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## The Culture of Preparedness

Disaster planning and preparedness in San Francisco neighborhoods



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Geologists predict that a major or catastrophic earthquake will strike the Bay Area in the coming years – in our lifetime. Tens of thousands of San Franciscans may be unable – or unwilling – to shelter-in-place in their homes or places of business. They will need emergency shelter, water, food and other services immediately. Hospitals will be damaged and health care workers overwhelmed by those seeking care. Electricity, gas, water and telephone service will be disrupted. Businesses will cease operations. Roads and bridges will be closed and San Francisco will be cut off from disaster relief aid, stranding tens of thousands of commuters and visitors unable to evacuate or return home. First responders – fire, police, and medical – will be stretched beyond comprehension as they fight raging conflagrations, major and minor fires; seek and rescue numerous victims in the rubble; patrol critical facilities and maintain law and order; and attempt to cope with thousands of casualties.

San Francisco will become an island.

San Francisco must be prepared to survive and respond to such a calamity with only the resources available at the time, and to recover quickly in the days and weeks afterward, restoring vital infrastructure and the economy. As San Francisco's major citizens planning organization, SPUR's (San Francisco Planning and Urban Research Association's) mission is to promote good planning and good government. In keeping with that mission, SPUR is examining the readiness of the City and County of San Francisco to protect its population in the event of such a disaster.

The challenges are great, but San Francisco has survived major disasters before and can do so again. We can learn lessons from our local history as well as from recent disasters in other regions of the world. We must be ready to incorporate the knowledge and best practices used in worldwide disaster planning and recovery to prepare and train ourselves. SPUR currently has three task forces studying preparedness and response to a major earthquake striking the Bay Area: the Hazard Mitigation Task Force, the Rebuilding Task Force and the Disaster Preparedness Task Force.

The objective of the Disaster Preparedness Task Force is to examine the city's ability to meet the needs of its residents where they live and work in the immediate aftermath of a disaster, and to address what individuals and neighborhoods must do to prepare. The Task Force has spent months interviewing city officials and planners, reviewing emergency response plans and supporting documents, and researching community preparedness efforts around the Bay Area and in other cities and countries around the world.

This report, the first in a series of the Disaster Preparedness Task Force's policy papers, addresses the most critical element of citywide emergency preparedness: establishing and maintaining a "Culture of Preparedness." To be prepared San Franciscans must receive comprehensive education on the expected effects of disaster and how best to respond. They should be trained and ready to care for family members, assist their neighbors and work effectively in teams and alongside first responders and other emergency workers. Residents will need adequate stores of water, food and supplies throughout the city to support a citywide response. Comprehensive public disaster education and neighborhood-based training and resource coordination are necessary for engaging all residents of the city in an ongoing preparedness effort.

Are we prepared? Can San Francisco establish a Culture of Preparedness and become a disaster resilient city? The first step toward a Culture of

Preparedness is individual awareness and self-reliance. The second step is community awareness, cooperation, planning and preparedness. SPUR urges all residents and workers in the city to begin individual preparedness by creating personal preparedness plans and disaster kits. To encourage individual preparedness and create a community of preparedness, SPUR believes the city must implement specific public policy actions. SPUR addresses a number of these public policy issues and includes recommendations in this paper to encourage further discussion and action.

### SPUR recommends

- Creating a Culture of Preparedness
- Strengthening NERT, a Program Critical to Neighborhood Preparedness and Response
- Supplying NERT—Disaster Supply And Equipment Caches: A Disaster Story
- Integrating Spontaneous Volunteers into Emergency Response
- Establishing Community Disaster Response Hubs
- Improving Public Information in the Neighborhoods
- Supporting Community Organizations Working With Neighborhoods for Disaster Preparedness and Response

SPUR believes that preparedness is a constant, never-ending process of education about earthquakes, training and practicing disaster response skills, neighborhood-based planning, and strategically placing adequate disaster supplies throughout the city. Continuous engagement in preparedness activities will result in San Francisco becoming a disaster resilient city. The time is now. The need to be better prepared is urgent. SPUR hopes that articulating and putting a voice to the issues will help move earthquake preparedness forward in San Francisco.

### INTRODUCTION

In Fiscal Year 2008/09 and subsequent years, the Department of Emergency Management (DEM) intends to emphasize community disaster preparedness and response. The City and County of San Francisco bases its emergency response planning and preparedness on the "All-Hazards Strategy" approach emanating from the federal government and funded, in part, by the Department of Homeland Security. Although All-Hazards focuses on the emerging potential of terrorism—chemical, biological, radiological, nuclear and explosive incidents or CBRNE—the strategy enables San Francisco to cope with a range of disasters. Without speculating on San Francisco's vulnerability from a terrorist attack, SPUR notes that the U. S. Geological Survey estimates a probability of two chances in three that a damaging earthquake will occur in the Bay Area in the next thirty years. The All-Hazards strategy satisfies multiple disaster preparedness and response purposes, including equipment acquisition, training, drills, and exercises and in planning to respond. Although certain CBRNE incidents require specialized training and equipment as well as federal and state incident response, the All-Hazards strategy emphasizes the inter-dependence between disaster approaches and assumes that broad preparedness will meet the requirements of a specific incident.

This SPUR policy paper's focus on community and neighborhood preparedness and response during a catastrophic incident coincides with the city's increased interest. SPUR and the city agree that introducing preparedness and response to the grassroots level leads to positive outcomes during a disaster. Further Disaster Preparedness Task Force reports will continue to amplify the city's increased emphasis on the community in disaster planning and preparedness.

### CREATING A CULTURE OF PREPAREDNESS

The 1989 Loma Prieta Earthquake, the 9/11 terrorist attacks, the Katrina and Rita Hurricanes and the 2007 Oil Spill in San Francisco Bay have successively substantiated that disasters are unpredictably amorphous, requiring a structured flexibility in the preparedness and response of emergency workers and the community as a whole. Even with optimal preparation, history demonstrates that chaotic conditions assure breakdowns in the best-laid plans. For self-sustaining emergency preparedness and response, all resources need greater integration and strategic investments. This is not because of a lack of vigorous planning or funding, especially with the Bay Area's known seismic risk and the spike in Homeland Security grants.

Throughout history, regardless of lessons learned from earlier calamities, societies become gradually lulled into complacency. In our research, we have found several countries that have ingrained emergency planning into their society's everyday life. Japan, with one of the world's most active earthquake zones, and Cuba, with its annual hurricane dangers, each engages its citizenry in preparedness and response. All citizens, in addition to disaster professionals, can embrace defined emergency roles and duties.

**Lessons Gained:** As a starting point, there is no need for San Francisco to "reinvent the wheel". From proven successes found throughout the world, we can adopt the simplest and lowest-cost programs that have the best chance for long-term sustainability. In massive disasters, initiative and action arise first by the survivors at the individual, family and neighborhood level, especially if they are cut off from governmental services because government is overwhelmed.

**Residents at the Ready:** Our primary investment may well be in the preparedness of residents—who can "snap into action", effectively utilizing the readied resources and infrastructure around them. Over-dependence on government stymies individual self-help and initiative. In the 1989 Loma Prieta Earthquake, ordinary citizens teamed with firefighters to stretch fire hoses from the waterfront to burning buildings. In the 1989 Cypress Freeway Collapse, nearby citizens were the first to rescue trapped motorists. In virtually all major disasters, people spontaneously arise to heroic levels, and necessarily so, when time is crucial and disaster workers are not available. Like a naval ship, where large crews constantly train and drill for every conceivable situation, the totality of a city's emergency response could be rehearsed and therefore be universally automatic.

**Empowerment:** Within a given structure, flexibility and initiative is necessary. Disaster professionals, communities and individuals need a sense of

responsibility to address dynamic problems. Professional, emerging and potential leaders in neighborhoods need to be tapped and pre-trained prior to disasters in case traditional societal order breaks down. An integrated resourcefulness needs to be nurtured—flexible, fluid and adaptive. History demonstrates that heroics and leadership can arise from many points in the society. The city needs to convey a strong message advocating individual, family, and neighborhood empowerment, with first-responders, public/private partnerships, and nonprofit groups working together.

