

CHAPTER 1
GETTING THE WORD OUT
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Information, the Difference between Life and Death

The next great earthquake on the Hayward Fault will directly affect every person in Berkeley. Friends will be injured or killed, homes and offices will be destroyed, businesses will be forced to discontinue operation, and much of the city will be in confusion and shambles. The extent of the negative impacts resulting from an earthquake will be in part a function of the amount of preparation local governments and individuals undertake. The quality and quantity of preparation will depend on how seriously people view the seismic safety problem. A 1976 survey of residents along the San Andreas Fault in Daly City found that 61% of the people surveyed would take no action in the event an earthquake was predicted within one year, and 38% would take no action given a week's warning.⁸ In addition, 39% were unsure as to what to do during an earthquake and did not even know the basic survival techniques such as getting under heavy furniture. Local governments had been relatively ineffective in distributing earthquake information for only 28% of the people had received any information directly from municipalities.

People's apathy, which is demonstrated in the low financial priority given to seismic safety by local governments, is also reflected in Berkeley. Berkeley has no program for reducing or eliminating the dangers posed by old hazardous structures, or by newer structures that may not be sufficiently earthquake resistant. Berkeley also lacks an effective distribution system for seismic hazards mitigation information. The result for Berkeley is a dangerous situation where a serious safety problem exists without the means to let people know how to protect themselves.

A major misconception of both politicians and citizens is that the only way to reduce death and damage during an earthquake is to spend great amounts of money. This is not true. Contrary to popular belief, simple low-cost preparations and awareness of potential hazards can significantly reduce damage and injury in Berkeley. Running in a panic out of a tile-roofed building could produce scores of injuries where none might have occurred if people had stayed inside the building. Turning off gas lines after an earthquake can prevent fires, which caused about 80% of the damage in the 1906 earthquake.⁵ Removing heavy objects such as stereo speakers from above a desk or bed will also help. Knowing simple first aid and getting under doorways, heavy furniture, or against interior walls are a few more elementary facts that can prevent much pain and suffering when the earthquake occurs.

No expensive bureaucracy or large fiscal allocation is necessary to compile and print the above information, which is already available through the University of California, the State Office of Emergency Services, the Red Cross, the Association of Bay Area Governments, and other local and regional agencies. What is needed is for people to realize that the extent of earthquake death and damage is not a fixed quantity, but is in large part dependent on preparation. Until people realize that preparation can substantially reduce seismic danger and be cost effective, little work to promote seismic safety will occur. Thus the existing difficulties in promoting seismic safety in Berkeley lie with current mechanisms for distributing earthquake information and the willingness of people to accept the responsibility of being informed.

Seismic Safety, the Struggle to Be Put on the Agenda

The issue of seismic safety must compete with severe problems in housing, transportation, unemployment, crime, and education for the citizen's time, interest, and money. City leaders are confronted daily with choices on how to allocate staff time and the public's money, and must set up their own triage system to deal with these choices. Programs that will survive without support, programs that seem useless, and programs that will die despite a fiscal allocation are all given very little money. Status quo programs and high interest, high need programs usually receive the greatest support. Seismic safety is rarely discussed, does not generate much interest, and hence gets little support.

Before city leaders can make responsible choices, they must have sufficient understanding of issues and know which segments of the population will benefit from their decisions. Seismic safety, unlike other issues such as traffic control, park maintenance, downtown development, and youth unemployment, does not have a well established constituency to provide information, develop arguments, or supply votes, and consequently is rarely discussed or acted upon. This attitude may seem irresponsible, but in a short-term political world the public officials are not so much negligent as astute in anticipating that citizens will not blame them for an act of God.⁶

Citizens, like public officials, are also concerned with many immediate problems. Double digit inflation and the effects of Proposition 13 on city services have provoked many people to become politically active. Nuclear power, women's rights, rent control, neighborhood preservation, and the gas crisis have also captured people's interest. Seismic safety is not a pressing problem with clearly evident short-run benefits. Spending a few hundred dollars to bolt a home to its foundation, or installing an automatic gas switch-off valve becomes an expensive luxury when alternative needs, such as paying the phone bill or putting food on the table, are considered. Whatever a person's reasons for ignoring seismic safety, whether it be financial or lack of interest, more earthquake information can help people make more responsible seismic safety decisions.

