SECTION 1
ADMINISTRATOR

OBJECTIVE

To provide an overview of earthquake preparedness issues, responsibilities and the planning process.

Earthquakes are an unfortunate fact of life in the New Madrid Earthquake Zone. Scientists estimate that there is now at least a 50% probability of another magnitude 6.5R or above earthquake striking the New Madrid Area in the next 15 years. Furthermore, earthquakes of less than 6.5R could happen in the New Madrid Area at any time and at any place.

"The earthquake (October 17th, 1989) was probably the single most significant event in my 30 years with the Pajaro Valley School District, in that I think it will be some time before people recover from the full impact of the quake. We can repair buildings, we can fix the light fixtures, we can take care of the painting, we can repair the cracks and take care of plumbing and gas leaks, but the emotional trauma as a result of the quake to me is almost as significant as the damage to the buildings."

James Baker, Superintendent (retired)
Pajaro Valley Unified School District, Watsonville, CA

As a school administrator you have the responsibility for ensuring the safety of your students in an earthquake. Developing earthquake emergency procedures is required by law. This information has been compiled to help you and your staff develop such a plan. Should you already have a plan or parts of a plan, you may wish to use only portions of this information. Check what you have already developed against the recommendations made here.
"I think we have been very successful in our planning because of the commitment of the Board."

Dorothy Kakimoto
Director of District Operations
Oakland Public Schools

KEEP IN MIND

➢ In most schools you are the single most important factor in the successful development of an earthquake preparedness plan.

Your support and commitment are critical to securing the involvement of your staff.

The planning process should be thought of as just that--a process. Think incrementally, divide your planning into manageable steps, decide what is most critical for your situation and focus on those steps first. Don't expect the plan to fall into place all at once.

At an absolute minimum each school should:

  develop communications capability with buses while enroute.

  be sure students and staff know what to do in an earthquake.

  have an established release policy that has been communicated to all parents and staff.

  have the ability to communicate to the district and/or the jurisdiction's emergency response agencies in the event the phone system is not working.
identify and eliminate those nonstructural hazards that represent the most serious threat to life safety.

provide training to students and staff so that they are familiar with the school's earthquake plan.

be sure bus drivers know what to do if the earthquake occurs while children are enroute.

make provisions for special needs students.

"I think that in our case for the past ten years we've been preparing for an earthquake such as the one we had on October 17th. If it had happened during school time (fortunately this one did not), I'm sure there would have been a whole different set of outcomes. You can't predict when it's going to be, so I think you've got to plan for the eventuality that the quake is going to hit when school is in session and that you're going to have the responsibility for 500 students, if that's what you have in your school, or for 20,000 students if that's what you have in your school district, and you're going to have to do all that you can to get ready for that.

James Baker, Superintendent (retired)
Pajaro Valley Unified School District Watsonville, CA
ACTIVITIES

1. Using the material in *What the Law Requires*, briefly review your legal requirements. Is your school currently in compliance with the law?

2. Review the *School Administrator's checklist* to determine what has/has not been addressed by your school's general operating procedures or specific disaster planning efforts. This will help you determine where you want to supplement or revise your planning effort.

3. **Review Summary of the Earthquake Planning Process** to identify plan components, organization and suggested planning approach. In light of your priorities and where you want to focus your effort, decide which components you want to address first. Set up a time table for when you will address each component.

4. To begin the planning process at your school, set up a Planning Committee. This committee can either set up teams (perhaps using the suggested list in the *Summary of the Earthquake Planning Process*) or address responsibilities for each of the teams.

5. Use **Suggested Training Needs by Team** as a guide to structure a training program. Provide training at the time responsibilities are assigned, as well as on an on-going basis.
"The district, in terms of the Administrators and the Board, needs to commit to the notion of disaster preparedness, which means making tough decisions and dealing with conflicting priorities. Site preparation needs to be a high priority."