**Self-Sustaining Emphasis:** Money need not be the primary mover of preparedness. Recently, increased emergency planning, technology and resources have been a function of federal Homeland Security funding. As funding declines, projects, personnel and sustaining maintenance will be diminished. Instead, existing institutions and their existing resources can be better incorporated into a culture of preparedness, developing a societal sense of responsibility.

**Planting Seeds:** Individual, neighborhood and institutional initiative is a no-cost sustainer of emergency planning. The U.S. Congressional Study on the Katrina Hurricane Response was entitled "A Failure of Initiative", highlighting that simple concepts can trigger large benefits. With proper nurturing, seeds of initiative induce a ripple effect of self-sustaining emergency awareness that engages residents, neighborhoods, workplaces, building complexes and transient populations. Small, incremental investments in neighborhoods and individuals can grow self-sustaining assets that are not dependent on federal funds and city budgets.

### **STRENGTHENING NERT, A PROGRAM CRITICAL TO NEIGHBORHOOD PREPAREDNESS AND RESPONSE**

Images from the Loma Prieta earthquake of survivors pulling fire hoses in the Marina, rescuing people from collapsed South of Market buildings and off the pan caked Cypress Freeway underscore the fact that, in a disaster, survivors will be the first responders. The Annals of Emergency Medicine estimates that after the Loma Prieta earthquake 3% or thousands of San Francisco residents became spontaneous rescuers, participating ad hoc in uncoordinated search and rescue efforts, putting them in harm's way and potentially becoming victims themselves.

Trained and prepared residents could effectively assist first responders after a disaster without running unnecessary risk to themselves and others. The Neighborhood Emergency Response Team (NERT) program trains San Franciscans to do just that. Since its inception in 1990, approximately 17,000 San Franciscans have taken the basic NERT course given by the San Francisco Fire Department (SFFD).

NERT is about personal and family readiness, neighbors helping neighbors, and "doing the greatest good for the greatest number". It is a positive and realistic approach to emergency and disaster situations where citizens will initially be on their own and their actions in a disaster can make a significant difference in saving lives, protecting property and helping to bring order out of chaos. The city and SPUR's goal is to strengthen NERTs to be effective, self-sufficient and self-activating teams during the critical first days of a disaster.

NERTs supplement first responder services – police, fire, and medical – offering immediate help to victims at the grassroots level. When the number of trapped people in buildings and collapsed structures exceed the city's capacity to respond, NERT can work with other survivors, who often have the most current information about the location of the missing, to conduct light search and rescue and provide austere disaster medical assistance (maintain airway, stop bleeding, prevent shock). They are trained to do so safely.

The basic NERT Training Program is a 20-hour comprehensive program consisting of six class sessions taught by professional firefighters. Through training, citizens prepare themselves and their families to cope with disasters both at home and at the workplace. They have hands-on training to develop skills, including training on the following: when and how to turn off utilities; how to control small fires; how to manage the three most frequent killers of victims by opening airways, controlling bleeding and treating for shock; how to administer basic first aid and triage; how to search for and rescue victims safely; and ways to effectively organize themselves and spontaneous and registered volunteers. Post-training evaluations rank both the quality and usefulness of the NERT training as excellent, and there is no cost for this valuable training.

Besides this initial training, NERT offers advanced training, leadership and team building, Incident Command Systems (ICS), amateur radio licensing and radio operations, and. NERT encourages its volunteers to take Red Cross First Aid and other disaster preparedness and response courses. Many NERTs are also involved in Red Cross and other disaster relief organizations. Retaining NERTs, while maintaining and advancing their skills, is an ongoing challenge. Although some participants in the NERT program may not maintain their skills, of the 17,000 who have completed the NERT training, SFFD estimates approximately 9,000 individual active NERTs in the city today. To remain active, NERTs must maintain their skills through neighborhood team drills and advanced NERT training. NERT has a very active training program and stays in touch with neighborhood NERT groups to keep volunteer skills current, holds district training meetings and requires biennial recertification.

NERT believes that involvement in pre-disaster planning and preparedness motivates residents to make a difference at home, in the neighborhood and the workplace following a disaster and wishes to reach out to those who do not complete the full basic course, yet want to have a way to assist their immediate community after a disaster. NERT and Project Safe have recently begun a Block Captain program aimed at these individuals.

In addition to the lack of trained active NERTs in the city, NERTs are not geographically dispersed throughout the city. Less than a third of the city's identified neighborhoods have an active NERT group, making the effect of NERT vary considerably from neighborhood to neighborhood. In particular, NERT teams do not exist in many neighborhoods including some of the most resource-poor and vulnerable. The biggest obstacle to developing and maintaining a NERT Team in each neighborhood is finding residents willing to assume the role of Team Coordinator.

**SPUR examined the NERT basic training, retraining, drill and exercise participation programs and SPUR recommends that to expand and sustain the NERT program, retain, train and maintain active NERT volunteers and to improve NERT training, the city:**

- Develop a plan to provide training and establish NERT teams in all neighborhoods of San Francisco, with an emphasis on reaching low income, non-English speaking, disabled and vulnerable populations.

- Increase the number of NERT exercises and drills to improve skill level and practice training.
- Identify grants to fund enhanced training.
- Increase outreach to NERTs through its website by providing technical support to improve the website, so NERT can utilize e-mails more effectively to update volunteers on preparedness tips and new skill topics. The city could seek private sector website designers to assist.
- Increase NERT staff to support more basic and advanced NERT training, create drill opportunities, and work with the volunteer NERT leadership to improve program effectiveness.
- Allocate additional General Funds to Block Captain courses in neighborhoods, schools, and businesses.

Widespread participation in drills is an essential part of a vibrant disaster planning and preparedness program. Drills hone skills and ensure that responders are operationally aware of the plan and the roles they play. While NERTs participate in district NERT training, exercises, and recertification programs, unfortunately only a few hundred NERTs participate in the citywide drills, although this number increases each year.

The city holds citywide exercises twice a year, plus a number of smaller drills and exercises involving more than one city department and/or category of first responders. The Department of Emergency Management initiates and directs many of these drills and exercises. Full participation of NERT in citywide and regional planning and exercises would not only increase NERT volunteers' skill levels, but would help integrate NERTs into citywide response plans.

Drills enable planners to identify shortcomings in existing emergency plans and to correct deficiencies in operations. By practicing the and experiencing the skills of NERTs through citywide disaster drills, disaster planners can refine and plan for the ways in which they can use NERT successfully during a disaster. By working along side NERTs in drills, first responders can learn to value NERTs as first responders. Familiarity with NERT capabilities gained through full NERT participation in exercises with first responders would help NERT gain the acceptance required to better serve the city. Recognition of the skills that NERTs can contribute to disaster response would enable the professionals to function in more complex disaster incidents and reduce the stress on their scarce resources.

In addition, full integration of NERT into the city's emergency response plans is essential now more than ever because city emergency response planners are considering expanding NERT's role to include participation in civic events and environmental incidents. Until now, NERT has served as a standby group of trained volunteers waiting to jump automatically into action when the "Big One" strikes. Although not all NERTs would want to move beyond the basic training, there are many additional NERT disaster response tasks possible. Beyond its current mission to self-deploy only in the event of an earthquake, NERT could become a resource for assistance in large oil spills, power outages, and transportation and health incidents. Some NERTs could be trained in traffic control or more complex light search and rescue.

Giving NERTs the opportunity to be continuously involved in civic activities may help retain NERTs and, most importantly, could give them opportunities to practice and enhance their skills. NERT is part of SFFD and SFFD conducts the highly praised NERT training program. Commendably, the mayor's budget has requested increased General Fund resources for NERT training, which will require extra staff. If advanced training includes educational modules for activities beyond the traditional NERT functions, that training could be conducted by other than firefighters.