A problem common to both public officials and the general public that further limits dialogue about seismic safety is an orientation towards short-run problems and solutions. Earthquake planning requires a look to potential problems that might arise far in the future. Large earthquakes occur very infrequently. It has been 73 years since the 1906 San Francisco earthquake, and people do not have a "gut level" understanding of what kind of devastation an earthquake can cause. Without that "gut level" feeling it is unlikely that people will put out scarce dollars to reduce seismic hazards from some future event to which they cannot relate. Public projects to eliminate unsafe buildings in the public and private sector will require lots of money, but these fiscal allocations can be made over time to lessen the burden on Berkeley during any one fiscal year. Studies have shown that public investment in seismic rehabilitation for buildings can be cost-effective in the long run.⁷ Even if people are unwilling to make the long-term investments, low-cost distribution of information need not be delayed any longer, for the benefits of giving people the opportunity to make responsible seismic choices far outweighs the cost to society.

Legislative activity around earthquakes decreases as the time span between earthquakes increases.⁶ The best safety legislation has been passed during periods right after major earthquakes. The Field Act of 1933 and the creation of the Alquist-Priolo Special Studies Zones in 1972 are two good examples. People's attention span in relationship to different issues has been described as the "issue attention cycle".² Issues and problems leap into prominence, remain for a short while, and then fade from public attention.

Issue Attention Cycle

- Stage 1 - The Pre-Problem Stage: problem exists but only experts or interest groups are aware of it.
- Stage 2 - Alarmed Discovery and Euphoric Enthusiasm: public believes a solution to the problem exists.
- Stage 3 - Public realizes the cost of significant progress.
- Stage 4 - Gradual decline of public interest.
- Stage 5 - Post-Problem Stage.

The cycle can be generalized for many issues, including seismic safety. Seismic safety in Berkeley seldom gets past stage one in the cycle. Completion of the issue attention cycle is not a goal, but once people are better informed, the decisions necessary to move towards responsible earthquake preparation can be made, and seismic safety can take its place beside other serious issues in the community.

Thus with an initial lack of information, no political constituency, pressing short-run problems, the perceived cost barrier, and the realities of the issue attention cycle, it is not surprising that the seismic safety issue seldom gets put on the agenda for discussion and resolution.

New Approaches to the Dissemination of Seismic Safety Information in Berkeley

Before alternative seismic safety strategies can be discussed, residents must have some basic information regarding the location of the faults, what seismic hazards exist, and what benefits they can expect by taking action to reduce their seismic risk. Currently, Berkeley leaves the responsibility of informing its residents up to the State. The California State Seismic Safety Commission, created in 1974, advises the governor and legislature on earthquake matters, composes statewide earthquake legislation, and is charged with the responsibility to inform California residents of seismic safety hazards. Robert Olson, Executive Director of the Seismic Safety Commission, feels that the special public (legislators, councilmembers, administrators) is in great need of seismic safety information and should be the focus of earthquake information distribution. The State does not do a good job of providing either the special public or its citizens earthquake information. The result of the City and State failure to provide public information is a void where little important seismic safety information is distributed. Special commissions, committees, and conferences pass some information on to the public through pamphlets, posters, and meetings. The problem with this method of distribution is that people must already be interested in earthquakes before they obtain appropriate seismic information.

