15,16-17,18-19,20-22,21-23,24-27,30-32,36-41.
- Hammering D spanner: 48,51,55,60, Allen Key set: 5mm-17mm, 1/2 " sq drive socket
- Torque wrench, Screw Driver - 12", Pipe wrench -24", Slide wrench-15"
- Hammer

Reported By:

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Annexure 1.4: Preventive Maintenance Checklist for Front and Back End Loader (JCB)

Objective: To carry out half-yearly preventive maintenance of JCB

<u>S.NO.</u>	<u>CHECK POINTS</u>	<u>RECOMM VALUE</u>	<u>STATUS</u>			<u>REMARKS</u>
			<u>OK</u>	<u>NOT OK</u>	<u>IF NOT OK THEN ACTION</u>	
<u>CLEAN</u>						
<u>1</u>	<u>Machine generally</u>	-	-	-	-	-
<u>2</u>	<u>Engine air filter pre-cleaner.(If fitted)</u>	-	-	-	-	-
<u>3</u>	<u>Fuel sediment bowl.</u>	-	-	-	-	-
<u>4</u>	<u>Battery terminals.</u>	-	-	-	-	-
<u>5</u>	<u>Fuel filter.</u>	-	-	-	-	-
<u>CHECK (Engine stopped)</u>						
<u>1</u>	<u>Generally for damage.</u>	-	-	-	-	-
<u>2</u>	<u>Engine coolant level and condition.</u>	-	-	-	-	-
<u>3</u>	<u>Engine oil level and condition.</u>	-	-	-	-	-
<u>4</u>	<u>Engine generally for leaks.</u>	-	-	-	-	-
<u>5</u>	<u>Hydraulic fluid level.</u>	-	-	-	-	-
<u>6</u>	<u>Hydraulic system for leaks.</u>	-	-	-	-	-
<u>7</u>	<u>Syncro Shuttle oil level.</u>	-	-	-	-	-
<u>8</u>	<u>Brake fluid level.</u>	-	-	-	-	-
<u>9</u>	<u>Tyre pressures and condition.</u>	-	-	-	-	-
<u>10</u>	<u>Tightness of wheel nuts.</u>	-	-	-	-	-
<u>11</u>	<u>Parking brake lever operation.</u>	-	-	-	-	-
<u>12</u>	<u>Operation of warning lights and audible alarm.</u>	-	-	-	-	-
<u>13</u>	<u>Front and rear axle for leaks - check level if leaking.</u>	-	-	-	-	-
<u>14</u>	<u>Hydraulic oil cooler connections.</u>	-	-	-	-	-
<u>15</u>	<u>Transmission oil cooler connections.</u>	-	-	-	-	-
<u>16</u>	<u>Radiator and hoses condition.</u>	-	-	-	-	-
<u>17</u>	<u>Fan belt tension and condition.</u>	-	-	-	-	-
<u>18</u>	<u>Slew gear box for oil leaks - check level if leaking.</u>	-	-	-	-	-
<u>19</u>	<u>Condition of Ram piston rods.</u>	-	-	-	-	-
<u>20</u>	<u>Hoses and pipe works for chafing/damage.</u>	-	-	-	-	-
<u>21</u>	<u>Air cleaner hose security.</u>	-	-	-	-	-
<u>22</u>	<u>Electrical wiring for chafing.</u>	-	-	-	-	-
<u>23</u>	<u>Fuel system for leaks/contamination.</u>	-	-	-	-	-
<u>24</u>	<u>Extra dig dipper wear pads.</u>	-	-	-	-	-
<u>CHECK (Engine running)</u>						

<u>1</u>	<u>Instrument readings, warning lights and audible alarm.</u>	-	-	-	-	-
<u>2</u>	<u>Operation of all electrical equipment.</u>	-	-	-	-	-
<u>3</u>	<u>Footbrake operation.</u>	-	-	-	-	-
<u>4</u>	<u>Steering operation.</u>	-	-	-	-	-
<u>5</u>	<u>Operation of all hydraulic services.</u>	-	-	-	-	-
<u>6</u>	<u>Exhaust for excessive smoke.</u>	-	-	-	-	-
<u>GREASE</u>						
<u>1</u>	<u>All pivot points, Kingpost & carriage.</u>	-	-	-	-	-
<u>2</u>	<u>Front axle pivot.</u>	-	-	-	-	-
<u>3</u>	<u>Steering kingpins or universal joints.</u>	-	-	-	-	-
<u>4</u>	<u>Steering ram, Hubs, Track rod ends.</u>	-	-	-	-	-
<u>5</u>	<u>Drive shafts-universal and sliding joints.</u>	-	-	-	-	-
<u>6</u>	<u>Extending dipper.</u>	-	-	-	-	-
<u>OIL</u>						
<u>1</u>	<u>All linkage points, cables, hinges.</u>	-	-	-	-	-
<u>CHANGE</u>						
<u>1</u>	<u>Mud filter element.</u>	-	-	-	-	-
<u>2</u>	<u>Engine oil and lubrication filter element.</u>	-	-	-	-	-
<u>3</u>	<u>Lubrication oil in fuel injection pump.</u>	-	-	-	-	-
<u>4</u>	<u>Slew actuator oil.</u>	-	-	-	-	-

Reported By:Signature:Date:Designation:Place:**Approved By:**Signature:Date:Designation:Place:

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Annexure 1.25: Preparedness Checklist for District PWD Office

(To be filled in by OFFICER-IN-CHARGE and submitted to district control room and the department head)

Action taken	Y / N	Details /Remarks
Radio Communication established with <ul style="list-style-type: none"> Emergency Operations Centre District Magistrate District control room and Departmental officers within the division 		
An officer appointed as OFFICER-IN-CHARGE-PWD"		
Extra transport vehicles dispatched from headquarters		
Work under construction secured		
Heavy equipment such as front-end loaders, have been secured		
All work teams issued two-way communication link		
Inspection and emergency repairs, if necessary, carried out for all buildings and structures of the central government (including hospital buildings) <ul style="list-style-type: none"> Roads Road bridges Underwater inspection of foundations and piers. Concrete and steelworks. 		
Inspection and emergency repairs, if necessary, carried out for all buildings and structures of the central government (including hospital buildings)		
Emergency inspection by mechanical engineer of all plant and equipment in the District Workshops carried out.		
Emergency tool kits assembled for each division		
Routes strategic to evacuation and relief marked		
Adequate road signs installed to guide and assist movement of the following to begin clearing roads. <ul style="list-style-type: none"> Earth moving equipments Cranes etc 		
Community assistance mobilised for road clearing		
The following activities were undertaken <ul style="list-style-type: none"> Cleaning of ditches Grass cutting Burning or removal of debris and Cutting of dangerous trees along the roadside in the affected area. 		
The following repair works were undertaken for <ul style="list-style-type: none"> All paved and unpaved road surfaces Pothole patching and Any failure of surface / foundations in the affected areas. 		
Construction work undertaken for temporary roads to serve as access to <ul style="list-style-type: none"> Temporary transit camps Relief camps <ul style="list-style-type: none"> Medical centres 		
Construction work undertaken for temporary structures required for organising relief work such as <ul style="list-style-type: none"> Relief camps Feeding centres 		

Action taken	Y / N	Details /Remarks
<ul style="list-style-type: none">• Medical facilities• Cattle camps and• SOC/s		
An up-to-date report of all damage and repairs keep in the district / office report-book.		

Reported By:

Signature: _____

Date: _____

Designation: _____

Place: _____

Annexure 1.36: Preparedness Checklist for ~~Urban Local Body~~ Nagar Nigam/ Panchayati Raj Department

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(to be filled in by the Department Head and submitted to the District Collector)

Preparedness Measures taken	Details / Remarks
Location approved / conveyed to District control room. Police control room.	
Accommodation provided for the following <ul style="list-style-type: none"> - Protection against adverse weather conditions. - Treatment for minor ailments and minor injuries. - Control over access and egress evacuation routes. - Equipped with a mobile PA system. - Update on disaster situation. - Drinking water. - Food arrangements. - Adequate lighting arrangements. - Sanitation facilities. - Facilities for storage of bulk belongings of evacuees. - Facilities for evacuation of cattle and pets. 	
Police personnel provided.	
Information desk available.	
Special skills required during emergency operations imparted to the officials and the staff	
Reviewed and updated: <ul style="list-style-type: none"> • Precautionary measures and procedures • The precautions to be taken to protect equipment • The post-disaster procedures to be followed 	
All officers are familiar with pre-disaster precautions and post-disaster procedures for road clearing and for defining safe evacuation routes where necessary.	
An officer has been designated as Nodal Officer for Disaster Management	
Sources of materials required for response operations have been identified	
Services of shelters have been checked.	
Spaces for accommodating people and storing goods have been identified.	
Separate sanitary facilities for men and women in shelters have been identified.	
All electrical fittings have been checked.	
All garbage and combustible material around shelter sites has been removed.	
Fire fighting equipment in shelter buildings has been checked.	
Structural repairs in shelter buildings have been carried out to prevent entry of water.	

Reported By:

Signature:

Date:

Designation:

Place:

Annexure ~~1.4:~~ 1.7: Preparedness Checklist for Home Department: Police

(To be filled in by the Department Head and submitted to the District collector)

Preparedness measures taken	Details/Remarks
The department is familiar with disaster response plan and disaster response procedures are clearly defined.	
Orientation and training for disaster response plan and procedures undertaken.	
Special skills required during emergency operations imparted to the officials and the staff	
Reviewed and updated <ul style="list-style-type: none"> • Precautionary measures and procedures • Precautions to be taken to protect equipment • Post-disaster procedures to be followed. 	
Adequate warning mechanisms established for evacuation.	
An officer has been designated as Nodal Officer-Police at State Level for disaster management.	
Officers have been designated as Officer-in-Charge-Police at District Level for disaster management.	
Sources of materials required for response operations have been identified.	
Vehicles have been checked and serviced.	
Registration desks have been set up at the shelter sites.	
Guards have been provided to supply depot.	
Patrolling schedule has been finalised.	
Guards for shelter sites have been posted.	

