

# SECTION 11.14

## EARTHQUAKE

### PROCEDURES TO BE FOLLOWED IN THE EVENT THAT A SIGNIFICANT EARTHQUAKE AFFECTS LOMA LINDA UNIVERSITY

#### PREPARATION

##### Education and Training:

1. The Safety Officers oversee an education and training program to ensure that faculty and staff is equipped with the knowledge necessary to function appropriately in emergency situations. At minimum, it is expected that all faculty and staff will be able to describe or demonstrate the following:
  - Risks within the organization's environment
  - Actions to eliminate, minimize and report risks
  - Procedures to follow in the event of an incident
  - Reporting processes for common problems, failures and user errors
  - Individual roles and responsibilities for emergency management
  - Recognizing specific types of emergencies (e.g., agents of chemical or biological terrorist attack)
  - Roles and past participation in organization-wide drills
  - Obtaining supplies and equipment during emergencies
2. **New Employee Orientation:** A section of the orientation presents emergency management and earthquake preparedness. For nursing division employees, a special section adds emphasis on the role of nursing staff.
3. **Department-specific and Job-specific Orientation:** Department managers conduct training for employees on department-specific and job-specific roles and responsibilities.

##### Annual Update for All Employees:

An annual update program includes the *B.L.U.E. Book* and department in-service training. On a rotating schedule, topics include:

- the *Emergency Notification Plan*
- alternate communication methods
- obtaining supplies and equipment
- *RACE* Fire Response Plan
- extinguisher and pull-box locations
- emergency notification procedures

- evacuation procedures

### **Training:**

Each school and department conducts training at intervals determined by the particular functions of the department. Training is expected to address:

- department-specific responsibilities and procedures for emergencies
- *Emergency Operations Plan* authorities and chain of command
- individual employee's role under the *Incident Command System*
- communication procedures during emergency conditions
- providing services under adverse and austere conditions
- information and skills required to perform duties during emergencies.
- Initiation of area specific evacuation procedures.
- Deployment of Zone based disaster caches.
- Disaster cache location and function.

### **Emergency Drills and Exercises:**

1. Quarterly disaster drills are conducted each year.
  - Test the organization's ability to respond to emergency situations, maintain operability, and reestablish normal operations.
  - One of the drills each year involves participation with external agencies and local area hospitals.
  - Community-wide activities exercise and assess communication, coordination, and interoperability among the command structures of community agencies and organizations.
  - Drills are designed to challenge system capabilities, involving multiple LLU departments, and at least once each year, provide an influx of volunteer "victims" sufficient to overwhelm the routine operation of the facility.
  - At least one of the emergency response exercises includes an escalating event in which the local community is unable to support LLU operations.
  - Participation in the California Great Shakeout earthquake readiness and response drill.
2. Persons expected to serve in ICS functions train by observing another individual performing in their designated position during a disaster drill.

## **MITIGATION**

### **Hazard Vulnerability Analysis (HVA):**

1. A Hazard Vulnerability Analysis (HVA) is performed annually to update the priorities assigned to emergency incidents for use in emergency planning.

2. Initial hazard vulnerability assessment undertaken in 2014 indicated that the greatest risk of disruptive damage to LLU would be due to a significant seismic event.
3. Seismic risk values associated with Maximum Credible Event (MCE) and Maximum Probable Event (MPE) are used to prioritize mitigation activities in:
  - Structural Hazard Mitigation
  - Non-structural Hazard Mitigation
  - Hazardous Materials Mitigation
  - Utilities Systems Protection
  - Research Equipment Protection.

### **Non structural Mitigation**

1. Mitigation options:
  - modify or anchor to protect the existing component;
  - abandon the component, remove it and eliminate the function;
  - replace existing components with newer, seismically stable components;
  - relocate the component.