The issue of seismic safety must be part of a continuous process of reassessment that forces elected public officials and individuals to discuss the difficult unanswered questions which seismic safety poses: Will City or University employees be seriously injured at work? How will all the injured be taken care of? How much will it cost in lawsuits and damages after the earthquake? Are the dams and reservoirs safe? What is the likelihood of landslides in the hills? What effect will a large earthquake have on business and employment? Are we doing enough to educate people to potential seismic hazards? These questions must be asked repeatedly because Berkeley is a dynamic city with changing political leaders, new students, tourists, and a constantly changing population. These people have changing roles with respect to seismic safety and need to be constantly reformed. Perhaps with a continuous process of reassessment earthquakes will move from an issue that is thought about only after chilling reports from Mexico or Yugoslavia to one that is seriously considered by elected officials when funds are allocated for social service.

Before a process of continuous reassessment can occur in Berkeley, changes in the structure of how seismic safety information is disseminated must be made. Some important changes are:

1. imaginative employment of the communications media;
2. repeated earthquake drills and public discussions;
3. activation of the City of Berkeley to the seismic safety issue; and
4. utilization of existing community organizations.

Many people rely on the electronic media to obtain most of their daily information. Bearing this in mind, public television, cable television, radio shows, and the commercial networks should be utilized to provide programming on self-help seismic safety projects, emergency responses, and general information. Talk shows, panel discussions, and historical accounts of past earthquakes could generate a higher level of public awareness and supply the necessary information to demystify earthquakes. KRON, News Center 4, recently produced an imaginative earthquake series and handbook for survival, which is an excellent example of how commercial television can provide seismic information.⁴ With the abundance of seismic experts in Berkeley, people interested in putting together programs on local talk shows and public television should have no problem.

Newspapers can also be an important source of information since they can go into more depth on the issues. Reporters could write many fascinating stories on earthquake prediction techniques, how earthquake intensity is measured, historical myths about earthquakes, international earthquake cooperation, how well prepared the City and utilities are for a big earthquake, and other issues. An excellent example of a very interesting earthquake story can be found in the March 23, 1979, issue of the Express.³ The story developed a scenario for a large earthquake on the Hayward fault and very effectively pointed out some of the probable seismic hazards Berkeley faces. The Oakland Tribune, the San Francisco Chronicle, the San Francisco Examiner, and the Berkeley Gazette have followed earthquake disasters and special events with interest, but have failed to conduct extensive investigative work such as that of the Express. Other alternative newspapers have much potential as distributing mechanisms for seismic safety information, and should be utilized when possible. Clearly, people working to promote seismic safety must work closely with all the varied forms of communication to increase the effectiveness with which crucial seismic safety information is distributed.

A second important change is the adoption of repeated earthquake drills and public discussions to provide awareness through continuous actions that can be easily remembered. Having to squeeze under a desk when you are eight years old, or to listen to experts discuss seismic issues when you are sixty-eight will make a greater lasting impression than reading handouts. Of equal importance to the dynamic nature of the information is the time between informational

events. Repeated exercises or forums underline the importance of seismic safety without sensationalizing it.

Two good examples of such programs are currently going on in Berkeley. The Council of Neighborhood Associations recently sponsored a well-attended forum which discussed seismic safety issues in Berkeley. This forum was comprehensive and sparked increased interest in a residential seismic hazards mitigation program currently getting started in the eastern section of Berkeley. Forums such as this, and smaller group discussions focussed on specific areas of the city, are needed to facilitate the distribution and understanding of seismic safety information. Berkeley also has a successful earthquake drill program in the primary and secondary public schools. One earthquake drill is conducted each semester.¹ The State Seismic Safety Commission is working to make earthquake education and drills mandatory in public schools, an important step forward for seismic safety. Earthquake drills and informal discussions need to be carried out not only by schools, but also by public agencies and businesses in Berkeley.