Reported By:

Signature:

Date:

Designation:

Place:

Annexure 1.58: Preparedness Checklist for Home Department (Police): District Level

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(To be filled in by "Officer-in-Charge" and submitted to District Control Room and the Department Head)

Action Taken	Y/N	Details /Remarks
Radio communications established with <ul style="list-style-type: none"> • Emergency operations centre • District collector • District control room • Other police headquarters within the division 		
Community assisted in organising emergency transport of seriously injured to medical treatment centres. Community assisted inroad-clearing operations. Overall traffic management and patrolling on all highways and other access roads to disaster site being carried out. The following roads have been identified <ul style="list-style-type: none"> • To be made one-way • To be blocked • Alternative routes 		
Transport carrying transit passengers (that is, passengers travelling through trains or buses and passing through the district), are diverted away from the disaster area.		
Security is being provided in <ul style="list-style-type: none"> • Transit camps • Feeding centres • Relief camps • Cattle camps • Affected areas • Hospital and medical centres 		
Areas to be cordoned off identified		
Guards provided for supply depots such as cooperative food, stores and distribution centres		
Security arrangements provided for visiting VVIPs and VIPs,		
District authorities assisted for taking necessary action against, black marketers and those found manipulating relief material.		
A public information centre activated		
Officers made available to inquire into and record of deaths		
Coordination with military service personnel in the area being carried out		

Inspected By:

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Date:

Designation:

Place:

Annexure 1.69: Preparedness Checklist for Home Department: Fire Service

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(To be filled in by the Department Head and submitted to the District collector)

Preparedness measures taken	Details/Remarks
The department is familiar with disaster response plan and disaster response procedures are clearly defined.	
Orientation and training for disaster response plan and procedures undertaken.	
Special skills required during emergency operations imparted to the officials and the staff	
Reviewed and updated <ul style="list-style-type: none"> • Precautionary measures and procedures • Precautions to be taken to protect equipment • Post-disaster procedures to be followed. 	
Adequate warning mechanisms established for evacuation.	
An officer has been designated as Nodal Officer-Fire Service at State Level for disaster management.	
Officers have been designated as Officer-in-Charge-Fire Service at District Level for disaster management.	
Sources of materials required for response operations have been identified.	
Fire engines have been checked.	
Staff has been familiarised with the routes.	
Location of shelters and vulnerable areas has been checked with staff	

Reported By:

Signature:

Date:

Designation:

Place:

Annexure 12.71: Preparedness Checklist for Home Department (Fire Service): District Level

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(to be filled in by "Officer-in-Charge" and submitted to District Control Room and the Department Head)

Action Taken	Y/N	Details /Remarks
Radio communications established with <ul style="list-style-type: none"> • Emergency operations centre • District collector • District control room • Other police headquarters within the division 		
Areas to be cordoned off identified		
Department vehicles filled with fuel and parked in a protected area.		
Fire engines are checked to be in good running condition		
Tanks of fire engines filled with water and kept in readiness		
A public information centre activated		

Inspected By:

Signature:

Date:

Designation:

Place:

Annexure 12.82: Preparedness Checklist for Energy Department

(to be filled in by the Department Head and submitted to the District Collector)

Preparedness measures taken	Details/Remarks
The department is familiar with disaster response plan and disaster response procedures are clearly defined.	
Orientation and training for disaster response plan and procedures undertaken.	
Special skills required during emergency operations imparted to the officials and the staff.	
Reviewed and updated: <ul style="list-style-type: none"> • Precautionary measures and procedures. • The precautions to be taken to protect equipments. • The post-disaster procedures to be followed. 	
An officer has been designated as Nodal Officer for Disaster Management.	
Sources of materials required for response operations have been identified.	
Vehicles have been checked and parked in a safe area.	
Repair gangs have been provided with bedrolls, waterproof clothing and repair equipment.	
Connections around shelters have been checked.	

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Annexure 12.93: Preparedness Checklist for District Electricity Office

(To be filled in by the Officer-in-Charge and submitted to District Control Room and the Department Head)

Actions taken	Y/N	Details/Remarks
Radio communications established with <ul style="list-style-type: none"> • Emergency Operations Centre • District collectors • District control room and • Departmental offices within the division 		
An officer appointed as Officer-in-Charge- Power Supply		
Standby arrangements for temporary electric supply or generators made for <ul style="list-style-type: none"> • Hospitals • Water department • DS office • Police stations • Telecommunications buildings • Meteorological stations • Transit camps • SOC • Feeding centres • Relief camps • Cattle camps • Warehouses for storing relief materials • Access roads 		
Each depot provided with disaster management tool kit.		
Inspection, and repairs if needed, carried out for <ul style="list-style-type: none"> • High-tension lines. • Towers • Substations • Transformers • Insulators • Poles. 		
Clearing of damaged poles carried out.		
Salvage of conductors and insulators done.		
Emergency accommodations organised for staff from outside the area		
An itemised damage assessment carried out		

Inspected By:

Signature:

Date:

Designation:

Place:

Annexure 2.4: Preparedness Checklist for Animal Husbandry Department

(to be filled in by the Department Head and submitted to the District Collector before May and November every year)

<u>Preparedness measures taken</u>	<u>Details/Remarks</u>
<u>The department is familiar with disaster response plan and disaster response procedures are clearly defined.</u>	
<u>Orientation and training for disaster response plan and procedures undertaken.</u>	
<u>Special skills required during emergency operations imparted to the officials and the staff.</u>	
<u>Reviewed and updated</u> <ul style="list-style-type: none"> • <u>Precautionary measures and procedures</u> • <u>The precautions to be taken to protect equipment</u> • <u>The post-disaster procedures to be followed.</u> 	
<u>Hospital staff are aware of which hospital rooms / buildings are damage-proof.</u>	
<u>All veterinary hospitals and centres staff informed about the possible disasters, likely damages and effects, and information about ways to protect life, equipment and property.</u>	
<u>An area of the hospital identified for receiving large number of livestock.</u>	
<u>Emergency admission procedures with adequate record keeping developed.</u>	
<u>An officer has been designated as Nodal Officer for Disaster Management.</u>	
<u>Sources of materials required for response operations have been identified.</u>	

Reported By:

Signature:

Date:

Designation:

Place:

Annexure 2.5: Preparedness Checklist for Health and Family Welfare Department

(to be filled in by the Civil Surgeon and District Health Officer and submitted to the District Collector)

<u>Preparedness Measures taken</u>	<u>Details/ Remarks</u>
<u>The department is familiar with disaster response plan and disaster response procedures are clearly defined.</u>	
<u>A hospital plan for the facilities, equipment and staff of that particular hospital has been developed</u>	
<u>Orientation and training for disaster response plan and procedures undertaken</u>	
<u>Special skills required during disaster situations are imparted to the officials and the staff</u>	
<u>Hospital staff are aware of damage - proof hospital rooms/buildings</u>	
<u>Reviewed and updated</u> <ul style="list-style-type: none"> • <u>Precautionary measures and procedures</u> • <u>Precautions that have to be taken to protect equipment</u> • <u>Post-disaster procedures to be followed</u> 	
<u>All hospital staff have been informed about the possible disasters in the district, likely damages and effects, and information about ways to protect life, equipment and property</u>	
<u>An area of the hospital has been earmarked for receiving large number of casualties</u>	
<u>Emergency admission procedures with adequate record keeping developed</u>	
<u>Field staff oriented about</u> <ul style="list-style-type: none"> • <u>EMRP</u> • <u>Standards of services</u> • <u>Procedures for triage tagging</u> 	
<u>An officer has been designated as Nodal Officer for Disaster Management</u>	
<u>Sources of materials required for response operations have been identified</u>	

Prepared by:

Signature:

Date:

Designation:

Place:

Annexure 2.6: Preparedness Checklist for Field Activities of Animal Husbandry

(to be filled in by the Officer-in-Charge and submitted to District Control Room and the Department Head)

<u>Actions Taken</u>	<u>Y/ N</u>	<u>Details/ Remarks</u>
<u>Radio communications established with</u> <ul style="list-style-type: none"> • <u>Emergency Operations Centre</u> • <u>District Magistrate</u> • <u>District Control Room</u> • <u>Veterinary aid centres and</u> • <u>Hospitals (including private practitioners) within the division</u> 		
<u>The District Animal Husbandry Officer designated as OFFICER-IN-CHARGE- Veterinary Services.</u>		
<u>Emergency medical equipments required are stocked.</u>		
<u>All veterinary hospitals and centres staff informed about the disasters, likely damages and effects, and ways to protect life, equipment and property.</u>		
<u>Emergency electrical generator arranged.</u>		
<u>Emergency supplies of anaesthetic drugs arranged.</u>		
<u>Hospital water storage tanks filled</u>		
<u>An area of the hospital prepared for receiving large number of livestock</u>		
<u>Emergency admission procedures developed (with adequate record keeping).</u>		
<u>Transfer of seriously injured livestock from villages to veterinary aid centres and hospitals organised.</u>		
<u>Established at disaster sites</u> <ul style="list-style-type: none"> • <u>Cattle camps</u> • <u>Additional veterinary aid centres.</u> 		
<u>Organised for cattle camps</u> <ul style="list-style-type: none"> • <u>Water</u> • <u>Fodder and</u> • <u>Animal feed.</u> 		
<u>Adequate sanitary conditions maintained</u>		
<u>Cleaning operations being carried out</u>		
<u>Epidemiological surveillance is being undertaken</u>		
<u>Emergency accommodations available for veterinary staff from outside the area.</u>		
<u>Public information centre established.</u>		
<u>The local police, and rescue groups informed of the resources of each veterinary aid centre and hospital.</u>		

Inspected By:

Signature:

Date:

Designation:

Place:

Annexure 2.7: Emergency Health Kit

First Aid Supplies

- First aid kit and manual
- Germicidal hand wipes or waterless,
- Alcohol-based hand sanitizer
- Antiseptic wipes
- Pairs of large, medical grade, non- latex gloves
- Cold pack
- Scissors
- Tweezers
- Assorted sizes of safety pins
- Cotton balls
- Thermometer
- Tube of petroleum jelly or other lubricant
- Sunscreen

Non-Prescription and Prescription Medicine Kit Supplies and Medical Support Equipment

- Antibacterial ointment
- Aspirin and non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for stomach upset)
- Laxative
- Vitamins
- Prescription Drugs (two week supply)
- Dentures and cleaning solution
- Eyeglasses/contact lenses and cleaning solution
- Hearing aid and batteries
- Medical support equipment (wheelchairs, battery if motorized, walkers, cane, dressings, oxygen and tubes, feeding equipment, etc.).