Other municipalities have expanded their trained volunteer programs. (In other communities, regionally and nationally, NERT is known as Community Emergency Response Team (CERT).) New York City and Washington DC have taken this approach with their CERTs. Other volunteer disaster relief organizations utilize cross training of volunteers as well. For example, the Red Cross, albeit a much larger, better-funded and multi-purpose organization, trains volunteers for site-specific and mobile roles, but then cross trains them to fill other roles when needed. San Francisco Red Cross Disaster Action Team volunteers, who are trained to assist clients at local fires, also are trained to open shelters, work with first responders and operate canteens. Some local Red Cross volunteers take national disaster assignments at floods, hurricanes, tornados and other major disasters. These opportunities help Red Cross volunteers to practice their skills in real life situations.

If NERT gains an expanded staff, NERT will need office space beyond the space allotted to it by the SFFD. DEM has additional space available and is willing to house NERT staff. SPUR believes NERT could benefit from being more broadly integrated into the emergency planning and preparedness activities of the city by having some staff work from the Department of Emergency Management. NERT staff occupying office space within DEM could promote better collaboration and provide a platform to move NERT into a broader set of responsibilities.

**SPUR believes that the city's emergency response planners must integrate NERT more thoroughly into its emergency planning and preparedness whether or not it decides to expand NERTs role. SPUR recommends that, to integrate NERTs as fully participating first responders, while maintaining the current effective working relationship between NERT and SFFD, the city:**

- Integrate NERT into city disaster planning and drills, including desktop exercises, field exercises, and statewide drills such as Golden Guardian.
- Co-locate DEM and SFFD NERT staff to improve cooperation, resource sharing and effectiveness.
- Hold periodic meetings of NERT volunteer leadership and SFFD staff with CERTs in other Bay Area counties, Red Cross Disaster Action Teams, Salvation Army and other disaster response NGOs to exchange information and program ideas and to expand volunteer recruitment and retention.
- Conduct joint drills and exercises with other regional governmental entities.

**The city could then expand NERT's role, if the city had successfully strengthened NERT to include more trainees, obtained adequate funding, and sustained the basic NERT program. To accomplish this, SPUR recommends that the city:**

- Allocate General Funds for advanced NERT training.
- Identify grants to fund advanced NERT training.
- Increase NERT staff to organize advanced NERT training and drill opportunities.
- Create differentiated roles for NERTs.
- Develop methods of notifying and activating NERT volunteers for non-earthquake assignments.

The city has a stated goal of increasing trained NERT volunteers to 50,000. If it wishes to accomplish this, it needs to enhance the visibility of the NERT program and develop programs to tap more volunteer resources.

To develop the Culture of Preparedness and to expand the ranks of NERT, the city should find ways to encourage young people to join the program. As the city's future citizens, students should be prepared to live and work in earthquake country. NERT can reach into the school system to encourage students to train for NERT, and NERT's practical and hands-on skills development would be of interest to students. Some high schools have Red Cross clubs and many have Junior Reserve Officer Training programs that could provide the foundation for NERT training within the schools. Student instruction on preparedness at all levels could motivate their families to be prepared and trained, as well. Proposition H, which was voter-approved in March 2004, earmarks funds for general education purposes. The city could earmark a portion of this annual allocation to finance disaster preparedness and NERT training.

**SPUR recommends that the city:**

- Support state legislation encouraging high school students to complete NERT/CERT courses as a graduation requirement.
- Designate a portion of the city's contribution to the school district for NERT courses tailored to high school students.

In the case of a declared emergency, all city employees automatically become Disaster Service Workers (DSWs). Another way to expand NERT is to train DSWs as NERTs. Not only would DSWs be better able to take care of their families and neighbors in a disaster, but they would also be more effective in their work as disaster responders. In addition, they would be better able to concentrate on their city disaster work because they could be confident that the "home front" is safe and coping well with the disaster.

**In order to facilitate the growth of NERT, SPUR recommends the city:**

- Increase NERT staff to help market NERT.
- Support NERT/SFFD staff to use the NERT website effectively to attract new volunteers.
- Allocate additional General Funds for a new course on management of spontaneous volunteers.
- Solicit the support of marketing firms to promote NERT training to individuals, businesses, neighborhood and faith-based groups.
- Encourage city workers to take NERT training.

For many citizens, NERT will be their first contact point to receive assistance. To be effective, NERT requires up to date information and maps to direct citizens to appropriate emergency services. During the disaster, this information should be kept current.

In advance of an incident, SFFD and DEM, working with NERT volunteer leaders, could identify mission critical information and equipment that should be available for training, drills and NERT staging areas. This includes disaster equipment, emergency priority street maps, and supplies for field triage and treatment.

As the incident proceeds, NERT staging areas and leadership should receive current information from DEM and SFFD about the status of the disaster, resource allocation, and problems. For instance, post-quake USGS shake intensity maps could guide search and rescue, and location of Red Cross and City shelter sites is important for survivor referral. Obviously, sensitive information would not be distributed to the public.

**SPUR recommends that the city:**

- Develop a plan for SFFD and DEM to communicate essential information more effectively to NERT both before a disaster and during a disaster response.

**SUPPLYING NERT—DISASTER SUPPLY AND EQUIPMENT CACHES:**

**A DISASTER STORY**

On a cold rainy Thursday at 2:10 pm, the "expected" 7.2 magnitude earthquake strikes along the San Andreas Fault, shaking and collapsing commercial and residential buildings throughout the 10-county San Francisco Bay Area. Telephone poles and building ornaments crash to the ground, buildings collapse, and freeways pan cake killing or injuring thousands. Survivors struggle to aid others in their workplace, in the streets and in their neighborhoods. Police, fire and medical services are overwhelmed. Chaos ensues. Some order is brought to the chaos as thousands of NERT-trained San Franciscans self-activate. First, as they are trained to do, they secure their immediate environment—home, workplace or wherever they happen to be. Then they survey

the nature of the disaster. Because they are trained "first responders," other survivors soon look to them as leaders. NERTs then assemble their own rescue gear or "go kits"—water, food, limited first aid supplies, flashlight, hardhat, vest and survival gear— and move to a NERT staging area for further assignments.

Unfortunately, the only mission-critical NERT supplies and equipment NERTs find at the staging area—other than their own personal gear—is a suitcase of NERT reporting forms necessary for tracking incidents and assignments. A fellow NERT has brought this case from the Fire Department Battalion Headquarters station some distance away. NERTs struggle to carry out their mission hampered by the fact that they lack sufficient supplies and equipment.

In the meantime, across the Bay, the Berkeley Community Emergency Response Teams (CERTs) access the Berkeley Community Supply Program disaster caches located at nearby residences or community facilities. They take their cache radios and fan out into their neighborhood, surveying, reporting damage, requesting additional support, and rendering assistance. With CERT fire suppression equipment, they fight small fires that could spread if left uncontrolled. They tend to the injured with cache first aid supplies. A neighborhood support area with a generator and protective canopy becomes a focal point for neighbors seeking assistance and survivors wanting to volunteer.

As a result, Berkeley CERTs with training and disaster duties similar to San Francisco NERTs are able to fulfill their critical "first responder" mission more effectively than San Francisco NERTs.

To obtain and keep the Berkeley disaster caches, CERTs maintain a minimum neighborhood staffing level for each cache, commit to training twice a year in their neighborhoods, identify residents with special needs, and assess neighbor capabilities such as medical skills. Using their own funds, a number of CERT groups have added to their neighborhood caches, thereby enhancing their capacity to support the neighborhood. Berkeley city officials and CERT leaders find that the caches encourage a culture of preparedness in neighborhoods because the program requires neighborhoods to organize and maintain a level of preparedness.

Initially, Berkeley Community Supply Program purchased eight large caches at \$13,000 per unit and located them in public and community buildings. Now, in order to extend community disaster capacity response, the Program has purchased upwards of 40 neighborhood CERT caches at \$3,000 per unit. San Francisco NERTs lack of geographically dispersed disaster supplies and equipment is a serious problem. NERTs only have their personal "go-kits." These kits are not adequate to provide first aid to victims, conduct search and rescue, support a NERT staging area, and communicate with the SFFD battalion.