The University of California at Berkeley took a major step towards responsible earthquake safety preparation when it recently conducted the first annual "Earthquake Awareness Day". Students, faculty, employees and administrators were involved in educational events and drills. For five months prior to the event, an earthquake contingency committee, chaired by Dr. Bruce Bolt, Professor of Seismology, met to discuss what steps the campus should take to mitigate potential seismic hazards. The results of the committee were substantial. In addition to the discussions that were created throughout the University, the administration established an emergency plan specifically for earthquakes that relies on decentralized decision-making. The plan is designed so that people in each of the University's departments can begin to take critical life saving action before centralized decision-making capabilities are established within the Chancellor's office. In addition, the University tested the plan in a drill situation, provided administrators and managers with crucial seismic information, began a physical improvements program in campus buildings to diminish seismic hazards, improved contacts with State and local disaster offices, and conducted a one-day program of information and exhibits which reached a substantial part of the campus community. These tangible benefits along with an awareness campaign which included an earthquake exhibit in Sproul Plaza, flags and tape marking the location of the Hayward fault, an information table for two weeks prior to the event, class announcements by some professors, and an informative lecture by Dr. Bolt in Wheeler Auditorium, made Earthquake Awareness Day an immensely successful event which should be held annually here in Berkeley and at other campuses across the state.

The third change, activation of the City of Berkeley to the seismic safety issue, is an important stimulus to begin seismic safety legislation and effective information distribution.

The City has a great deal of flexibility to deal with the seismic safety issue. Berkeley could enact and enforce less restrictive housing codes for old buildings for which seismic strengthening under present State codes would be too expensive, exert its redevelopment powers to remove buildings that qualify as urban blight under seismic safety criteria, use its zoning powers to induce responsible seismic safety land-use planning, provide earthquake information to residents, and strengthen its post-disaster planning and response. The Berkeley Parapet Ordinance is an example of legislation which is sorely needed. Both Los Angeles and Salinas have recently started city-wide programs to up-grade seismically unsafe buildings in the private sector.⁷ Funding is available from Community Block Grant Development money, and the Mayor should look into getting seismic safety money from this source. The City could also put political pressure on the State to provide some money for seismic safety improvements and the printing and mailing of information. Money spent at the local level would have a better chance of reaching the unique problems in Berkeley. To provide effective information distribution, the City should not just pass out information, but work to encourage existing organizations and individuals to discuss seismic safety at the neighborhood level.

Finally, utilization of existing community organizations will allow information to be distributed throughout the community to diverse groups of people, many of whom have very different needs for seismic safety information. Given limited resources, seismic safety organizations and governmental agencies could begin distribution to the public through neighborhood groups. Organizations have distributional mechanisms of their own such as newsletters and mailings which could be used to carry the seismic safety information farther into the community. Neighborhood associations, the chamber of commerce, churches, and political parties are a few obvious organizations which need to be utilized for effective community distribution. Existing organizations are also advantageous for they have shown that they can survive the organizational competition in Berkeley and will probably be around in future years to re-address the critical issues.

Some progress has been made recently with the establishment of a continuous disaster preparedness project in the Associated Students of the University of California Municipal Lobby, neighborhood action in the Council of Neighborhoods, the University's Earthquake Awareness Day, and the completion of the City of Berkeley's disaster plan. These measures are a good start, but extensive work still needs to be done. Other measures that could be undertaken to increase seismic awareness in Berkeley include:

1. inclusion of earthquake planks in the platforms of local political organizations;

2. earthquake awareness training for City and University employees;
3. earthquake awareness presentations to existing local organizations;
4. a permanent earthquake exhibit at the University of California;
5. an annual earthquake awareness day for the entire City;
6. establishment of an earthquake advocacy person in the City to facilitate information flow and voluntary efforts to reduce seismic risk in the city.

The above changes, and the earlier suggested changes in the distribution of information on seismic safety, can help reduce danger to Berkeley residents in the event of a major earthquake. Not all earthquake issues need be given the highest priority, but with an effective information distribution system, seismic safety will become part of the dialogue between citizens and political leaders. Given a fair chance, it is likely that seismic safety preparation will approach a responsible level in Berkeley. In conclusion, "getting the word out" is an essential part of effective earthquake preparation. Technical and practical information is useless unless it is made available to and remembered by the people in the City of Berkeley.

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