Sanitation and Hygiene Supplies

- Towelettes, body wipes, soap, hand sanitizer
- Heavy-duty plastic garbage bags and ties for personal sanitation uses and toilet paper

- Washcloth and towel
- Medium-sized plastic buckets with tight lid
- Tooth paste, toothbrushes
- Disinfectant and household chlorine bleach
- Shampoo, comb, and brush
- Feminine supplies
- Deodorants, sunscreen Toilet paper
- Razor, shaving cream
- Diapers, Disposable incontinence supplies
- Lip balm, insect repellent
- Mirror

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Annexure 2.8: Checklist for RES

Name of the specific facility: _____

Examined Sector: _____

Details

True

False

Not
applicable

MACHINERY AND EQUIPMENT

Are adequately designed and constructed in order to avoid lateral and backwards overturning

The equipment and machines receive periodic preventative maintenance

Operators of machines and equipment are trained

There are available standards for operating the machines and equipment and to prevent over turnings.

Machines and equipment have cabins and safety entrances adequately designed and constructed

Machines and equipment are provided with rails to go up and down

The cabins are designed and constructed to be comfortable and to protect the worker against dust and noise

The front of the tractor is ballasted when the equipment is heavy

Moving parts and implements have adequate protection guards

Equipment platforms have access stairs and adequate railing

Machines and equipment have signs or indicators

The signs and indicators provide clear information safely and quickly

The machines and equipment have controls

The controls are designed and prepared compatible with the characteristics of the body part with which they are operated

The functions of the controls are easily identifiable

The controls are designed to prevent accidental operations

HAND TOOLS

The right tools are selected according to the task in which they are going to be used

The conditions of the tools are adequate, so they do not represent danger for the user

Tools are subject to review and periodic control, as part of their maintenance program.

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Details**True****False****Not
applicable**

Tools are stored in places especially designed to safely keep them

Means or special safety instruments are employed to safely transport the tools

Adequate procedures are used for the transportation and use of the tools

MACHINERY

The methods of prevention and protection are considered when machinery is designed and installed

Sharp objects and energy conductive elements are duly protected with guards and protection devices designed and constructed according to national standards

Machines and equipment are anchored to the floors and facilities in such a way that vibrations are alleviated

There is a program for preventive maintenance of the machines

Systems of signaling are available in those machines that involve dangers

NOISE AND VIBRATION

Machines and tools that generate noise and vibrations are not utilized

Causes of noise and vibration are identified

Noise levels to which the workers are exposed are measured periodically

Technical procedures of noise control in the source, in the environment, and in the receptor are applied

Adequate auditory protection equipment is provided

Cases of irritability, headache, insomnia, etc. attributed to the facility's level of noise and vibration occur

Special accessories for controlling exposure to tools vibration are employed

PERSONAL PROTECTION

Protective equipment for the head is utilized

The helmets utilized are resistant to impact

The helmets utilized are fire resistant

The helmets utilized are light-weight

The helmets utilized when working with high-voltage equipment have electrical isolation

The helmets utilized are resistant to aggressive chemical spills

Details**True****False****Not
applicable**

The helmets are comfortable

The helmets utilized do not interfere with work activities

Visitors utilize the protective equipment for the head wherever it is needed

Noise protection equipment is utilized in those areas where intensity higher than the 85dB(A) is reached (plants and offices)

Visitors utilize the auditory protection equipment wherever necessary

Noise protection equipment is comfortable

The equipment does not induce adverse effects on the skin or on the ear

The protective equipment adequately attenuates the noise

The useful time life of noise protection equipment is established

The status of noise protection equipment is periodically reviewed

Protective equipment for the eyes against the projection of particles is utilized

Protection equipment for the eyes is utilized in the operations where toxic substances are handled

The protective glasses are impact resistant

Safety goggles have plastic lenses to prevent eye scratches due to particles frequently released in some operations

Glasses with filters are utilized in welding operations to protect against brightness and radiant energy

The welding area, personnel visiting the plants are instructed not to observe the spark or the brightness of the welding operations

Face protective equipment is utilized when required

Gloves are utilized in the activities that require them

Gloves types are adequate to the activities carried out

The size of the glove fits the worker who utilizes it

GAS CYLINDERS

The cylinders are kept separated from the area where welding and cut operations are carried out

Are not placed indoors

Placing cylinders in locations where they can be exposed to mobile equipment, substances, etc. is avoided

Are safely and well placed in order to avoid displacement

Are visibly labeled

The equipment is utilized with hands free from grease or oils

Details**True****False****Not
applicable**

When carrying out welding jobs, an extinguisher is kept close in case of fire

Are transported by wheelbarrows and are not dragged

When the cylinders are moved, the protective cover of the valve is in place and closed

The cylinders are raised appropriately (not through the valves and covers)

Valves are checked and are in good condition

The person in charge of reviewing the cylinders is defined

ELECTRIC WELDING

The floor is clean and free from oil, grease or paint and from any other combustible material

It is ensured that the work area is not wet or moist

The work area is inspected at the end of the day

The energy feed is turned off before any maintenance is carried out on the machine

The use of gas or inflammable liquid plumbing to ground the equipment is avoided

To ground the equipment, electrical wiring is used

Power that surpasses the capacity of the wire is not used

There are no welding tubes with compressed gas

Remarks:

(1) In general, anything that corresponds to the column "false" (incorrect phrases) will be considered a potential hazard. Attention will be given to determine whether it represents a significant risk.

(2) In general, the statements that fall in the "true" or "non-applicable" columns represent the absence of the hazard or an adequately controlled risk.

Reported By:

Signature:

Date:

Designation:

Place:

Approved By:

Signature:

Date:

Designation:

Place:



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Annexure 2.9: List of equipment used in PWD and RES

Activity Name: Search and Rescue

Category Name: Cutters

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>1</u>	<u>Gas Cutters</u>	
<u>2</u>	<u>Cold Cutters</u>	
<u>3</u>	<u>Bolt Cutters (Shears)</u>	
<u>4</u>	<u>Electric Drill</u>	
<u>5</u>	<u>Circular Saw with Diamond Blade(Electric)</u>	
<u>6</u>	<u>Chipping Hammer</u>	
<u>7</u>	<u>Chain Saw – Diamond</u>	
<u>8</u>	<u>Chain Saw – Bullet</u>	
<u>9</u>	<u>Pneumatic Chisel</u>	
<u>10</u>	<u>Cutters – Hydraulic</u>	
<u>11</u>	<u>Cutters Battery</u>	

Category Name: Spreaders

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>12</u>	<u>Spreaders - Hydraulic</u>	
<u>13</u>	<u>Spreaders – battery</u>	

Category Name: Lifting Equipment

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>14</u>	<u>Air Lifting Bag/ Tools</u>	
<u>15</u>	<u>Jack with 5 ton lift</u>	
<u>16</u>	<u>Iron shod levers, 10 ft long</u>	

Category Name: Light Equipment (search and rescue)

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>17</u>	<u>Sledge hammer</u>	
<u>18</u>	<u>Heavy Axe</u>	
<u>19</u>	<u>Two handled cross cut- saw</u>	
<u>20</u>	<u>Chain tackle</u>	
<u>21</u>	<u>Single sheave snatch box</u>	
<u>22</u>	<u>Smoke blower and exhauster</u>	
<u>23</u>	<u>Ste of rope tackle (3 sheave – 2 sheave)</u>	
<u>24</u>	<u>Gloves- rubber, tested upto 25,000 volt</u>	
<u>25</u>	<u>Stretcher harness (set)</u>	
<u>26</u>	<u>Scaffold poles for sheer legs</u>	
<u>27</u>	<u>Jumping Cushions</u>	
<u>28</u>	<u>Rescue rams</u>	
<u>29</u>	<u>Glass remover (Punch mark)</u>	

<u>30</u>	<u>Crescent/ adjustable wrenches</u>	
<u>31</u>	<u>Slotted screw drivers</u>	
<u>32</u>	<u>Traps 4 X 4 meters</u>	
<u>33</u>	<u>Blankets</u>	
<u>34</u>	<u>Lifting tackle – 3 ton</u>	
<u>35</u>	<u>Chains – 6 ft (3 ton lift)</u>	
<u>36</u>	<u>Aspects blanket</u>	
<u>37</u>	<u>Soaking kit</u>	