San Francisco officials need to trust that neighborhood NERT teams can manage disaster caches. With disaster caches to support them, neighborhoods can become more self-reliant in a disaster. This can free the city to respond to other emergencies requiring greater professional and resource capabilities.

#### **SPUR strongly recommends that the city:**

- Purchase, with General Funds, at least 100 neighborhood disaster supply and equipment caches to support NERT staging areas, neighborhood NERT teams, other NERT trained groups, and Community Disaster Response Hubs. An agreement between the city and the NERT team or other neighborhood group would support the cache distribution by addressing the safeguarding, maintenance and training necessary for effective utilization of the cache. San Francisco could model the program on the Berkeley best practice model.

#### **INTEGRATING SPONTANEOUS VOLUNTEERS INTO EMERGENCY RESPONSE**

Across the globe, disaster survivors emerge as spontaneous volunteers to rescue victims, provide first aid, work in shelters, distribute food and water, and participate in many emergency response activities. They are most likely to be untrained and to be unaffiliated with any disaster relief organization, and yet they are a valuable resource. These volunteers are known amongst emergency planners as convergent, emergent, unsolicited or unaffiliated volunteers, as well as "spontaneous" volunteers. City disaster response planners should develop a program to channel the services of these volunteers into productive response and recovery tasks.

Survivors will recognize NERT volunteers with their yellow hard hats and orange vests as disaster response leaders in their neighborhood. In many instances, NERTs will be the only source of immediate disaster response. Survivors wanting to help are likely to gravitate toward NERTs, as well as to other first responders, putting the trained responders in a difficult situation. How will the city's first responders use spontaneous volunteers productively and safely when disaster strikes?

In city disaster plans, the Department of Human Resources (DHR) is currently responsible for registering disaster volunteers. DHR is planning to set up a centrally located registry site for unaffiliated volunteers. Realistically, during a disaster, volunteer registration will take time to organize. In addition, many spontaneous volunteers will not want to trek across town to a central location to be registered. They are likely to "do their own thing" because they see the urgency of responding in their neighborhood. Ideally, spontaneous volunteers should register so trained disaster personnel can assess their skill sets and aptitudes prior to assignment. In addition, these spontaneous volunteers could injure themselves rendering aid, becoming new "victims," and they should be covered by Workers Compensation when performing duties on behalf of the city. To best utilize and protect spontaneous volunteers, the registration sites should be located in neighborhoods. Within hours of the incident, these multiple registration sites should be staffed by pre-assigned DHR personnel and DSWs to register and assign volunteers.

In the recent Cosco Busan oil spill, spontaneous volunteers hit the beaches without guidance, training or support to clean up the spill. Spontaneous volunteers are highly motivated; they want to make a difference when disaster strikes. State and local agencies were slow to recognize and channel this human resource. The city had no mechanism to activate NERT, its trained volunteers, in this real-life disaster.

In the first few hours of a major disaster, the city emergency response planners need to have a functioning spontaneous volunteer program. Some volunteer organizations have developed programs for integrating spontaneous volunteers, including the Red Cross and the San Francisco's Project Homeless Connect program. The Red Cross is experienced in bringing spontaneous volunteers into shelter, bulk food and water distribution operations, and intake of survivors and related disaster activities. The Red Cross may be able to provide valuable insights on how to integrate volunteers into effective disaster programs. Project Homeless Connect utilizes spontaneous volunteers and can provide additional information in how to use spontaneous volunteers.

#### **SPUR recommends that the city:**

- Establish a simple and rapid registration policy for DEM , DHR and NERT, to train and integrate spontaneous volunteers into disaster response and recovery.
- Plan for DHR to open multiple registration locations rapidly, preferably adjacent to NERT staging areas and other city operated response locations.
- Instruct DEM and all city departments including NERT to identify in advance of the event appropriate roles and tasks to assign emergent volunteers, based upon each individual's skills.
- Train first responders, NERTs and city department personnel in managing spontaneous volunteers, including assigning and supporting them in appropriate tasks. In addition, field guidance "flash cards" could delineate task assignments for orienting emergent volunteers to be safe and effective in the performance of their work.

#### **ESTABLISHING COMMUNITY DISASTER RESPONSE HUBS**

To assist communities to prepare for a disaster and to improve emergency response, the Department of Public Health for the City and County of San Francisco has obtained a federal grant to create Community Disaster Response Hubs or field-based disaster coordination centers throughout the city.

The "hub" model is a common means of administering emergency response. In case of a major disaster in San Francisco, a variety of organizations and public entities will rely on the hub model to direct response activities. For example, the Red Cross will use the hub system to coordinate shelter and other services; the Department of Public Health will use a similar model to direct medical care. The city's Department of Emergency Management, first responders, representatives from community organizations, along with the Department of Public Health, have developed a draft proposal to establish Community Disaster Response Hubs (Community Hubs) as a conduit between city government and the communities.

Community Hubs can provide the infrastructure for community response to major emergencies by bringing together community organizations, businesses, faith-based entities and neighborhood organizations. Together they can identify local resources, construct a plan to integrate and coordinate those resources with each other and with the city, and practice communication. The Community Hubs will perform an administrative function – they are not meant to be service centers. Their role is limited two primary functions:

**1. Information Coordination** – They will act as the city government's portal within each specific affected community, as communication centers to facilitate the exchange of information between the EOC and the local community regarding available and needed resources and available and needed services.

**2. Resource Coordination** – They will identify and assess available resources and shortfalls and, where shortfalls exist, communicate those needs to the EOC to facilitate resource deployment to the appropriate community site. Community Hubs activate immediately after the emergency event, staffed by city employees with the assistance of registered and trained volunteers who represent participating organizations.

Community Hubs will not replace any emergency operation in the Strategic Plan; rather they will be an "add-on," taking advantage of resources that already exist in local communities and radiating out into each community to help match identified needs with city resources. Ironically, although the city will initiate the Community Hub program and the city will facilitate its planning and assist in sustaining it, the leadership and commitment to maintain and sustain the program in each district must come from the local community or the program will fail. Success depends upon active community involvement and continued commitment by the City and County of San Francisco.

- **City Government:** San Francisco engages in comprehensive planning to prepare response to and recovery from an earthquake. The city's Strategic Plan provides for the city to engage all its public entities to restore lifelines, manage structural assessment, and supply mass care, including shelter, food and emergency medicine. The city's command structure will be an Incident Command System (ICS) following the National Incident Management System (NIMS). In the event of a major disaster, the EOC will activate immediately and will become the focal point for coordinated command and control of citywide response efforts. Participants will include representatives from all departments with a major disaster response role. The EOC operates as a multi-agency, multi-department coordinated command, providing support and communication to control citywide response efforts.
- **Communities:** At the same time, a variety of non-governmental organizations, including local businesses, faith-based organizations, community associations and medical facilities, make up local communities throughout the city. Many of these organizations have considerable resources at their command, including expertise, able personnel and volunteers. The strength and variety of these groups and their resources vary from community to community. The extent to which organizations and leaders within local communities in San Francisco have identified these resources and developed a coordinated local response plan also varies. Specific entities have developed their own internal earthquake plans. Even in the most organized communities, though, as in Chinatown for example, leaders recognize that their preparedness remains inadequate.

A two-year Federal grant funded the initial drafting and implementation of the Community Hub plan in the two pilot communities, Chinatown and the Bayview. During 2008, the second year of planning, the city intends to run a pilot program in these two communities culminating in a drill. The grant expires on December 31, 2008.

Some responsibility for Community Hub planning will belong to the city, for example, conducting initial outreach throughout the city's communities, designating city-owned sites and assigning staff, assisting communities in the maintenance of data by identifying supplies and developing record keeping protocol, and conducting educational and practice drills involving both city workers and community representatives. Some responsibility will belong to the communities. Although each community must first finalize a plan specific to the needs of its residents and identify its local resources and vulnerabilities, the community's plans must be consistent with the guidelines provided by the city as to what it can realistically provide. Once finalized, the community, with city assistance, must sustain the plan by updating and maintaining data and keeping designated organizations working together.