Micheal Chambers, AIA
State Department of Education
WHAT THE LAW REQUIRES

I. Earthquake Preparedness

In 1989 the state legislature passed ACT 247, sponsored by Representative Owen Miller, that established a state Earthquake Preparedness Program with the purpose of charging the Office of Emergency Services, Earthquake Preparedness Program, with the responsibility of carrying out the Earthquake Preparedness Program requiring the full cooperation of all other state and local government agencies, departments, offices and personnel and requiring that all earthquake mitigation, preparedness, response and recovery related functions of Arkansas be coordinated to the maximum extent with comparable functions of the Federal government including its various departments and agencies with other states and localities, and with private agencies of every type, to the end that the most effective earthquake mitigation, preparation, response and recovery capabilities may be accomplished.

"We found alot of new people there. And actually they were commuters who were trapped between road closures ... Those people were looking for a place of safety so they came here ... Within about an hour we had maybe 200 commuters and local residents whose houses were destroyed... So that night we probably had 200 commuters, probably 50 children and maybe another 50 adults that we housed. And most of them were in cars or out on the turf with absolutely no sleeping bags or anything like that."

Kenneth Simpkins, Superintendent
Loma Prieta Joint Elementary School Dist., Los Gatos, CA
II. The Damage Assessment Process

It is apparent that school districts will have a great deal of difficulty in evaluating damage assessment of their school buildings. Such an ability is very important in determining whether or not a school structure is safe to have students, faculty, and staff re-enter after an earthquake, especially in view of the after shock potential in the New Madrid Fault. Each district is encouraged to pre-arrange post earthquake evaluation services with a local structural engineer if one is available.

(See Appendix I - Post-Earthquake Damage Evaluation.)

"In thinking about our preparedness (on October 17, 1989) I think that we missed the boat totally because we had no idea whether the buildings were structurally safe to reoccupy, and we had no checklists to make that determination."

Kenneth Simpkins, Superintendent Loma Prieta Joint Elementary School Dist. Las Gatos, CA

III. State Department of Education

On May 26, 1989 quoting ACT 247 of 1989 the Director of the Department of Education in the Director's Regulatory Memo No. 89-18 emphasized the Department's responsibilities in providing "full cooperation in the order that the most effective earthquake mitigation, preparation, response, and recovery capabilities may be accomplished."
During 1992 the Governor's Task Force on Student Discipline and Safety strongly recommended that "the Arkansas Department of Education. develop guidelines for earthquake safety in schools."

Dan Lovelady, Coordinator, School Plant Services, Department of Education is in charge of coordinating these guidelines and can be reached at (501) 682-4261, FAX (501) 682-4466.
SCHOOL ADMINISTRATORS EARTHQUAKE SAFETY CHECKLIST

(Marked in parentheses are the Section(s) which address the issue.)

PREPAREDNESS AND MITIGATION

Does your school have a disaster plan, and is your staff aware of the roles and responsibilities under the plan? Do they realize that they are responsible for the students during and after the emergency, which could mean 72 hours or possibly longer? (Addressed in Sections I and 3)

"The district's management of the earthquake (October 17, 1989) was, on a scale of 100, with 100 being perfect, a 50 or a 60. This was because of the communications problems, the (dead) batteries, the excitement. You just can't plan for every eventuality and have to be ready to adjust and to think or try to anticipate right after the earthquake of some of the necessities."

James Bakers, Superintendent (retired)
Pajaro Valley Unified School District
Watsonville, CA

Does your staff know the location of the main gas, electricity, and water shut-off valves?
Who has been trained to check for damage and turn
them off if the need arises?
(addressed in Sections 3 and 6)

Have you made a list and a map of the location and availability of First Aid and other emergency supplies?
(Addressed in Sections I and 5)

What nonstructural hazard mitigation measures have been completed at your school:
(Addressed in Section 4 and Appendix 2)

Have bookshelves, file cabinets and free-standing cupboards been bolted to the wall or arranged to support each other?

Have heavy items been removed from the tops of bookshelves and cupboards?

Have the windows in the classrooms and other campus buildings been equipped with safety glass or covered with protective film?

"Nonstructural components and building contents were important sources of injury (in the Coalinga earthquake). Many of the injuries could have been avoided, either by modifying the physical setting or by providing better public information on appropriate behavior both during earthquake shaking and following the event."

Kathleen Tierney
Report on the Coalinga Earthquake, September 1985
Are the partitions, ceilings, overhead lights, and air ducts secured to the structure of the buildings?