Category Name: Lighting Arrangements

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>38</u>	<u>Inflatable Light Tower</u>	
<u>39</u>	<u>Light Mast</u>	
<u>40</u>	<u>Search light</u>	
<u>41</u>	<u>Electric Generator</u>	

Category Name: Rescue boats

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>42</u>	<u>Inflatable boat (12 persons)</u>	
<u>43</u>	<u>Fiber boat (12 persons)</u>	
<u>44</u>	<u>Motor boats</u>	
<u>45</u>	<u>Motor Launch</u>	
<u>46</u>	<u>Country boats</u>	

Category Name: Breathing Apparatus set

<u>Item No.</u>	<u>Item Name</u>	<u>Item present in the department/ Agency (Yes/ No)</u>
<u>47</u>	<u>Breathing apparatus – self contained</u>	
<u>48</u>	<u>Breathing apparatus - compressor</u>	

Reported By:

Signature:

Date:

Designation:

Place:

Approved By:

Signature:

Date:

Designation:

Place:

Annexure 3.0: List of Machines used in PWD and RES

<u>Item no.</u>	<u>Item name</u>	<u>Item condition (OK/ Not OK)</u>
<u>1.</u>	<u>Hot Mix Prowl</u>	
<u>2</u>	<u>Loader JCB</u>	
<u>3</u>	<u>Generator KVA</u>	
<u>4</u>	<u>Tipppers</u>	
<u>5</u>	<u>Pavers (Hot Mix)</u>	
<u>6</u>	<u>CC Pavers</u>	
<u>7</u>	<u>Vibratory road roller</u>	
<u>8</u>	<u>Soil compactor</u>	
<u>9</u>	<u>Tar boiler</u>	
<u>10</u>	<u>Dozer</u>	
<u>11</u>	<u>Crane</u>	
<u>12</u>	<u>Water Mix Macadam (WMM Plant)</u>	
<u>13</u>	<u>Road roller (static)</u>	
<u>14</u>	<u>Road roller (static)</u>	
<u>15</u>	<u>Bitumen sprayer</u>	
<u>16</u>	<u>Bitumen pressure distributor</u>	

Reported By:

Signature:

Date:

Designation:

Place:

Approved By:

Signature:

Date:

Designation:

Place:

Annexure **2.03.1**: Standards for Cattle Camps

(May be decided according to the local standards)

- The minimum number of cattle in the cattle camp should be about 100 and the maximum 500.
- The cattle camps should be located at suitable sites, bearing in mind that adequate supply of water and shade are most essential for the wellbeing of the cattle.
- Cattle sheds constructed should not exceed 20 sq. ft. per animal. Suitable arrangements for water trough and manger(s) should be made.
- The feeding centres for cattle should be located in such a manner that
 - There is adequate supply of drinking water
 - There is sufficient shade for cattle to rest during the afternoon
 - They are located as near the rail head as possible
 - They are conveniently located, not beyond a radius of 8 km from the affected villages.
- The cattle will require 6 kg per cattle head per day of fodder, and 1 to 1½ kg per cattle head per day of concentrate.
- Each cattle camp will have a minimum of one camp manager, two labourers and two sweepers.

Annexure 2.1: Recommended List of Shelter Equipment

Sl. No.	Items	Unit per Shelter
1	Generator Sets	01
2	Light & fans	-
3	Pulley Block	03
4	Life-buoy	02
5	Life Jacket	02
6	Nylon Rope 12mm dia-50 mtr	04
7	Stretcher	01
8	Manila Rope 200 ft. 6mm dia	01
9	Manila Rope 60 ft. 12 mm dia	06
10	Sisal chord 60 mm dia 20 ft	25
11	G.I. Trunk	01
12	First Aid Box with two manuals	01
13	Notice Board with chicken net covering and locking	01
14	Telescopic Aluminium Ladder	01
15	Dari (KDC 15'X12')	01
16	Folding Black Board	01
17	Plastic chair(5 Nos)	01
18	Solar lantern	01
19	Inflatable Tower Light	02
20	Portable Power Saws	02
21	Gloves (Rubber)	05
22	Water Filter (Bajaj 26 ltr.)	01
23	Radio (Philips)	01
24	Siren	01
25	Hand Held Mega Phone	01
26	Flexi-water tank-200 lit capacity	02
27	Foldable stretcher	

Annexure 3.2 Recommended list of shelter equipment

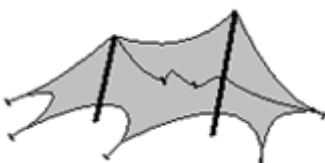
<u>Sl. No.</u>	<u>Items</u>	<u>Unit per Shelter</u>
<u>1</u>	<u>Generator Sets</u>	<u>01</u>
<u>2</u>	<u>Light & fans</u>	<u>01</u>
<u>3</u>	<u>Pulley Block</u>	<u>03</u>
<u>4</u>	<u>Life buoy</u>	<u>02</u>
<u>5</u>	<u>Life Jacket</u>	<u>02</u>
<u>6</u>	<u>Nylon Rope 12mm dia-50 mtr</u>	<u>04</u>
<u>7</u>	<u>Stretcher</u>	<u>01</u>
<u>8</u>	<u>Manila Rope 200 ft. 6mm dia</u>	<u>01</u>
<u>9</u>	<u>Manila Rope 60 ft. 12 mm dia</u>	<u>06</u>
<u>10</u>	<u>Sisal chord 60 mm dia 20 ft</u>	<u>25</u>
<u>11</u>	<u>G.I. Trunk</u>	<u>01</u>
<u>12</u>	<u>First Aid Box with two manuals</u>	<u>01</u>

13	Notice Board with chicken net covering and locking	01
14	Telescopic Aluminium Ladder	01
15	Dari (KDC 15'X12')	01
16	Folding Black Board	01
17	Plastic chair(5 Nos)	01
18	Solar lantern	01
19	Inflatable Tower Light	02
20	Portable Power Saws	02
21	Gloves (Rubber)	05
22	Water Filter (Bajaj 26 ltr.)	01
23	Radio (Philips)	01
24	Siren	01
25	Hand Held Mega Phone	01
26	Flexi-water tank-200 lit capacity	02
27	Foldable stretcher	

Annexure 2.23.3: Tent Types - Tent Classifications

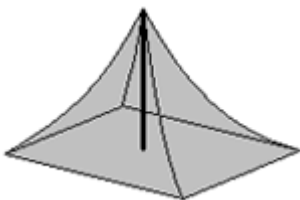
Tents come in every imaginable size and shape, making it hard to clearly define categories. However, there are some widely agreed upon Tent Characteristics that can be used to classify tents. Knowing these characteristics will help you in finding what you are looking for.

In general, Tents consist of poles which form a skeleton and over this skeleton, the **Tent Fabric** or skin is laid out to create an inner pocket. These are the basic Tent Structures:



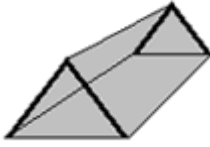
Avian Tents

One or two straight poles with the Tent cover spread out create a covered ground area. They are mostly used for quick shelter and generally light weather conditions.



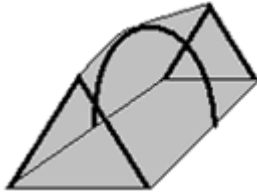
Pyramid Tents

One central pole and the Tent cover pulled tight and spread out around the center pole form a pyramid shaped pocket. Pyramid Tents are rare in Hiking as the center pole effectively divides the Tent in multiple smaller compartments.



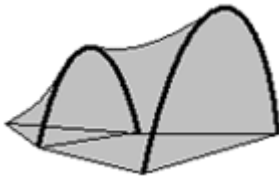
Traditional A-Frame Tents

Two-legged frames at the outer ends of the Tent with the Tent cover form a triangular pocket. Old backpacking tents were often A-frame Tents. The increased roominess of hoop tents and domes has replaced most A-frame tents.



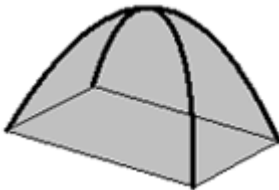
Modified A-Frame Tents

Add a ridgepole and a center hoop to the traditional A-Frame to create a larger volume version of the traditional A-frame pocket. Modified A-Frame tents are also becoming rare in Hiking.



Hoop Tents

Use one to three hoops with the Tent cover to form a tubular pocket. The curved walls give a bigger volume with the same ground surface. Hoop Tents are surprisingly strong as they divide pressure over the full length of the hoops.



Wedge Tents

Two intersecting hoops with the Tent cover form a square to round pocket. These tents are very popular in Hiking as they combine great strength in combination with the least use of material and weight.



Dome Tents

Three or more intersecting hoops with the Tent cover form a multi-faceted ground floor with a dome. The added hoops give this tent increased strength in comparison to Wedge Tents. However, they are mostly pretty difficult to erect. Most 4-Season tents are domes with four intersecting hoops.

Besides these Basic Tent Structures, there are a lot of Hybrid Tents which combine any of the above structural features to come up with other tent structures. The combinations often try to mix the strengths of each of the structures used and thus come up with a stronger construction.

The structures that the poles build derive their strength from the way the pressure is placed on the poles. In the case of the A-Frame structure, most of the pressure is directed to the length of the poles where it is strongest. In dome structures where the poles are curved, the pressure is equally directed to all sides of the curve.

Freestanding vs. Fixed Tents

The strength of a tent is based on the combination of the compression members (the tent poles) and the tension members (the tent fabric and the possible guy lines). Guy lines are lines used to stretch the tent fabric by staking them to the surface. Tents that do not need guy lines are freestanding. Freestanding Tents offer a couple of advantages:

However, all tents including the freestanding type derive a lot of their strength from being anchored down by stakes and guy lines.