Establishing a Hub for community response will be accomplished in stages, first by the city, then by the city and communities working together, as follows:

- **Selecting Communities:** The city will initiate planning for Community Hubs, neighborhood by neighborhood, first identifying the city's most vulnerable communities, i.e. those on unstable ground and with dense populations.
- **Invitation:** The city will issue an invitation to community-based entities to introduce the Community Hub concept. To secure broad representation within a community the city must include each unique non-profit, faith-based and community organizations, schools and interested residents. In addition, each larger community is made up of smaller neighborhoods, often organized around local shopping districts. The city will need sources within the community to identify which community/neighborhood leaders and organizations it should bring to the table.
- **Community Planning/Steering Group:** Ideally, a community planning group will grow out of the initial meeting. The community planning group will develop its own emergency response plan specific to the character of its own community. The city will facilitate the planning and offer other support and overall management, but the community must provide the leadership. The city and community steering group should together develop the ground rules for organizing each Hub, then finalize the community's plan early with great care paid to encouraging collective objectivity.
- **Identification of Vulnerabilities and Strengths Specific to the Local Community:** In order to refine the Community Hub model to meet the needs of its community the planning group should create an initial list of community vulnerabilities and strengths. Readiness in local communities varies. Some communities will have unusual requirements; some already have developed a community organization; some have trained NERT teams, while others do not. Potential vulnerabilities could include large numbers of elderly, schools and day care centers, unreinforced masonry buildings, and/or restricted open space. Potential strengths could be accessible open space and/or adequate medical facilities.
- **Inventory of Resources:** The planning group will develop a list of its own community resources, including facilities, available supplies, local expertise, and potential volunteers. Representatives from the city possess knowledge of the city's resources and emergency response strategy.

SPUR believes that if adequate pre-planning and preparation between city government and communities has taken place, San Francisco can begin to meet the goal of "the resilient city" where residents and communities accept the inevitability of an "expected" earthquake and have prepared to respond and sustain themselves and their communities until help arrives. Despite its limited function, SPUR believes that the existence of a hub plan in a community can be a valuable tool in embedding emergency response awareness deeply in the culture of each community, providing a framework for that community to begin its own plans for local emergency response. SPUR makes the following observations and recommendations that it believes San Francisco can do to strengthen the plan and sustain the program.

#### **SPUR recommends that the city take the following actions:**

- **Program Oversight and the Chain of Command:** SPUR recognizes that under the city's Strategic Emergency Response Plan the Department of Emergency Management (DEM) has responsibility for overseeing and managing emergency response. DEM should include the Community Hubs in its overall responsibility for strategic disaster response activities and oversee the management of the program, including: identify community leaders and organizations; issue invitations to initial planning sessions; facilitate planning sessions; advise steering groups as to city resources; assist in sustaining Hubs by providing personnel to help keep records; and run practice drills and train pre-designated Hub staff. SPUR encourages DEM to become an active partner with the Department of Public Health (DPH) in successfully completing the pilot program.
- **Funding:** At the conclusion of the grant period, SPUR believes that DEM should take the responsibility for obtaining funding to assure that the District Hub plan becomes an ongoing program. A successful Community Hub program will enable the city to take advantage of resources that already exist in local communities, so the city will, in essence, be gaining resources for little outlay.
- **Locating the District Hubs:** DEM should consider the optimum use of each potential city-run site during emergency response. Initially, DPH was considering locating the Hubs at health and mental health clinics. SPUR raised concerns that DPH facilities should be available for emergency medical response. Currently, DEM and the San Francisco Public Library are discussing locating the hubs at neighborhood libraries.

SPUR encourages DEM and the libraries to reach an agreement to locate Community Hubs in the libraries. The twenty-five public libraries are spread throughout the city. Most have been seismically upgraded. In addition, libraries have a strong neighborhood identity as information and resource centers.

- **Staffing Hubs:** If the Hubs are located in public libraries, library staff should be trained to function as Hub staff.

DEM should review the Hub plan for each Community Hub to develop criteria for staffing, designating command and alternate command, and identifying duties, responsibilities and the organizational structure for each major response function within the Hub.

- **Coordinating with Neighborhood Emergency Response Teams (NERT):** SPUR considers NERT the most reliable tested and proven citizen preparedness and neighborhood response program and, as such, SPUR believes the city should consult with local NERT teams in initiating and sustaining Community Hubs.



- **Publicity:** SPUR believes that fostering a culture of preparedness to create a sense of individual responsibility is essential to community emergency response. To assist residents to become aware of the resources that will be available in their community after a disaster, DEM should widely disseminate aspects of the Hub program, including the location of the Hub site within each community.
- **Supplying the District Hub:** The city should provide a dedicated non-perishable supply cache, including not only the medical supplies and emergency supplies necessary to sustain the city's Hub workers, but also the administrative supplies necessary to maintain records at each Hub.
- **Inventory of Resources and Record Keeping:** The prime responsibility of each Hub will be to identify available supplies and human resources available for and needed in emergency response. Record keeping will be essential during response and for FEMA reimbursement. DEM should assign city staff to help Hubs maintain records.
- **Volunteers:** DEM should address the advisability of covering the pre-identified volunteers who will be representing community organizations at the Hubs to provide the same liability protection as NERT volunteers.
- **Communications:** DEM, with input from the Department of Telecommunication and Information Services, should develop plans to provide adequate communication equipment and training.
- **Security:** DEM, with input from the San Francisco Police and Sheriff Departments, should develop plans to provide security and commitment for police response.
- **Vulnerable Populations:** SPUR believes that maintaining a comprehensive local community list of the more vulnerable among us would be an ideal function for a highly developed Community Disaster Response Hub and could evolve into one of its prime responsibilities.
- **Pre-Disaster Coordination Drills and Exercises:** SPUR believes that the only way to achieve effective response leading to timely activation and useful coordination and communication is through pre-planning, updates, drills and practice. DEM should staff and facilitate continuing drills and practice of the hub functions within each District.

[SPUR's Emergency Preparedness Task Force has prepared an extensive analysis with recommendations of the Community Disaster Response Hub Proposal. This report is available on the SPUR website: [www.spur.org](http://www.spur.org)]

#### **IMPROVING PUBLIC INFORMATION IN THE NEIGHBORHOODS**

Accurate and effective public information can educate a large audience on topics of public interest. In the last few decades, many public information or social marketing campaigns have successfully used the techniques of product marketing campaigns. Examples include the campaigns against drunk driving, against smoking and littering. The City and County of San Francisco needs an effective public information campaign to educate its residents on how to prepare for and survive a major earthquake. Without such information, lives of countless residents and visitors will be put at risk needlessly and business and economic life will be jeopardized.

Information on how to prepare physically for an earthquake is available to individuals and businesses. Through its 72hours.org website, San Francisco government has set forth guidelines for self-preparedness, such as lists of recommended supplies and procedures for reuniting with family. NGOs have had comparable campaigns, for example the Red Cross' Prepare Bay Area or the Salvation Army's PREP kit. Regional, state and federal agencies, including the Super Urban Area Security Initiative (SUASI), the Bay Area regional mutual aid agency, have disseminated similar information. The media, including radio, TV and newspapers, have been strong public information partners.

Yet, public opinion survey data indicate that less than one-third of the public is prepared for an emergency. The public has not assimilated nor has it acted upon the basic information provided to it by public education campaigns. The vast majority is not adequately prepared to survive independently for at least 72 hours. Many have inaccurate information on what to do during a violent earthquake. Despite the fact that the accepted safe behavior during an earthquake is to *DUCK, COVER AND HOLD*, many in the public cling to dangerous ideas—such as running out of buildings in the path of falling objects—or inadequate ones—such as standing in doorways.

Changing behavior across a diverse population requires more than dispensing information; it requires changing attitudes to create a culture of preparedness. In order to accomplish this, the city, along with federal, state and private organizations, needs to study effective social marketing campaigns of the past and to evaluate its current public information campaigns to develop a more effective way to educate the populace in preparedness and proper emergency response. In 2007, SUASI provided grant funding to begin an assessment of public education campaigns. San Francisco needs follow-up and additional public education projects.