Have inventories been made of hazardous chemicals in areas such as the science building and maintenance shops? Has anyone been appointed to check on these chemicals after an earthquake?

Have you conducted an inventory of the kinds of skills or needs of your staff?
Have you conducted training in first aid, damage assessment and fire suppression?
(Addressed in Sections 1 and 6)

Does the school have any arrangements with structural engineers who will report to the school directly after a disaster to determine the damage and the need to evacuate?
Do you know how to report your damage to the School District Office?
(Addressed in Sections 1 and 3)

"If you happen to have school construction going on, or major contractors in your area you might keep (them in mind to help you with your repairs) or (make it ) as part of your plan, because our crews could not handle the damage and the repairs that were necessary. It was all that they could do to help us do the inspection of the facilities and report what was damaged and what needed to be repaired. "

James Baker, Superintendent (retired)
Pajaro Valley Unified School District
Watsonville. CA
Do you know whether or not your school has been designated as a potential mass care shelter?  
(Addressed in Section 3)

Does your school have a back-up communications system such as a CB radio, ham operator, or two-way radio to communicate with your local emergency operations center? Who is trained to use this equipment?  
(Addressed in Sections 5 and 6)

Does your school have an internal communication system such as walkie talkies, megaphones? Can bus drivers communicate to the school in the event the earthquake occurs while students are enroute?  
(Addressed in Section 5)

Is there an earthquake preparedness program in your curriculum?  
(Addressed in Section 2)

Are there any programs established between the school and parent groups which discuss the school's policies regarding student release and retention and the development of an emergency plan for the home?  
(Addressed in Section 1)

How and where are you storing vital data and records? Do you have duplicate copies of important data stored in an off-site location?  
(Addressed in Section 1)
Have earthquake preparedness and response provisions been included for considerations for special needs students?  
(Addressed in Sections 3 and Appendix 3)

"With something as large as earthquake preparedness, we need to work with the city government and the community at large. Parent participation is particularly critical to the success of any plan."

Patricia Monson  
Member, Board of Directors  
Oakland Public Schools

EMERGENCY RESPONSE

Has a central "command post" or other central planning area been identified, with maps of the campus, facilities and hazards in the area, an enrollment sheet for the current year, First Aid supplies, and other tools necessary to manage the emergency response activities after a disaster?  
(Addressed in Sections 3 and 5)

Do the teachers have basic operating procedures to follow such as:  

Knowing how to implement the basic "duck and cover" action when an earthquake begins?  
(Addressed in Section 6)

Having an emergency kit near the desk which contains an attendance sheet, special medical information, and student release information?  
(Addressed in Section 5)
SECTION 1

When to evacuate, and when to remain in the classroom after an earthquake?
(Addressed in Sections 3 and 6)

Knowing how to determine the most seriously injured (triage), to administer first aid and to comfort those who are frightened or hysterical?
(Addressed in Sections 3 and 6)

Working in a "buddy system" with another teacher and class so that if one teacher is injured, the other will take care of the students and get them to safety?

If some students are seriously injured and an evacuation is ordered, what you will do with the injured?
(Addressed in Section 3)

Does your school have established check-out procedures to be taken before a student is released to an adult?
(Addressed in Section I and 3)

What are your immediate damage assessment procedures?
(Addressed in Sections I and 3)

Have you developed emergency sanitation procedures?
(Addressed in Sections 3 and 5)

Has a spokesperson been appointed to serve as liaison with the press after a disaster?
(Addressed in Section 3)
Have personnel been assigned to assist mobility impaired students during response?
(Addressed in Section 3 and Appendix 3)

Have you identified personnel who can translate information, to non-English speaking parents?
(Addressed in Section 3)

Have you identified an evacuation site? Is there and alternate location if you cannot use your initial site?
(Addressed in Section 3)

**RECOVERY**

The following items are district-level responsibilities. An individual school site might want to check with its district to determine the procedures that will be followed.

Identify recordkeeping requirements and sources of financial aid for disaster relief.

Establish absentee policies for teachers/students after a disaster.