Protection Level: Number of Supported Seasons

There are a couple of ways of categorizing tents by their functions. One of the most defining ones is the number of seasons that the tent supports:

- 4-Season Tents are meant for year round use and they are capable of withstanding the heaviest snowstorms.

- 3-Season Tents will protect you from the worst summer, spring, and autumn can throw at you. However, they will not be able to protect you in heavy winter conditions. Some 3-Season Tents are convertible into 4-Season Tents by adding extra sections or tent parts to the tent.
- 2-Season Tents will serve you perfectly well from late spring to early fall but they are not designed for rougher conditions.

Capacity: Number of Persons

Nowadays, many Tent manufacturers give an estimated or exact number of people that the tent can accommodate (for instance: 1-person, 2-person, 4-person, etc.). Other often used expressions are solo, duo, trio, etc. Make sure not to just take the manufacturer's word for it. Often their definition of capacity means x smaller persons packed close together. In reality, you will often find a 2-person tent having room for just one person. In bad weather, you may want to take your backpack inside your tent or do your cooking inside. Some manufacturers have taken this into account and call their tents 2-person plus or 3-person plus, signifying that there is some extra space. In general, when finding a tent, simply go for a tent meant for more people than the group size you are actually going to accommodate.

Hiking Tents are an essential component of Camping. Make sure that you have a Tent which is appropriate to what you need. Knowing the various Tent Types or Tent Classifications can greatly help you in narrowing down your selection. Determine your requirements and get familiar with the essentials of Hiking Tents.

Annexure 2.33.4: Site selection and arrangement of emergency settlements

When existing buildings are not available, one possibility is to use tents or makeshift shelters made of plastic sheets, tarpaulins, or local materials, such as palm thatch, in a secure location where water, sanitation and food can be provided. Emergency settlements for refugees and displaced people need to be established rapidly. However, they may be in service for months or even years, and it is usually impossible to know at the outset of an emergency how long the emergency settlement will exist. Therefore, the measures listed below are designed to provide healthy living conditions for disaster-affected people in both the short term and the long term. Specific long-term issues are discussed in Section 6.5. The requirements that ensure that temporary camps are healthy environments are considered below (Assar, 1971; United Nations High Commissioner for Refugees, 1999; Sphere Project, 2000).

- _ The site should be free of major water-related hazards such as malaria, onchocerciasis (river blindness), schistosomiasis (bilharzia) and trypanosomiasis (sleeping sickness). If these diseases are endemic, care should be taken to avoid or control vector habitats and provide personal protection against mosquitoes, black flies, Tsetse flies, etc.
- _ The topography of the land should permit easy drainage and the site should be located above flood level. Rocky, impermeable soil should be avoided. Land covered with grass will prevent dust, but bushes and excessive vegetation can harbor insects, rodents, reptiles, etc., and should be avoided or cleared. Wherever possible, steep slopes, narrow valleys, and ravines should be avoided. Ideally, the site should have a slope of 2–4% for good drainage, and not more than 10% to avoid erosion and the need for expensive earth-moving for roads and building construction.
- _ Whenever possible, the area should be naturally protected from adverse weather conditions.
- _ Areas adjacent to commercial and industrial zones, exposed to noise, odours, air pollution and other nuisances should be avoided.
- _ Areas sufficiently close to blocks or rows of shelters should be identified for sanitation and waste management. The residential area of the camp should face the prevailing wind to avoid odours from latrines.
- _ There should be ample space for the people to be sheltered and for all the necessary public facilities such as roads, firebreaks (areas without buildings and with little or no flammable vegetation) and service areas (30m² per person, or 45m² per person allowing for small gardens, but not for full-scale agricultural activities). Areas for public spaces, markets, etc. should be defined from the beginning.
- _ Food distribution areas should be organized so as to create safe conditions for people collecting food, as well as for those distributing it.
- _ To facilitate the management and control of communicable diseases, camps should hold no more than 10000–12000 people, or should be subdivided into independent units of no more than 1000 people.
- _ Drainage ditches should be dug around the tents or other shelters and along the sides of roads, especially if there is a danger of flooding. Care should be taken to lead water away from shelters, latrines, health centers, and stores. Persistent areas of stagnant water that are difficult to drain can be backfilled, or covered with polystyrene balls or a thin layer of oil, to control insects. Water points should also have adequate drainage to avoid mud.
- _ The site should be provided with at least two access roads for reasons of security and to reduce the risk of the site being cut off due to floods or other problems with roads.
- _ The surface of roads can be sprinkled with water to keep dust down. Sullage wastewater can sometimes be used to keep down dust on dirt or gravel roads. Restricting traffic and imposing speed limits can also help to reduce dust.
- _ Shelters should be arranged in rows or in clusters of 10–12 on both sides of a road at least 10 metres wide to permit easy traffic flow and access by ambulances or firefighting vehicles. In tented areas, there should be at least 2 metres between the edge of the road and the tent pegs.
- _ Built-up areas should be divided by 30 metres wide firebreaks approximately every 300 metres. Firebreaks can be used for locating roads and recreation areas.
- _ Shelters should be spaced 8 metres apart so that people can pass freely between them without being obstructed by pegs and ropes. This spacing also helps to prevent the spread of fire. If this is not possible owing to a lack of space, the distance between shelters should preferably be at least twice the overall height of each

shelter, and should never be less than 2 metres. A separation greater than 8 metres may lead to open defecation and should be avoided.

_ There should be a minimum of 3.5m² per person inside the shelter in warm climates where cooking is done outside, and 4.5–5.5m² per person in cold climates where cooking is done inside the shelter.

_ Shelters may be tents or prefabricated units, or may be built out of plastic sheeting together with timber, stone and thatch. Where plastic sheeting is used, it is common to provide one piece, 4 metres by 6–7 metres, per household.

_ Small shelters with few occupants are preferable to large shelters with many occupants.

_ In cold weather, kerosene stoves or other heating appliances should be provided and people should be instructed in their use; every precaution must be taken to prevent fires and explosions.

_ In the absence of electric lighting, wind-proof kerosene or oil lamps, or battery operated lanterns, should be provided for lighting shelters, toilets and roads.

_ Natural ventilation should normally be adequate for temporary shelters such as tents.

_ The site chosen should be within reasonable distance of an ample source of good water and, ideally, near some high ground from which water can be distributed by gravity; water sources should gradually be improved and protected once basic needs are satisfied. No one should have to walk more than 500 metres to water point, and there should be at least one water point for every 250 people.

_ Where there is no piped water, water tanks should be installed on both sides of the road.

_ Refuse bins should be provided.

_ Latrines or other facilities for excreta disposal should be provided (at least one toilet per 20 people), and gradually improved as time and resources allow. The dangers of indiscriminate defecation should be emphasized in health education. Maintenance of toilets must be given priority in health education and camp organization .

_ Bathing, laundry and disinfection facilities should be provided, and health education should emphasize the importance of frequent hand-washing. One double sided ablution bench (3 metres long) should be provided for every 50 people .

_ The camp site should be cleaned regularly according to a prearranged schedule. Participation by camp residents in the cleaning of the camp should be encouraged. Young residents can be organized into teams responsible for cleaning and reporting possible health and environment problems.

_ Separate accommodation is necessary for unaccompanied children, with provision for adults (welfare staff and/or community volunteers) to stay with them; there should be at least one adult per shelter or room. These children may be very disoriented and frightened, and may also have special nutritional needs (United Nations Children's Fund, 1986). The shelters should be situated near the nutritional rehabilitation centre and field hospital, and as far from sources of secondary hazards, noise and contamination as possible.

_ In conflict- and famine-related disasters, many people may be suffering from malnutrition and debilitation when they arrive, so specialized services such as intensive or therapeutic feeding may be needed. Intensive feeding or nutrition rehabilitation units should be provided with up to 15–30 litres of potable water per bed per day. Also, special care needs to be given to latrines and other waste disposal facilities used by parents, children and staff. Means for hand-washing by all staff and parents concerned with child feeding are also important.

Annexure 2.43.5: Longer-term issues for emergency settlements

When emergency settlements exist for more than a few weeks, a number of social, environmental and health issues need to be considered to ensure that the health and wellbeing of the settlement population are sustained and that long-term costs of maintaining the settlement infrastructure and services are kept under control. Some of the short term risks to health may be managed during the emergency phase, but when communities are obliged to remain in emergency settlements for a long time, a number of psychosocial and other health problems associated with alienation, overcrowding, and loss of control and purpose, demand special attention. Longer-term settlements need more sustainable and durable water-supply and waste disposal systems, laundries and wastewater facilities. As far as possible, these facilities should be designed and constructed so that local authorities and local residents can maintain them with a minimum of external resources. Regular monitoring and repair schedules need to be established and managed. The need for recreational facilities may become greater. The safety of areas where children play must be ensured. If a stream or lake offers the opportunity for swimming or water sports, community volunteers should act as lifeguards. Children should be prevented from entering dangerous parts of the camp or its environment, and encouraged to use recreational areas with swings, seesaws and other amenities that can be easily made from locally available materials. Fences should exclude all camp residents from dangerous areas, e.g. those where fuel and pesticides are stored. In longer-term camps, schools, places of worship, workshops, bakeries, etc., may be planned or grow up spontaneously. Care should be taken to provide them with appropriate and adequate water-supply, sanitation and drainage systems. Where camp inhabitants spontaneously set up workshops or carry out commercial activities—a sign of social and emotional health and much to be encouraged—care should be taken to ensure that there are no health hazards, such as smoke or fire from a bakery or pottery, liquid effluent, and flies from an abattoir or butchery. It may be best to zone the camp so that such activities are confined to an industrial quarter.