#### **SPUR recommends the City and County of San Francisco:**

- Solicit joint state, federal and regional agencies and NGOs to sponsor surveys to evaluate the effectiveness of public information campaigns to encourage emergency preparedness and educated response.
- Use survey results to provide feedback to increase the effectiveness of the public disaster preparedness campaign.
- Use survey results to tailor messages to specific vulnerable segments of the public, including the elderly, the medically fragile, low-income families, and non-English speaking residents.

SPUR puts forth below some additional suggestions for programs that it believes could strengthen the public education campaign: 1) a proposal for a month-by-month disaster preparedness campaign, 2) suggestions for improving communication by upgrading the communication structure, in particular

signage, the public address system, SFAAlert, the Auxiliary Communication Service, and 3) a recommendation to initiate a warning system.

#### A MONTH-BY-MONTH CAMPAIGN ON HOW TO PREPARE FOR A DISASTER

In advertising, constant repetition ensures that the listener hears the message and acts upon it. Public information on disaster preparedness activities usually floods the airwaves and fills the newspapers around the commemoration of the 1906 San Francisco earthquake or following minor earth tremors.

At these times, the media broadcasts information drawn from 72hours.org or other preparedness sources. Should citizens or businesses wish to avail themselves of the preparedness checklists, they may feel overwhelmed by the number of items to acquire and store, plans to prepare, and training to take. Even the most zealous disaster preparer may be daunted by the task because often the preparedness lists are not prioritized to highlight the most essential five to ten items. The lists do not reflect the fact that many apartment residents and homeowners may not have adequate storage space. Most, as evidenced by surveys, react by inaction. In addition, the constant turnover of the population means many will miss messages.

A way to provide the public with continuous emergency preparedness and response information without over-loading them would be to divide the year so that each month has a recurring theme. To mimic successful product campaigns, the preparedness campaign needs to operate in the same repetitive manner month by month, year after year. The calendar of monthly tasks should focus on the key items and plans to foster resilience and self-reliance and not try to address the laundry list of the "ideal" preparedness kit and plans. If followed, after a year, an individual, family or employer would be prepared. For instance, JANUARY and AUGUST could be potable DRINKING WATER supply purchase and rotation. MARCH and OCTOBER could be emergency FOOD stock acquisition and rotation. SEPTEMBER could be FAMILY RECONNECT for preparation and/or updating of a disaster plan.

Media reaches across political and geographic lines to all Bay Area communities. Consequently, any major media campaign would by necessity need to be regional. San Francisco could initiate the program with the intent of involving counties throughout the region and seek support from state and federal grants. City and regional government would have to seek broad involvement of the media, businesses, schools, service, community and faith-based organizations to get out the word. Then, local disaster preparedness public information groups would need to cooperate with common, monthly messages. The monthly program should be coordinated with retailers to ease purchase of supplies, preferably on sale. Special attention should be paid to the many segments of San Francisco that do not respond to mainstream media, for example, non-English speaking residents and the disadvantaged.

#### SPUR recommends that the City and County of San Francisco

- Take the lead, based on survey data, in exploring a month-by-month public information campaign as the most effective way to educate the public about emergency preparedness.

#### NEIGHBORHOOD SIGNAGE

San Francisco public buildings—libraries, schools, recreation centers—and other locations—social, community and faith-based facilities—should display permanent and rotating disaster preparedness and response messages. Disaster preparedness information provided should include guidance on personal and family disaster preparedness and safety, NERT and Red Cross training courses, the proposed month-by-month campaign posters, and key preparedness contacts. Updated Community Hub information should be posted as well.

#### SPUR recommends that the city:

- Implement a neighborhood emergency signage program.
- Institute a signage program to complement and support the proposed month-by-month public information campaign.

#### OUTDOOR WARNING SYSTEM (NEIGHBORHOOD PUBLIC ADDRESS SYSTEM)

The city has invested in several public information systems. Every Tuesday at noon, San Francisco tests its outdoor warning system (once known as air-raid sirens). San Franciscans can hear the sirens throughout the city, but they are then followed by a frequently inaudible announcement. Starting in 2005, the City installed 77 outdoor speakers at a cost of \$2.1 million. The system was ineffectual. After the city attorney threatened litigation, the manufacturer agreed to replace defective parts and to install 45 additional speakers during the next three years. Acoustic experts and city agencies are studying optimal locations, taking into consideration the communication problems in San Francisco due to "dead spots" caused by hills and valleys, and attempting to improve the audible component. Lacking substantial audible improvement, the city needs to educate its population that when the siren sounds, they should turn to the radio for current information.

Tokyo tests its citywide loudspeaker warning system daily at 5:00 pm using music instead of a siren. In a real emergency, the loudspeakers provide information on the location of safe and unsafe areas.

#### SPUR recommends that the city:

- Hold drills and training on a routine basis to maximize the effectiveness of the Outdoor Warning System or Siren/Emergency Public Address System.
- Educate the public to turn to the emergency band on the radio for updated emergency instructions once the siren sounds.

#### ALERTSF

AlertSF is a text-based notification system to alert or warn registered San Franciscans by sending messages to wireless devices and email accounts on earthquake, chemical spills, tsunamis, flooding and tornados. Although individuals can register for AlertSF and receive messages without charge, the system is not widely known or used. (The cost of receiving text messages depends upon each user's provider contract.)

AlertSF also has the capability to segment information distribution. Registrants have options for English-language automated information feeds, alerts targeted to specific areas of the city and/or other Bay Area alerting systems. NERTs, for instance, could receive specific information for a disaster response or even have a "call down" program to request NERTs to go to particular assignments.

**SPUR recommends that the city:**

- Consider how to promote AlertSF to residents.
- Consider how to integrate AlertSF into its emergency preparedness and response plans.
- Explore means for AlertSF to communicate directly to NERT members.

**AUXILIARY COMMUNICATION SERVICE (ACS)**

In event of failure or overload of the city's normal and emergency communication systems, ACS (aka Ham radio and other telecommunication equipment operators) will provide the ultimate backup. ACS will establish and operate primary and secondary radio networks to carry public safety and emergency communications. ACS FCC licensed and background checked volunteers would provide critical communication support between NERT staging areas, Hubs, SFFD battalion stations, EOC and other first responders. They have the capability to transmit messages to regional and state government disaster agencies. NERT and ACS jointly drill and have many mutual volunteers. In fact, once a week ACS volunteers report into a central station to test their capabilities. As with all the volunteer disaster organizations, they are seeking new members. ACS is closely affiliated with DEM.

**SPUR recommends that**

- The city's disaster telecommunication plan, equipment acquisition, training and drills must reflect the ACS volunteer requirements and critical disaster mission. DEM and ACS should work on an even closer integration of their disaster responsibilities as well as building on the successful NERT collaboration.

**WARNING SYSTEM**

Japan has deployed a post-earthquake seismic warning system to warn citizens that an earthquake has occurred at a distant location and they now have a few seconds to as long as half a minute before shaking begins in their locale. This provides sufficient time for people to "DUCK, COVER AND HOLD", for emergency responders to prepare, and for utilities and transportation agencies to protect their systems.

The warning system works by detecting primary P-waves, which spread from the quake's epicenter at a faster speed than the destructive shear S-waves. A warning could activate the public media announcement system/sirens, automatically open firehouse doors, halt elevators, mass transit and airport operations, stop factory machinery, and initiate safety measures for medical surgeries. The farther away from the epicenter, the greater the warning time would be. A few seconds or more of warning may provide life saving and property damage-mitigating response.

The Bay Area presents a complex seismic condition with three major earthquake faults (Hayward, San Andreas, and Calaveras), making it difficult to differentiate a P-wave source and thus decreasing potential warning time. Any system in the Bay Area would probably just have a single mode of warning that there is a big earthquake somewhere in the Bay Area.

