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JOSHUA D. LICHTERMAN, PHD

## A “Community as Resource” Strategy for Disaster Response

### SYNOPSIS

Natural and technological disasters present significant threats to the public’s health. The emergency response capabilities of government and private relief organizations are limited. With a strategy in which residents of urban areas are trained in search and rescue, first aid, fire suppression, care and shelter, emergency communications, and disaster mental health, the community becomes a “resource” rather than a “victim.”

Dr. Lichterman is President of Emergency Management Group, Inc., Grass Valley, California.

Address correspondence to Dr. Lichterman, 22990 Blue Heron Rd., Grass Valley CA 95949; tel. 530-268-3640; e-mail <joshemgi@quiknet.com>.

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Recent experience has demonstrated the enormous potential for loss in the United States due to natural and technological hazards. Since 1989, the federal government has spent an average of \$10 billion a year on disaster relief. Part of this cost has been due to an exceptional concentration of major events in a short time, including hurricanes on the Southeast coast, record flooding in the Midwest, and earthquakes, fires, and floods in California. However, losses are also incurred by the simple increase in exposure. The built environment—the sum of all human-made structures and interconnecting systems—is becoming more extensive, dense, complicated, and expensive. Natural and technological hazards simply have much more to destroy per square mile.

The major natural hazards that cause the greatest losses in the United States are flood, wind, fire, and earthquake. Increasingly, technological hazards also present a major risk.



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**Flood.** In terms of cumulative cost, flooding causes more loss than any other kind of natural disaster in the United States. Although flood damage occurs throughout the United States, the greater loss tends to be in the Eastern and Midwestern states of the greater Mississippi basin, typically during the late spring and summer.

**Wind.** Like flood, wind is a universal source of loss throughout the United States. Serious wind damage typically occurs through hurricanes striking the Gulf and Southeastern Atlantic coasts, and tornadoes throughout the Midwestern states and occasionally in the Western states.

**Fire.** Loss of the built environment to fire is the historical scourge of developed communities. As suburbs expand the wildland-urban interface, fire becomes a serious source of loss. In contrast to flood and wind, losses due to fire tend to be concentrated in the drier Western states.

**Earthquake.** Although earthquake tends to be the most mysterious and terrifying natural hazard, it occurs the least frequently and, as a yearly average, leads to the lowest loss. The earthquake hazard is focused in the Western states. A great earthquake near a large urban center probably has the greatest potential for any single-event loss of the various natural hazards because an earthquake can trigger massive fire and flood.<sup>1</sup>

**Technological hazards.** These fall into two major categories: deliberate and accidental. Deliberate acts include industrial (waste soil, water, and air) pollution, pesticide and herbicide use, worker exposure due to lax rules, ille-

gal dumping of hazardous waste, and terrorist acts. Accidental acts can be failures in any number of industrial processes resulting in some form of release, transportation accidents such as oil spills, hazardous materials spills, fires, or explosions.

With nuclear war a diminishing risk, it is possible for communities to focus on the more manageable natural and technological hazards that present the major risk to the built environment.

#### MITIGATION—HARD AND SOFT

Mitigation, the reduction of loss through various measures taken before or after a disaster, can be categorized as “hard” or “soft.”

*Hard mitigation* is the traditional strategy of constructing the built environment to withstand natural hazards. This includes engineered modifications to watersheds such as flood control dams and levees; provisions in building standards for structures to resist the loads of wind and earthquake or to limit combustibility; and permanent on-site emergency systems, such as fire suppression systems, uninterruptible power supplies, and standby power generators. The purpose of hard mitigation provisions is to “harden” a facility, to make it withstand a disaster with little active human intervention.

*Soft mitigation*, on the other hand, is typically associated with emergency preparedness or emergency response. The most obvious examples of soft mitigation are fire sup-

pression and sandbagging against floods, followed by common disaster relief activities such as search and rescue, first aid, care and shelter, emergency communications, and disaster mental health. Soft mitigation reduces the effects of natural disasters that cannot be adequately alleviated by hard mitigation measures. The focus of this article is on the human resources portion of soft mitigation.

## SOFT MITIGATION RESOURCES

Community mitigation resources have been developing in California communities over the past decade and a half. Some of the more successful programs include extensive training provided by fire, police, mental health, and emergency services personnel. The most successful community-based programs have been linked to neighborhood crime watch organizations. Some of these organizations have been in place for more than two decades. A crime watch organization that discusses disaster preparedness once or twice a year is likely to have the longevity to make a difference when a disaster event occurs.

**Citizen disaster preparedness programs.** Elements of citizen disaster preparedness programs include basic preparedness, neighborhood response teams, and advanced training.

*Basic preparedness.* Most citizen emergency response training programs begin with a basic preparedness course designed to assist individuals in preparing their home and family to cope with a disaster event. These basic courses address reducing household hazards; preparing emergency kits; developing evacuation plans; knowing what to do in the event of a variety of disaster events; and developing family notification plans.

*Neighborhood response teams.* Citizens are trained in organizing emergency response capabilities at the neighborhood level. Included in these neighborhood courses are: setting up a neighborhood response area; choosing a block captain; and establishing emergency response teams to address issues such as search and rescue, safety and utilities, damage assessment, emergency communications, first aid, shelter, and special needs.

*Advanced training.* Some communities have established advanced training programs designed to augment public safety and other emergency response personnel in order to optimize their response to large-scale emergencies. In these programs, citizens acquire hands-on experience in fire suppression; search and rescue; damage assessment; incident management; disaster medical aid; disaster mental health; and emergency communications.