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Annexure 2-53.6: Standards for shelter

Tent camps

The layout of the site will meet the following specifications:

1. 3-4 hectares of land / 1000 persons.
2. Roads of 10 meters width.
3. Minimum distance between edge of road and tents of 2 meters.
4. Minimum distance between tents of 8 meters.
5. Minimum floor area per tent of 3 meters per person.

Water distribution in camp sites should consist of

1. Minimum capacity of tanks of 200 liters.
2. Minimum capacity/ capita of 15 liters/ day.
3. Maximum distance of tanks from furthest tent of 100 meters.

Solid waste disposal containers in tent camps should be

1. Waterproof.
2. Insect- proof
3. Rodent proof.
4. The waste should be covered tightly with plastic or metallic lid
5. The final disposal should be by incineration or by burial.

The capacities of solid waste units should be 1 liter/ 4-8 tents or 50- 100 liters /25- 50 persons.

Excreta and liquid waste should be disposed in bore – holed or deep trench latrines in tent camps. Specifications for these are:

- 3 meters in length.
- Double- sided.
- 2/100 persons.

Buildings

1. Minimum floor area of 3.5 sq. meters/ person.
2. Minimum air space of 10 sq. meters/ person.
3. Minimum air circulation of 30 cubic meters/ person/ hour.
4. There should be separate washing blocks for men and women.
5. Washing facilities to be provided are:
 - 1 hand basin/ 10 persons.
 - 1 shower head/ 30 persons.

Toilet accommodations in buildings housing displaced persons should meet the following requirements:

- 1 seat/ 25 women.
- 1 seat plus 1 urinal/35 men.

- Maximum distance from building of 50 meters.

Refuse containers are to be plastic or metallic and should have closed lids. To be provided are:

- 1 container of 50-100 liters capacity/25-30 persons.

Annexure 2-63.7: Water Supply

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Investigation of source

Piped Water

- After any repair on the distribution system, the repaired main should be flushed and disinfected with a chlorine solution of 50 mg/litre for a contact period of 24 hours, after which the main is emptied and flushed again with potable water.
- If the demand for water is urgent, or the repaired main cannot be isolated, the concentration of the disinfecting solution may be increased to 100 mg/litre and the contact period reduced to 1 hour.
- At the end of disinfection operations, but before the main is put back into service, samples should be taken for bacteriological analysis and determination of chlorine residue.
- When a water treatment plant, pumping station, or distribution system is so badly damaged that operation cannot be restored for some time, other methods described in the following paragraphs must be used.

Private systems (open well or tube)

- Water from these sources, with adequate chlorination as necessary, can be connected to a distribution system or hauled to the points of consumption.

Springs and wells (non-private)

- Ground water originating from deep aquifers (such as is obtained from deep wells and certain springs) will be free from contamination if certain simple protective measures are taken.
- When springs are used as a source of water supply for a disaster area, careful attention must be paid to geological formations. Limestone and certain rocks are liable to have holes and cracks, especially after an earthquake, that may lead to the contamination of ground water.
- A sanitary survey of the area surrounding a well site or spring is of utmost importance. This survey, which should be carried out by a qualified professional environmental health worker, should provide information on sources of contamination, geological structures (with particular reference to overlying soil and rock formations), quality and quantity of ground water, direction of flow, etc.
- The well selected as a source of water, should be at least 30 m away from any potential source of contamination, and should be located higher than all such sources. The upper portion of the well must be protected by an external impervious casing, extending at least 3 m below and 30 cm above ground level. The casing should be surrounded by a concrete platform at least 1 m wide, that slopes, to allow drainage away from the well; it should connect to a drain that will carry the spilled water away. The opening for drop pipes should be sealed to prevent outside water from entering the well. The rim of manholes should project at least 8 cm above the surrounding surface, and the manhole cover must overlap this rim.
- Immediately after construction or repair, the well should be disinfected. First the casing or lining should be washed, and scrubbed with strong chlorine solution containing, 100 mg of available chlorine per litre. A stronger solution is then added to produce a concentration of 50-100 mg/litre in the water stored in the well. After adequate agitation, the well water is left to stand for at least 12 hours, then pumped out. The well is then allowed to refill. When the residual chlorine of the water drops below 1 mg/litre the water may be used.
- Most of what is stated above applies also to the location and protection of springs. The following points may be added :
 - The collection installation should be so built as to prevent the entrance of light.
 - The overflow should be so located as to prevent the entrance of surface water at times of heavy rainfall.
 - The manhole cover and gates should be locked.
 - Before using the water, the collection chamber should be disinfected with a chlorine solution.
 - An area within a radius of 50 m around the spring should be fenced off to prevent ground surface contamination.

Surface water

- Surface water should be used as a source of water supply only as a last resort.

· Measures should be taken to protect the watershed from pollution by animals and people. As it is usually difficult to enforce control regulations, the point of intake for water supply should be located above any tributary carrying grossly contaminated water. The pump intake should be screened and placed so that it will not take in mud from the stream bed or floating debris. The device can be something extremely simple, such as a perforated drum fixed in the middle of the stream.

Treatment

· Water should be tested for the presence of *Escherichia coli* and unsafe concentrations of nitrate as soon as possible. Detection of *E. coli* indicates contamination by human waste and therefore requires immediate protective and corrective measures.

· Monitoring of water quality should be restored or initiated immediately. During the disasters, daily determination of the chlorine residual in public water supplies is sufficient.

Disinfection

· Chlorine and chlorine-liberating compounds are the most common disinfectants. Chlorine compounds for water disinfection are usually available in three forms:

· Chlorinated lime or bleaching powder, which has 25 % by weight of available chlorine when fresh. Its strength should always be checked before use.

· Calcium hypochlorite, a more stable compound, sold under various proprietary names. This compound contains 70 % by weight of available chlorine. If properly stored in tight containers and in a dark cool place, it preserves its chlorine content for a considerable period.

· Sodium hypochlorite, usually sold as a solution of approximately 5 % strength under a variety of proprietary names. Its use in water disinfection is limited to small quantities under special circumstances.

Methods of chlorination

Gas chlorinators

· These machines draw chlorine gas from a cylinder containing liquid chlorine, mix it in water and inject it into the supply pipe. Mobile gas chlorinators are made for field use.

Hypochlorinators

· These are less heavy than gas chlorinators and more adaptable to emergency disinfection. Generally, they use a solution of calcium hypochlorite or chlorinated lime in water and discharge it into a water pipe or reservoir. They can be driven by electric motors or petrol engines and their output can be adjusted.

· Hypochlorinators are small and easy to install. They consist usually of a diaphragm pump and standard accessories, including one or more rubber-lined solution tanks, and a chlorine residual testing set. The usual strength of the solution is 0.1 %, and it seldom rises above 0.5 %.

The Batch Method

· In the absence of chlorinators, water is disinfected by the batch method. This method is more likely to be used in emergencies. It involves applying a predetermined volume of chlorine solution of known strength to a fixed volume of water by means of some gravity arrangement. The strength of the batch solution should not be more than 0.65 % of chlorine by weight, as this is about the limit of solubility of chlorine at ordinary temperatures. For example, 10 g of ordinary bleaching powder (25 % strength) dissolved in 5 litres of water gives a stock solution of 500 mg/litre. For disinfection of drinking water, one volume of the stock solution added to 100 volumes of water gives a concentration of 5 mg/litre. If after 30 minutes contact the chlorine residual is more than 0.5 mg/litre, this dosage could be reduced.

· After the necessary contact period, excess chlorine can be removed to improve the taste by such chemicals as sulphur dioxide, activated carbon, or sodium thiosulphate. The first two are suitable for permanent installations, whereas sodium thiosulphate is more suitable for use in emergency chlorination. One tablet containing 0.5 g of anhydrous sodium thiosulphate will remove 1 mg/litre of chlorine from 500 litres of water.

Continuous Chlorination

· This method, in which porous containers of calcium hypochlorite or bleaching powder are immersed in water, is used mainly for wells and springs but is also applicable to other types of water supply. A free residual chlorine level of 0.7 mg/litre should be maintained in water, treated for emergency distribution. A slight taste and odour of chlorine after half an hour gives an indication that chlorination is adequate. In flooded areas where the water distribution system is still operating, higher chlorine residuals should be maintained. Occasionally, an unpleasant

taste develops from the reaction of chlorine with phenolic or other organic compounds. This taste should be accepted, as it is an indication of safe disinfection. Continuous Chlorination

Coagulation-Disinfection

· Removal of the organic matter greatly lessens the amount of chlorine needed for disinfection. There are many factors that govern the coagulation process. These include:

1. Hydrogen-ion concentration. The optimum pH value for coagulation is the value that provides the best floc formation and settling. The pH value of water changes when coagulants are used and has to be adjusted to its optimum value, by the addition of alkalis or acids.
2. Mixing. Coagulants must be thoroughly mixed with the water to give satisfactory results. This may be accomplished by (a) pump action, whereby the coagulant solution is added to the suction pipe of the pump and the pump does the mixing; (b) the drip-bottle method, i.e., hanging a drip-bottle over the discharge pipe or hose of raw water that feeds the tank and letting the coagulant solution drip on to the water jet; or (c) dissolution, i.e., allowing the discharge of raw water to splash on to a basket containing solid coagulant.
3. Coagulant dosage. The amount of coagulant and chemicals required to adjust the pH value of water may be calculated when the pH and the type of alkalinity are known. However, optimum dosage for given water may be determined approximately using the jar test.