Funded by the United States Geological Service (USGS), seismologists at the University at California, Berkeley, collaborating with Caltech, the Southern California Earthquake Center (SCEC at USC) and the USGS, are working on a California system, inspired in part by Japan's warning system. They are currently two years into a three-year testing project.

For testing purposes, the seismologists have several algorithms running on the real time seismic system in the state. ElarmS is the algorithm developed at UC Berkeley that successfully detected the October M5.4 Alum Rock earthquake near San Jose and provided accurate information about its intensity and direction. It is running statewide using approximately 180 stations. They are hoping to add the remaining stations within the next month or two bringing the total to over 300. On this system, they are able to assess the timeliness and accuracy of warnings. The Onsite method (developed at Caltech), a single station approach with higher speed and lower accuracy, is aimed at providing warnings even at the epicenter of large earthquakes. It is already running in Southern California and the algorithms are currently being installed in Northern California. The goal of the three-year project, to be completed in the summer of 2009, is to assess the accuracy and timeliness of these early warning systems should they proceed to full implementation. While the testing is ongoing, there has already been success in detecting earthquakes and providing predictions of forthcoming ground shaking. Researchers are starting to look to the next stage of the early warning project, how would/should the system be implemented.

Researchers believe the California system is five years away from being fully implemented, because the \$50-\$100 million cost needs to be funded. After testing of optimal station spacing and accuracy of warnings, they have concluded that 350 existing seismometers would need upgrading and 600 new seismometers would need to be added. Japan's system uses 1000 instruments. Sadly, the President's FY09 budget almost cut the funding for external support within the earthquake program at the USGS in half. If this cut occurs, there is no possibility for the USGS to continue the early warning project beyond the current three-year project, so we need to be vigilant to keep funds in the budget. Other regions of the United States have federal systems to provide severe weather warnings including tornadoes, hurricanes, floods and winter storms. It is time earthquake prone states have an early warning system to safeguard infrastructure networks and protect life, as well. SPUR believes that further testing of an earthquake warning system in California is essential to secure property and preserve life.

**SPUR recommends that the City and County of San Francisco**

- Lobby California's congressional delegation and state government to support further funding of the California Seismic Network Project by the USGS to develop and deploy an earthquake identification and warning system.

In particular, Congresswoman Jackie Speier has indicated that she will explore funding for development and deployment of the post-earthquake warning system. SPUR has sent Congresswoman Speier a letter of support.

#### **SPUR recommends that its membership**

- Support Congresswoman Speier's initiative to develop and install a post-seismic early warning system by seeking its approval through California's congressional delegation, state and local governments.

#### **SUPPORTING COMMUNITY ORGANIZATIONS WORKING WITH NEIGHBORHOODS FOR DISASTER PREPAREDNESS AND RESPONSE**

During the two most recent Bay Area disasters—the Oakland Wildfire and the Loma Prieta earthquake—many non-profit service agencies, faith-based organizations and disaster relief non-governmental organizations (NGOs) assisted their communities, supplementing government first responder and disaster response efforts. Unfortunately, their ability to galvanize their resources to respond successfully to these small-scale disasters does not prove they could perform during a large-scale disaster, such as an earthquake on one of the Bay Area's faults. Of course, complacency is not exclusive to non-governmental organizations. To counteract a false sense of safety and foster the culture of preparedness, San Francisco city government and non-governmental organizations have begun to collaborate to augment traditional emergency preparedness and response with community self-reliance.

#### **SAN FRANCISCO CITY ENTITIES SUPPORTING COMMUNITY PREPAREDNESS**

In addition to NERT and the incipient Community Disaster Response Hubs, discussed elsewhere in the paper, other San Francisco city-sponsored government entities interact at the neighborhood level to support disaster response. Among these are:

##### **SAN FRANCISCO'S CITIZEN CORPS COUNCIL**

The Citizen Corps Council brings together representatives from the non-profit, faith based, private and government sectors to coordinate outreach and volunteer efforts related to citizen preparedness. Participants include SPUR, the Red Cross, Salvation Army, Macy's West, First Republic Bank, San Francisco State University, SF SAFE (Safety Awareness for Everyone), SF NERT, San Francisco Police Department, Mayor's Office of Neighborhood Services, SF Ready, Department of Public Health, The Volunteer Center, the University of San Francisco, San Francisco 211/HelpLink, SFCARD (Community Agencies Responding to Disaster), City College of San Francisco, Fritz Institute, and many others.

##### **NEIGHBORHOOD EMPOWERMENT NETWORK (NEN)**

NEN is a strategic partnership of city agencies, local non-profits and committed community leaders. NEN is a collaborative platform that serves as a central engagement point for communities to find and share information that will empower them to make their neighborhoods a better place to live. One of its long-range goals is planning and preparedness for disaster.

Basic to NEN's mission is its belief that once people become involved in their community on a regular basis, they will self-initiate community activities. At the same time, NEN has found that the residents who are individually prepared through 72hours.org, NERT training or other programs are often also engaged with some local community organization. NEN wishes to build upon this base of prepared, community-involved residents by streamlining access to information and continuing education to strengthen community preparedness and planning. NEN hopes to advance the mission of preparedness beyond the first 72 hrs after the earthquake and well into the complete recovery of the city.

##### **NON-GOVERNMENTAL ORGANIZATIONS ACTIVE IN COMMUNITY DISASTER PREPAREDNESS**

Several non-governmental organizations operate to strengthen neighborhood response to disaster by assisting non-profit service agencies, neighborhood associations and local business. Their activities range from assistance in planning and preparedness to actual disaster response. The success of their efforts will be critical to minimizing death, injuries and destruction as well as improving recovery where San Franciscans live and work.

The significance of the involvement in disaster response by non-governmental agencies, including faith-based organizations, cannot be overstated. They are spread geographically across the city, and many are located within city communities with vulnerable populations. Although their missions vary, most are oriented toward assistance to San Franciscans in their daily lives. Often these are the very organizations that support populations mass media will not reach: the homeless, non-English speaking residents, the frail or the mentally impaired. If prepared to do so, these organizations – like food banks, immigrant rights organizations, crisis centers, and churches—could reach these populations in case of a disaster.

Non-governmental organizations exclusively devoted to disaster preparedness, include SF Community Agencies Responding to Disaster (SFCARD), SF Coordinated Assistance Network (SF CAN), and Fritz Institute. Other non-governmental organizations include neighborhood disaster response in their broader missions and programs. Some of these organizations include Bay Area Red Cross and the San Francisco Interfaith Council.

A brief description of the activities of key organizations follows.

##### **SF COMMUNITY AGENCIES RESPONDING TO DISASTER (SFCARD)**

SFCARD provides disaster preparedness training to individual community and faith based organizations to enable each organization to continue to serve the recipients of its services after a major disaster. SFCARD also organizes and coordinates workshops to bring these community and faith-based organizations together to begin cooperative disaster preparation and planning. Their most recent workshop brought together members of the faith-based community as part of their Inter-Congregational Emergency Preparedness Pilot. Membership on the Executive Committee of SFCARD demonstrates the organization's reach into the non-profit community. Members include the San Francisco Food Bank, Glide Church, American Red Cross Bay Area Chapter, San Francisco HELPLINK/211, Jewish Community Relations Council, The Salvation Army, the Junior League, San Francisco Interfaith Council, and The Volunteer Center.

### **SF COORDINATED ASSISTANCE NETWORK (CAN)**

SF CAN is a collaborative group of nonprofit and faith-based agencies working together to strengthen San Francisco's disaster response and recovery systems. Its primary purpose is to coordinate and utilize a shared client and resource information database that shares client data among members to enhance services to clients after a disaster. In addition, the collaboration works to create joint response and recovery plans to integrate these into the city's overall response plan and enhance existing community collaboration efforts. The core agencies involved in CAN include the American Red Cross Bay Area, The Salvation Army, United Way of the Bay Area, San Francisco HELPLINK/211, The Volunteer Center, Catholic Charities CYO, SFCARD, San Francisco's Department of Emergency Management and Department of Human Services.