### **Hazardous Materials Mitigation**

The Office of Environmental Health & Safety is responsible to implement processes and procedures to reduce the incidence and severity of hazardous materials incidents. These processes include:

- Requirements for storage, handling and disposal of hazardous materials.
- Environmental audits
- Chemical monitoring
- Laboratory surveys
- Training
- Personal Protective Equipment

### **Utility Systems Protection**

Campus Engineering and Power Plant are responsible to implement provisions to reduce the likelihood and severity of disruptions in utility service, including:

- Electrical Distribution;
- Emergency Power;
- H.V.A.C. Systems;
- Plumbing and Water Delivery System;

- Medical Gas Systems (LLUSCD);
- Medical Vacuum Systems (LLUSCD);
- Communication Systems.

### **Critical Supplies and Services**

Departments responsible for essential supplies are also responsible for the following duties:

- Developing and maintaining lists of supplies critical to LLU operations;
- Maintaining plans for obtaining these supplies during time of disaster;
- Establishing agreements with vendors to guarantee availability and delivery of essential supplies during emergencies.
- Communicating plans to the Administrator or to the Incident Command System Logistics Section Chief and the Supply Branch Director during any disaster situation.

### **LLU Research Integrity:**

Departments with critical research data and specimens are responsible to ensure basic controls and policies are in place to protect their research. This will include but not be limited to:

- Facilities
- Maintenance and Testing
- Inventory
- Redundancy
- Records Management

### **LLU Zone Based Disaster Caches:**

Response teams deploy the equipment housed in the zones to support students and staff following a large seismic event. The first two zones out of a total of nine in development will be operational in 2016.

### **Other Disaster Caches:**

Schools, residence halls, and Drayson Center have water/disaster caches that can be deployed when disaster or emergent events dictate the need.

Under extreme disaster circumstances, the food and supply inventory in the Loma Linda Market is at the exclusive disposal of Loma Linda University Health per an emergency use agreement signed by LLUH leadership and Loma Linda Market proprietorship.

## **RESPONSE**

### **During The Earthquake:**

**DUCK, COVER, HOLD:** Take refuge under desks, tables, in corners of rooms. Kneel down, cover your head.

## **All Personnel**

- **Remain Calm:** Think about your actions. Do not abandon responsibilities. Do not run.
- **If indoors, stay there:** Avoid windows, mirrors, light fixtures; large cabinets, furniture or equipment which might topple.
- **Do not evacuate:** Wait until the shaking subsides to attempt any evacuation.
- **If outdoors, stay in the open:** Move away from overhanging structures, utility wires.
- **Stay in your car:** In an automobile, stop in a safe place away from utility lines and trees.

## **After The Earthquake: All Personnel**

1. **Account for all persons** in your area at the time of the earthquake. Check closets, work areas, restrooms.
2. **Check for injuries**, persons needing assistance.
3. **Assess damage:** broken glass, building collapse, damaged equipment, utilities disruption.
4. **Check for hazards:** fire, hazardous materials, blocked exits.
5. **Report any urgent conditions** to Security Control Center, ext.911, if telephones are operating.
6. **In case of fire:** Implement the R.A.C.E. fire plan.
7. **Do not use phones** or FAX machines except to report emergencies.
8. **Avoid identified hazards:** exposed wires, broken glass, collapsed walls, ceilings or stairs, hazardous materials.
9. **No open flames:** Do not use matches, candles or other flames.
10. **Do not use elevators** until notified that they are in service.
11. **If evacuation** is required, follow your evacuation plan, assemble at the relocation point, account for all personnel, and prepare to continue your function or to receive assignment to support other functions. Stay clear of an evacuated building until it is safe to return.
12. **Clean up:** As soon as it is safe, clean up spilled materials, glass, other debris.
13. **Stay clear** of fire lanes, hydrants and other emergency access routes.
14. **Stay away** from the Unified Command Center unless you have official business there.
15. **Assist** emergency response crews as requested or assigned.
16. **Be prepared** for possible aftershocks.