Physical protection

· In disaster situations, physical protection of water supplies for use, is a major consideration. In addition to such barriers as walls and fences, guards may be necessary to prevent mobs from overrunning and damaging treatment units, pumping stations, tankers, distribution stations, and temporary collection facilities. Intake structures, wells, and springs should also be protected against misuse. The character and extent of such protection will depend on the local situation.

Ice supply

- Required ice should be supplied from a commercial manufacturing plant where it is made from safe water and where sanitary regulations are observed.
- It should be distributed in trucks designed for the purpose, equipped with tools for the safe handling of ice.
- After drinking water is secured within stricken areas, making water available for domestic uses (such as cleaning and washing) should be considered.

Annexure 2.73.8: Storage and distribution of water

Storage

· Emergency storage of water can be improvised in plastic containers, with capacity up to 10 m³. Polyethylene containers erected in pits, dug to size, can provide upto 50 m³ storage capacity. If the purpose of storage is only to provide contact time after chlorination, the minimum capacity should be such as to secure contact for at least 30 minutes. The total storage capacity for water distribution should be equal to the amount required for 12-24 hours. Elevated tanks can be set up within a short, time by using drums, iron sheeting, or asbestos-cement tanks. Wooden poles, timber, or iron tubing can be used for the supports. In many countries, elevated storage tanks are manufactured, in standard sizes with all parts prefabricated. They can be transported and erected rapidly.

· In long-term relief camps, all reservoirs should be covered, primarily, for protection from sunlight and consequent growth of algae, which produce tastes in water, and secondarily; for protection from birds, insects, and dust. The roof may be made of asbestos-cement sheets or corrugated iron sheets. An overflow pipe should be provided, care being taken that the overflow water should not endanger the foundations. The inlet pipe will normally discharge at the top of the reservoir and be fitted with a float valve. The outlet pipe should be about 5 cm above the bottom of the tank. A small drain pipe should be installed flush with the bottom of the tank, and a manhole on the roof is necessary to permit cleaning, inspection and repair. The openings of vent pipes should be screened to keep out insects and small birds.

Distribution

· In most disasters, water is distributed from tankers, which may be provided by fire brigades, the army, dairies, beverage plants, or other sources. Each family may be issued with a water container, made of plastic or galvanized iron. A tanker with a storage tank (or tanks) at the site should be able to provide water for 1000 persons. Environmental health workers are responsible for seeing that the tankers are filled from acceptable sources in a hygienic manner and chlorinated under their supervision.

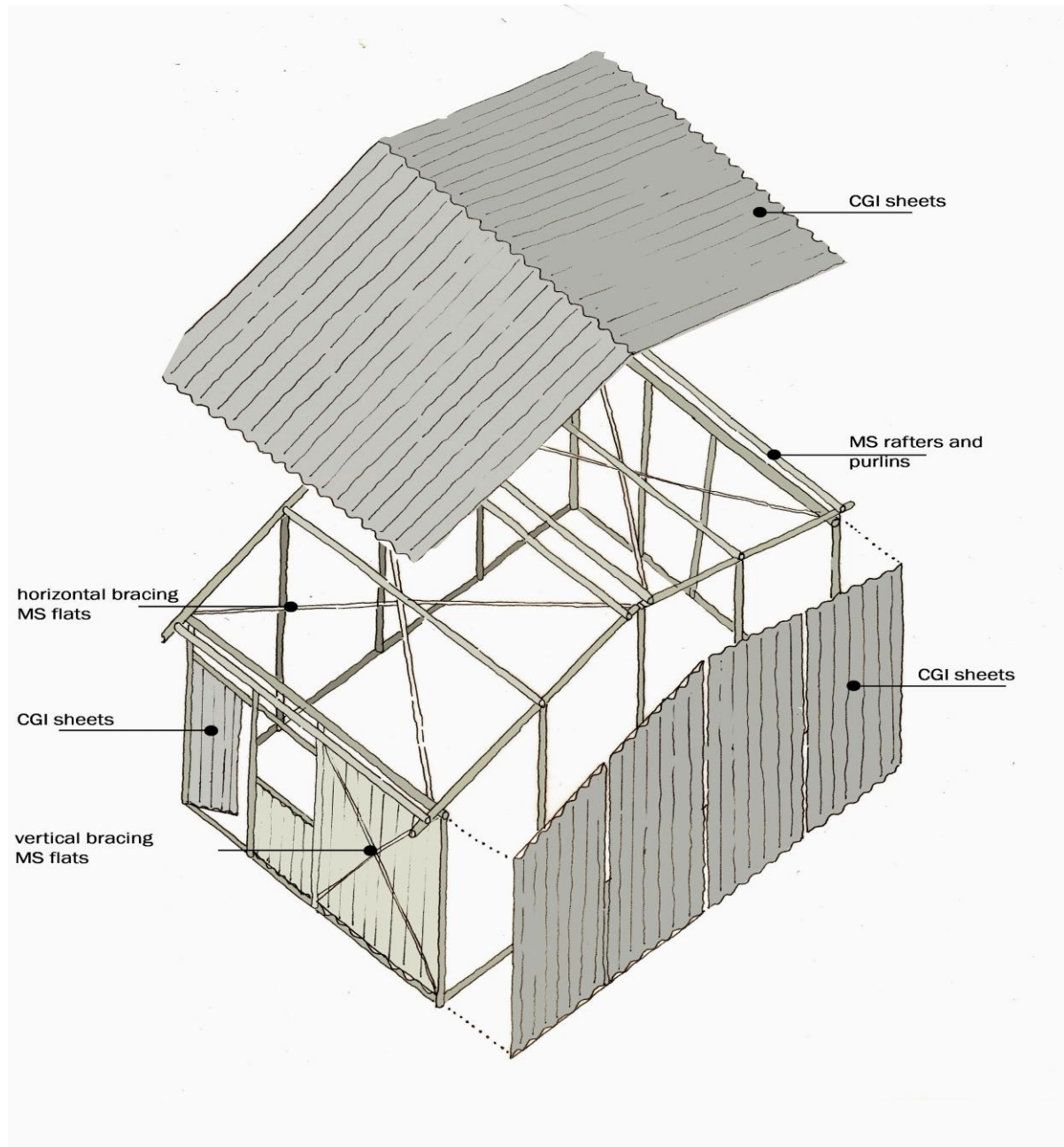
· If there is a municipal distribution system within reasonable distance, it may be possible to extend this to a temporary camp, by means of light and quick-coupling steel or plastic pipes. In long-term camps, distribution pipes may be laid to feed water points.

· Water points usually have two or more taps, and one tap should be provided for every 100 persons. No shelter should be more than 100 m away from a water point.