**CERT programs.** In 1985, the City of Los Angeles funded a program for citizen training in the Los Angeles Fire Department. To date, this has been the most successful program in the state. In 13 years, more than 20,000 people have been trained in the Los Angeles Citizen Emergency Response Training program (CERT). Currently, 300 to 400 people a year are being trained in a seven-week program. Recently, new ties have been established between the Los Angeles CERT program and the Amateur Radio Emergency System.

The City of Sunnyvale, in Santa Clara County at the south end of San Francisco Bay, introduced the citizen disaster preparedness training concept to the Bay Area in 1987 with the start of the Sunnyvale Neighborhoods Actively Prepare (SNAP) program. The 1989 Loma Prieta earthquake further raised consciousness on the part of both the public and local officials that the degree of preparedness for damaging earthquakes was not at an acceptable level. As a result, a number of communities created training programs, including:

- San Francisco's NERT program (Neighborhood Emergency Response Teams);
- Oakland's CORE program (Citizens of Oakland Respond to Emergencies);
- El Cerrito's NEAT program (Neighborhood Emergency Action Teams);
- Albany's ALERT program (Albany Local Emergency Response Teams);
- Berkeley's CERT program (Citizen Emergency Response Training); and
- Novato Fire District's HEART program (Homeowner's Emergency Action Response Teams).

In the nine years since the Loma Prieta earthquake, the NERT program has trained more than 8,000 people.

The most sophisticated citizen emergency response training program in California is Oakland's CORE program. CORE's goals are: to minimize natural hazards and risks for residents; to increase self-reliance skills at the individual and neighborhood level during a disaster and for the critical 24 to 72 hours after a disaster; and to augment public safety and other emergency response personnel with trained volunteers to optimize response to emergencies.

The CORE program is currently the most active citizen emergency response program in the San Francisco Bay area. It has trained more than 6,000 citizens and an additional 7,000 employees in private industry and is currently training approximately 1,000 people per year. CORE has developed a 15-minute video on home and workplace preparedness with financial assistance from the East Bay Municipal Utilities District.

The City of Berkeley's CERT program has trained approximately 2,500 Berkeley residents since its inception. Among its offerings are a basic course in family and neighborhood disaster preparedness (nicknamed Earthquake 101); a light-duty search and rescue class; beginning and intermediate courses in fire suppression; a disaster first aid course; and a disaster mental health course.

**CARD programs.** After the 1994 Northridge earthquake in Los Angeles, a group of agencies in Alameda County (northeast side of San Francisco Bay) providing services to a variety of vulnerable and underserved populations decided to develop disaster preparedness plans and services together. This group, called CARD (Collaborating Agencies Responding to Disasters), has grown over the past four years to include more than 250 nonprofit agencies in Alameda County. The organization is structured with geographical cluster groups and with functional service teams providing support services (such as transportation and counseling); shelter and housing; health services; and commodities.

The program prides itself on being designed as a bottom-up planning effort, while conforming to the state-mandated Standardized Emergency Management System. CARD has a seat at the Alameda County Office of Emergency Services Emergency Operations Center alongside the Red Cross and the school districts. Its activities include self- and home-preparedness plans; agency emergency plans; agency cost recovery plans; and coordinated response plans. CARD also brokers fire suppression and search and rescue operations for its member agencies.

The populations served by these agencies include the homeless, veterans, people with severe disabilities, people from many cultures, at-risk youth, and people with AIDS. Alameda County CARD has been able to attract a lot of grant money to support its activities. Initially this funding came from the Red Cross. One of Alameda CARD's more recent grants is \$143,000 from the city of Oakland to fund a youth program to develop culturally specific emergency management programs for young people. This program will not only assist their home communities in preparing for disasters but will lead to long-term employment as well.

The Alameda CARD organization has been so successful that additional CARD-like organizations have been established in San Mateo, San Francisco, Contra Costa, and Marin Counties. All these agencies are filling

a void that has existed in disaster preparedness and response planning for years.

In spring 1994, a new organization was founded called BayNET (San Francisco Bay Area Neighborhood Emergency Training). The approach that BayNET follows promotes a partnership between public institutions and citizen volunteers. The idea is to provide "first-responder" training at a very basic level and thereby make local neighborhoods and communities as self-sufficient as possible. The local self-sufficiency concept is the driving force behind the community programs, and behind BayNET as well.

The City of Santa Barbara, California, also has a fledgling program called the Community Emergency Response Team (CERT), which is currently being formulated in the Santa Barbara Fire Department. In essence, CERT is a "train the trainer" program.

The Community Emergency Response Team (CERT) concept is focused on training citizens to take immediate care of themselves and others nearby during disasters or large-scale emergencies. The core curriculum emphasizes skills that will enable citizens to minimize loss of life and to implement self-care for up to 72 hours following a disaster. The program is not designed to train a cadre of citizens who would report in and take directions from emergency service personnel. Rather, it is the expectation of the program to give leaders within the community the skills with which to organize and care for their own families, neighbors, co-workers, or the people within their care (Katherine Lynn, Community Liaison Officer, Santa Barbara Fire Department Fire Prevention Section, CERT program description document).

## C O N C L U S I O N

The "community as resource" model of community emergency preparedness is now the accepted strategy for preparing residents of hazardous regions for disaster response. This concept, which was first proposed by the present author in 1978,<sup>1</sup> is now sought after by citizens and members of the business community as their program of choice and is supported by local, regional, state, and federal emergency managers. Residents of cities in regions threatened by a variety of natural and technological hazards are likely to feel more secure and less fearful about the impact of future disasters if they have prepared for potential emergencies through a community-based disaster preparedness program. This security significantly contributes to the "health" of their community.

## References

1. Lichterman JD. Earthquake contingency planning efforts—both existing and proposed—involving community response. Presented at the Cali-

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