## **After The Earthquake:**

- Security Control Center**
1. Receive reports of persons needing assistance, immediate damage assessment, facility and systems status.

2. Notify, as indicated:
  - Emergency response agencies
  - Campus Engineering
  - Office of Environmental Health & Safety
  - Office of Radiation Safety
  - Emergency Management Specialist
  - LLU Deans
  - Administration

**After The Earthquake: Administration**

1. Obtain damage assessment information.
2. If the situation indicates:
  - Assume command.
  - Declare a Disaster Condition, in consultation with the Emergency Management Specialist.
  - Assume or assign the role of Incident Commander.
  - Implement the Incident Command System.
  - Activate the Unified Command Center.
3. Ensure that necessary response and recovery actions are implemented and carried through to completion.

**After The Earthquake: Support Services**

1. Deploy damage assessment teams, with personnel from the critical facility support services.
2. Report initial damage assessment to the Emergency Management Specialist, to the Administrator in charge, or to the Unified Command Center.
3. Respond to urgent requests for assistance.
4. Provide support for search and rescue, and recovery operations.
5. Restore critical services as soon as possible.

**After The Earthquake: Student Services**

1. Inform students where to go for water, shelter, first aid, and where to report to assist disaster recovery operations. Student shelter locations include but are not limited to:
  - *Drayson Center gym* if found to be structurally sound. If not structurally sound, Drayson Center Super field once the area is deemed safe from hazards including any nearby train derailments.
  - *Centennial Complex* if found to be structurally sound. If not structurally sound, Lot X north of Centennial

Complex, once the area is deemed safe from hazards including any nearby train derailments.

- *Campus Street Parking Structure* which is located west of Campus st. adjacent to School of Nursing if found to be structurally sound.
- *Zone Based Disaster Caches (ZBDC)* will have quick deploy shelters available to students and staff. The first two of these nine total zones will be in service Q2 of 2016 and will be located near Centennial Complex and West Hall. Trained ZBDC response team members will deploy shelters, water, first aid supplies, and light search and rescue equipment near these buildings.

## RECOVERY

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| <b>General Responsibility</b>       | Responsibility for implementing recovery processes is shared by the President, the Executive Vice President of Finance, the Executive Vice President of Student Services, and the Senior Vice President, Risk Management.  |
| <b>Facilities Recovery</b>          | Responsibilities and procedures for facilities recovery operations are detailed in <i>Section 6.2</i> of this Plan.  |
| <b>Business Restoration</b>         | <ol style="list-style-type: none"><li>1. Refer to detailed contingency plans and procedures for each of the mission-critical functions, found in <i>Section 12.2</i> of this plan.</li><li>2. Determine staffing needs.</li><li>3. Make temporary layoffs as needed.</li><li>4. Document staff, hours worked, work performed, for support staff.</li><li>5. Post relocation addresses and phone numbers of alternate sites, as appropriate.</li><li>6. Arrange for short-term financing.</li><li>7. Notify suppliers of the university's payment plans.</li><li>8. In coordination through the UCC, notify suppliers of critical items needed.</li></ol> |
| <b>Public Relations Recovery</b>    | <ol style="list-style-type: none"><li>1. Coordinate with the Incident Commander according to the Community and Agency Liaison Plan (Section 7.3) whenever the Unified Command Center is in operation.</li><li>2. Inform the public about the status of LLU facilities.</li></ol>   |
| <b>Strategic/financial Recovery</b> | <ol style="list-style-type: none"><li>1. Evaluate cost-effective options available for recovery of <i>strategically important function</i>, rather than recovery of the <i>facility</i>.</li><li>2. Determine types of financing available for recovery assistance and the documentation required. Assess availability of FEMA, OES and SBA recovery funds.</li></ol>  |

3. Submit required applications as soon as possible.
4. Re-evaluate periodically each restoration proposal, weighing its strategic value (not whether it addresses a historically important function) against availability of resources.