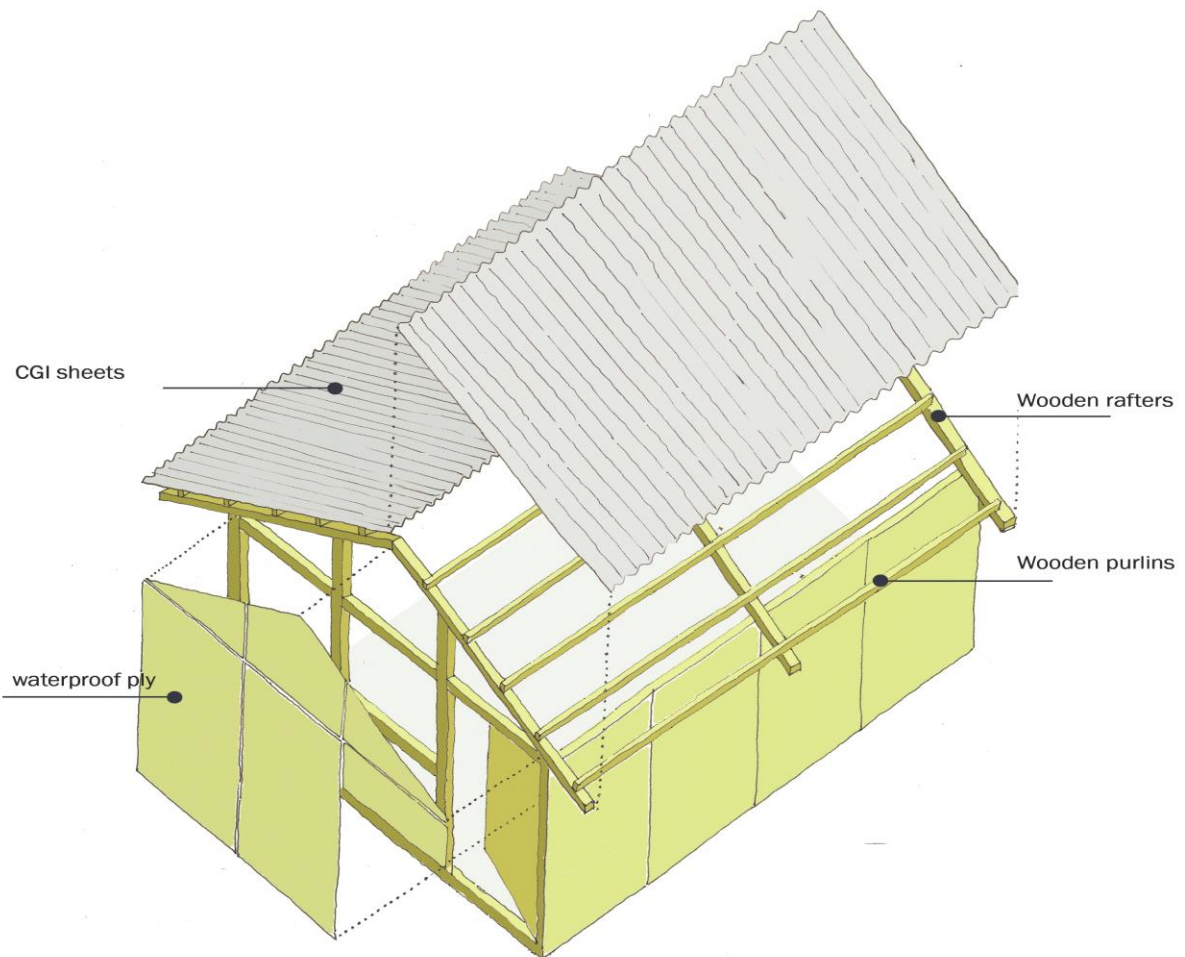
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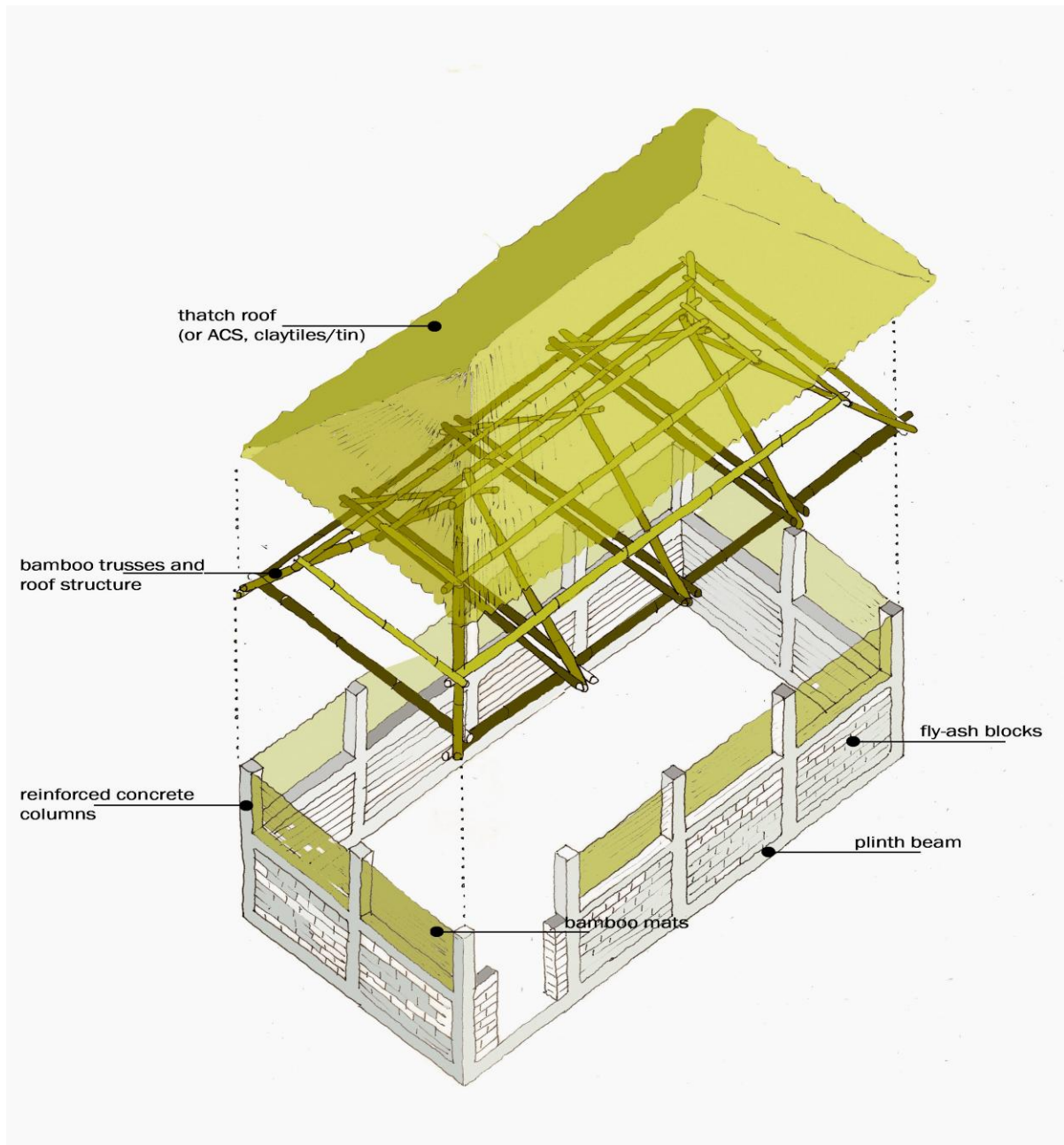
Annexure 2.83.9: Shelter Designs



The above shelter has been constructed using corrugated galvanized Iron sheets (CGI sheets) for walls and roofing. The framework is made out of Mild Steel Hollow pipes driven into the ground to a depth of two feet. Wall panels were secured from outside using J- bolts. The roof sheets were supported by Mild Steel hollow pipe rafters and purlins. Vertical bracing was provided by 30 x 4 Mild Steel Flats. The flooring was of cement. The above structures were constructed in Andaman & Nicobar islands after the 2004 Tsunami.

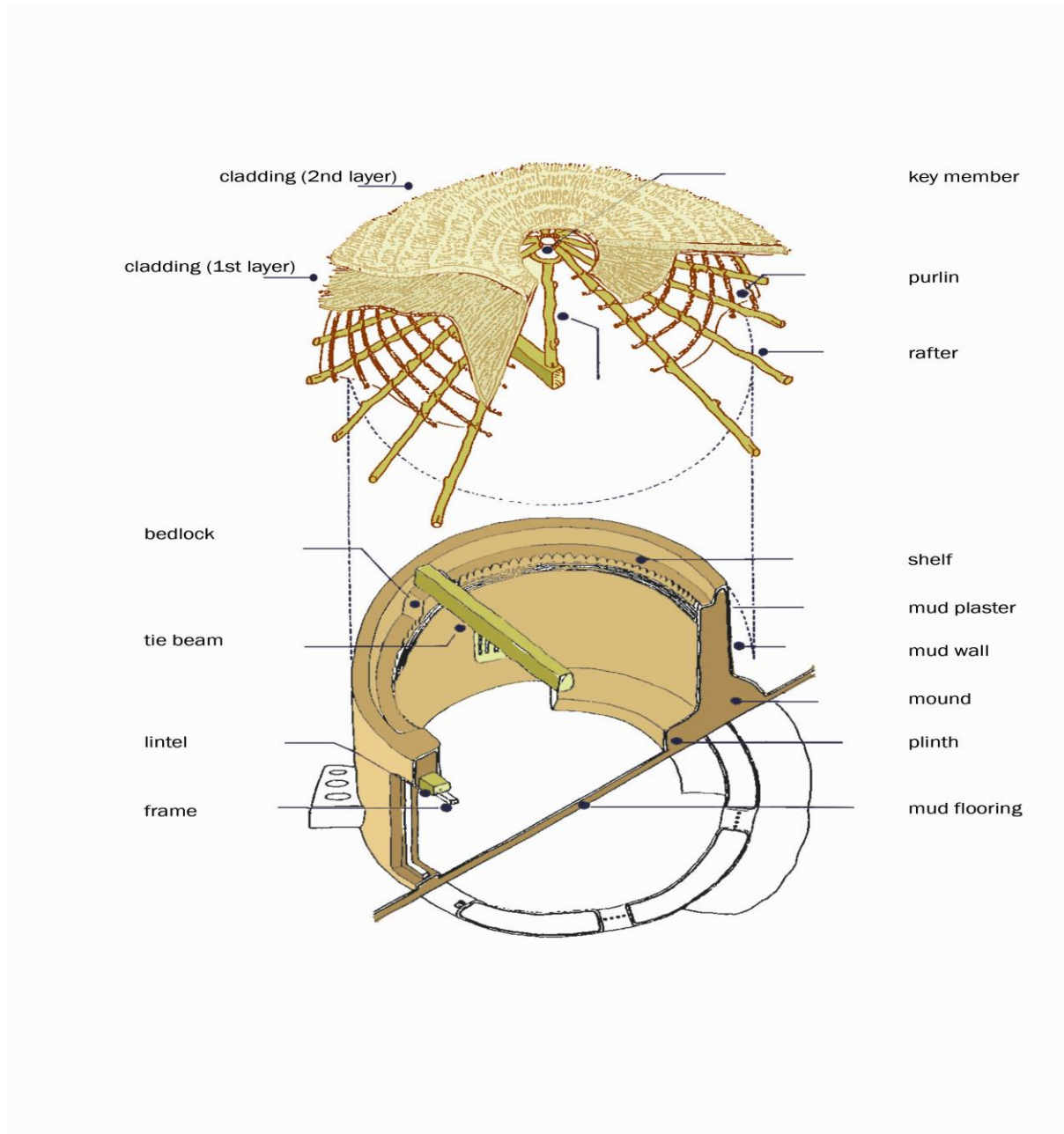


The above shelter was made out of timber frames and 12 mm thick water proof plywood walls. Bamboo mat boards can also be used in place of ply wood. The roof was made of corrugated galvanized iron sheets. The shelter was constructed in Kashmir after the 2005 earthquake.



The above structure is constructed out of fly ash blocks with roof made of bamboo frame and thatch. The shelter is constructed on a raised plinth constructed above high flood level. The foundations are constructed out of reinforced concrete stubbing made out of RCC Hume pipes filled with concrete and reinforcement.

The above shelter was constructed in Balasore after the floods.



Walls of the above shelters were made out of mud blocks stabilized with 5% cement. The roof was of rough hewn timber and thatch. The shelter was constructed on a stone plinth. Foundations were constructed from stone masonry on top of Plain Cement Concrete footing.