Establish an agreement with mental health organizations to provide counseling to students and their families after the disaster.

Establish alternative teaching methods for students unable to return immediately to classes: correspondence classes, tele-group tutoring, etc.

Develop a plan for conducting classes if some of your facilities are damaged--half-day sessions, alternative sites, portable classrooms.
SUMMARY OF THE EARTHQUAKE PLANNING PROCESS

While the steps in this process are not necessarily consecutive, it is useful to think of the process as containing separate components. Each component can be tackled when you are ready, and as you address and complete a component you will have a sense of accomplishment. (The basic components correspond to the sections in this set of training materials.)

The planning process encompasses actions taken before, during and after an earthquake; it is not simply a matter of thinking about what you will do in the event of an earthquake. Actions taken before an earthquake can change how you behave in an earthquake, and actions taken beforehand can also affect how well you will be able to function after an earthquake. By identifying and removing certain obvious hazards in your classrooms, for example, you will be able to greatly reduce the possibility of injury.

By practicing what to do during an earthquake, you will increase the confidence of students and staff that earthquakes are survivable, manageable events. Thinking about how you can provide instruction after a damaging earthquake or how you will handle your students' psychological problems will help insure the continued regular functioning of your school.
"When school did start on Tuesday (after the earthquake), we were prepared to spend a part of a day or a better part of a day or all day if necessary in talking about the earthquake, what their experiences were, letting students express what happened either on paper, or in groups, act out, anything we could do to bring out those emotional issues ... In one school 20% of the homes in the school attendance area were damaged beyond use and some of them had burned down, so everyone had something to share."

James Baker, Superintendent(retired)
Pajaro Valley Unified School District
Watsonville, CA

There are several basic elements to this process which are important to understand before you begin the planning:

**This is a group process.** You as an individual will not be able to develop and implement a plan for your school. The group process enables you to share information among colleagues, gain support for the planning process and in fact generate excitement and interest for what you all may learn.

**Everyone will have responsibilities based on his/her job at the school.** Instructional staff, for example, will be expected to maintain control of their classrooms, account for their students, direct their classroom drills and evacuation, etc. Administrators will be responsible for making school-wide decisions (the need for evacuation, the need to close the campus, communication of the plan to parents).

**In addition, there are certain responsibilities that are related to the emergency** that are specifically related to one's job--search and rescue and site security, for example. Thus some staff will have to be freed of
classroom or office assignments so that they can fulfill particular emergency responsibilities. The following page summarizes the teams needed, and who might be on them.

Training is an important part of the planning process. It helps staff become familiar with their responsibilities. In addition, it is critical for new staff who may not have been around at the time of the development of the plan.

"After this last earthquake (October 17, 1989), The District recognized the need for preparation, including more in-service training for every level of staff--administrators, custodians, site principals, teachers, classified staff."

Patricia Monson  
Member, Board of Directors  
Oakland Public Schools
SUGGESTED TEAMS/RESPONSIBILITIES FOR EARTHQUAKE PLANNING

This list suggests ways that you can apportion various emergency responsibilities to your staff. Everyone will have some responsibilities based on his/her job, and some people will have additional emergency responsibilities. See Section 3 for checklists of suggested actions for each of these teams before, during and after an earthquake.

The Planning Committee

This team can be composed of staff and/or parents. Interested individuals who have the time to participate will be most effective. People on this committee do not necessarily have responsibilities at the school at the time of an earthquake -- rather, this committee is responsible for insuring that the planning takes place and that someone is responsible for each of the major issues identified. This committee drives the planning process, and will also want to observe drills and oversee training.

Responsibilities by Job Position

School Principal/Administrator

This team would also include office staff, who would function as support to school administrators.

Instructional Staff

This team would include teachers, as well as aides.
SECTION 1

Maintenance Staff

This team would include custodial, buildings, and grounds and food workers.

Emergency Response Teams

(May not usually be part of school staff's responsibility. In order to have two or three staff members participate on these teams, they will have to be freed from their usual staff responsibilities.)

Emergency Operations Center -- principal or administrator and two or three others.

(This center will be put into operation after an earthquake. Most or all members of the Coordinating Committee will report here.)

First Aid Team -- school nurse and two others (preferably with first aid and CPR training).

- Make sure that first aid supplies are up to date and always complete.
- Keep emergency cards (list of medical resources in area) and health cards (for each employee and pupil) up to date.
- Make sure training of staff expected to administer first aid is up to-date.
- Be aware of special needs students' medical requirements and ensure that they are provided extra medication while at school or enroute.
Search and Rescue Teams -- three teams of two or three people,

- Make sure needed supplies (crowbar, hard hat, etc.) are on site.
- Make sure team members stay current with their training.

Site Security Team -- an administrator and two others.

- Work with Coordinating Committee to establish a release policy and communicate this policy to parents and staff. Develop procedures for how release will be handled with non-English speaking parents.

Fire Safety Team -- two teams of two or three people.

- Make sure fire fighting equipment (extinguishers, etc.) is in working order and that staff has received training in its use.

Evacuation Team -- an administrator and three others.

- Keep plans for designated emergency assembly area current.
- Make sure that necessary supplies are accessible.

Maintenance Team--custodians and food workers.

- Assist the Coordinating Committee in the identification of nonstructural hazards.
- With direction from the Coordinating Committee, assist in the reduction of non-structural hazards.
- Maintain inventory of food supplies. Include special needs students dietary requirements (i.e., Diabetics).
Communications Team -- three teams of two or three people.

- Assist the Coordinating Committee in identifying back-up communication capability within school campus organization and between campus and local officials.
- Assist in communicating school emergency procedures and policies to parents of students.
- Coordinate communications backup requirements with local ham radio, Citizen Band and/or runners.
- Develop communications backup for buses to ensure communication can be maintained while children are enroute.

SUGGESTED TRAINING NEEDS BY TEAM

To help people meet their responsibilities in an earthquake, it is useful to provide training that goes beyond a hand-out at a staff meeting. The suggestions here include the basic concepts that each team or staff person might be expected to understand, as well as possible sources of more in-depth training and information.

Planning Committee

a) Familiarity with the earthquake threat and damage potential.
b) Understanding of components in emergency planning process.

Materials and/or training available from Federal Emergency Management Agency, local Education Cooperatives, police, fire, and offices of emergency services.
**SECTION 1**

**Principal / Administrator**

a) Understanding of emergency situation coordination.
b) Familiarity with emergency communications capabilities.


**Teacher / Aide**

a) Familiarity with what happens in an earthquake and the sorts of damages that result.
b) Understanding of children's responses to disaster situations and knowledge of the recommended ways for coping with their distress.
c) Arranging for support considerations for special needs students.

Information available from local offices of emergency services, Federal Emergency Management Agency, Education Cooperatives, Red Cross, and county or school district mental health professionals.

**Maintenance Staff**

a) Familiarity with nonstructural hazard identification and reduction.
b) Familiarity with when and how to turn off utilities.
c) Understanding of techniques for food and water storage and distribution.
d) Knowledge of emergency sanitation provisions

Training and/or advice available from Federal Emergency Management Agency, Education Cooperatives, local offices of emergency services, and Red Cross.
First Aid

a) Familiarity with principles and techniques of first aid and cardiopulmonary resuscitation.
b) Understanding of principles of triage.

Training available from the Red Cross.

Search and Rescue Team

a) Knowledge of systematic procedures for sweeping the building and locating victims.
b) Mastery of victim extrication techniques.

Training and/or advice available from local fire department.

Site Security Team

a) Understanding of damage potential and emergency situation coordination.
b) Knowledge of communications procedures.

Local first responder agencies can give advice, as ban local offices of emergency services.

Fire Safety Team

a) Knowledge of operation of different types of fire extinguishers.
b) Familiarity with when and how to turn off utilities.
c) Understanding of principles of fire safety, including techniques for extinguishing various kinds of fires.

Local fire department and/or office of emergency services can train.
Evacuation Team

a) Understanding of techniques for quick damage assessment.
b) Familiarity with procedures for crowd control.
c) Be prepared to assist mobility impaired students.

Training and/or advice is available from local offices of emergency services.

Communications Team

a) Knowledge of communications techniques.
b) Knowledge of local communications organizations.