### **FRITZ INSTITUTE**

Fritz Institute works with government and non-governmental entities to make disaster relief more effective. About a year ago, the Institute began a multi-year program, the Bay Area Preparedness Initiative, bringing together local government, corporate, nonprofit and philanthropic leaders in the San Francisco Bay Area in a joint effort to identify gaps in disaster preparedness. The initiative developed ways to measure and improve preparedness and response capacity in the region, beginning with local community and faith-based organizations. The intent is to strengthen the organizations' disaster resilience to deliver critical disaster services to their at-risk and vulnerable populations.

In Fall 2007, 12 major service agencies agreed to participate in the Disaster Resilient Organization: Glide Church, St. Anthony Foundation, Catholic Charities, Mission Neighborhood Health Center, San Francisco Food Bank, Project Open Hand, Jewish Community Center, Episcopal Community Services, Lutheran Social Services, NICOS Chinese Health Coalition, Meals on Wheels, and Jewish Family and Children's Services. The Institute helps each organization define their preparedness criteria and disaster mission, develop a disaster operation plan, and facilitate staff trainings with assistance from the American Red Cross Bay Area chapter, City Department of Emergency Management and SFCARD.

As part of the initiative, each organization will develop a disaster service focus. For example, the Mission Neighborhood Health Center will focus its disaster mission on triage and medical care. St Anthony Foundation will focus on continuing its mass-feeding program. Upon the successful completion of the San Francisco efforts, the Fritz Institute plans to expand this initiative to the greater Bay Area.

### **BAY AREA RED CROSS**

San Franciscans can choose to be prepared for an earthquake through the Red Cross' Prepare Bay Area (PBA), an initiative to guide at least one million Bay Area residents to get ready for a disaster. PBA offers disaster information materials, preparedness presentations, and first aid training to individuals, neighborhood groups, businesses, faith-based organizations, government agencies and non-profits organizations. Online tools on the organizations website instruct on how to "Make a Plan, Get a Disaster Kit, and Get Trained."

Volunteers carry out 99 percent of the Red Cross's Disaster Services, providing shelters, mass care, logistics and related services. In addition, the Disaster Action Team and other volunteers respond to local and national disasters such as fires, hurricanes and floods providing "real life" response training. Unfortunately, the Red Cross as well as other NGO first responders do not have enough local volunteers to care for the estimated tens of thousands of people displaced persons after a major earthquake strikes the Bay Area.

### **SAN FRANCISCO INTERFAITH COUNCIL (SFIC)**

Disaster planners recognize that faith-based organizations will be an essential resource in disaster response. Places of worship exist in all neighborhoods; they will be the locations where neighbors converge following a quake. Congregations need to be prepared to take care of their own needs and to provide relief to survivors. Faith-based organizations can further disaster preparedness by making their congregations aware of programs and individual preparedness guidelines. In addition, they can encourage congregants to train in programs such as NERT and the Red Cross, which could multiply the number of self-reliant San Franciscans prepared to activate and respond in a disaster.

The San Francisco Interfaith Council has facilitated a coalition of faith congregations in disaster planning and preparedness. The council was an early financial supporter of SFCARD. In May 2008, the coalition assembled nearly 100 faith-based communities for a conference focused on their challenges and potential roles in the event of a disaster. One goal of the coalition is to form clusters so neighborhood congregations can plan together, assess area emergency assets, and share resources. These clusters could be important participants in the proposed Community Disaster Response Hubs program.

### **To strengthen collaborative planning and preparedness between the city and non-governmental organizations in order to assist communities in planning for and executing disaster response**

#### **SPUR recommends the following.**

- SPUR recognizes that SFCARD needs additional funds to staff its programs. SPUR encourages the Interfaith Council and the Red Cross to continue their financial support of SFCARD's work providing training and resources to community and faith-based organizations so they can continue to serve their clients post-disaster. In addition, SFCARD's work in bringing organizations together to work collaboratively is essential to community disaster response. SPUR urges and encourages other foundations and public and private organizations to lend their support.
- SF CAN administers a shared client and resource information database. SPUR urges the city to include SF CAN in its annual disaster drills to test and practice the efficacy of the database. SPUR urges SF CAN's member organizations to drill, at least annually, using the shared client database to strengthen their collaboration agreements.
- SPUR urges Fritz Institute and all cooperating organizations to develop and implement a plan to ensure of the Disaster Resilient Organization initiative.
- SPUR urges the city to increase its support training, material and leadership of faith-based communities so they can become one of San Francisco's most effective disaster preparedness, response and recovery resources. Linkage with the Community Disaster Hubs can help to coordinate, support

and mobilize these communities.

#### DISASTER PREPAREDNESS TASK FORCE – NEXT STEPS

**The Task Force intends to research, analyze and prepare reports on the following topics:**

1. emergency medical response planning for mass casualties;
2. emergency planning and preparedness for mass care and shelter;
3. the Department of Emergency Management's All Hazards Strategic Plan and other departmental Emergency Operation Plans and how they relate to regional and state disaster planning.

#### APPENDIX I:

STEPS YOU CAN TAKE TO IMPROVE YOUR CHANCES OF SURVIVAL. THE CHOICE IS YOURS. ARE YOU PREPARED?

- Everyone must assume personal responsibility to be prepared. Your life could change radically following the inevitable next earthquake. Consider ...
- Where will your family be? Do you have a family disaster plan? Do you update it annually and keep your family members informed?
- Will you have medical services? 911 emergency system and hospitals and trauma centers may be physically damaged and will be undoubtedly overwhelmed. Do you have needed prescription drugs, first aid supplies at home, in your car and work? Are you trained to provide emergency medical assistance?
- Will you be able to get home? Road damage and closures, and public transportation and airports will experience interruptions in service. Do you have alternate plans to travel home or stay at work for several hours or days? If you cannot get home who will care for your family members?
- Will you be able to stay in your home? Your home may be damaged and unsafe and your personal necessities may be inaccessible. Do you have a disaster "go-kit" containing water, food, first aid supplies, flashlight, radio, poncho, space blanket, and warm clothes? Do you have sufficient supplies for your family to sustain them for at least one week? Do you have a "shelter-in-place" kit including plastic sheeting, hammer, nails and other materials for repairing your home or workplace to live in following a property-damaging quake?
- Can you live without services upon which you rely? Drinking water will be in very short supply. Gas and electricity may be out for days or weeks. Telecommunications will be overloaded or unavailable. Waste treatment facilities could be out of commission. Gas will be in short supply and possibly, rationed. Bank operations may be disrupted. Grocery, drug and other retail stores may be closed or unable to restock shelves for an extended period.

How will your job be affected? Business may sustain damage to buildings and disruptions of operations. Employers—private, public, and non-profit—need to develop and implement business continuity and recovery plans. The plan should be updated and tested annually. Without a recovery plan, many small businesses are likely to fail. Employers and their employees need to prepare work place disaster plans, including disaster supplies to sustain and shelter workers in-place for days.

#### APPENDIX 2:

DISASTER PREPAREDNESS RESOURCES

- [72hours.org](http://www.72hours.org)/San Francisco Department of Emergency Management's excellent website providing thorough information on a wide range of disaster preparedness and response issues: [www.72hours.org](http://www.72hours.org)
- Neighborhood Emergency Response Team (NERT) provides free training on how to prepare for a disaster at home, car and work as well as hands on skill development in light search and rescue, fire suppression, disaster first aid, and utility shutoff. [http://www.sfgov.org/site/sfnert\\_index.asp](http://www.sfgov.org/site/sfnert_index.asp)
- ACS/Auxiliary Communication Service are volunteer radio operators providing communication during a disaster: [www.sfacs.net](http://www.sfacs.net)
- AlertSF Register is the place to register your email address and/or text enabled device (cell phone, pager, computer, etc) for text alerts from the City and County of San Francisco about potential hazards and/or post-disaster information: [www.alertsf.org](http://www.alertsf.org)
- Association of Bay Area Governments has earthquake shake maps and disaster preparedness information
- The Bay Area Red Cross Chapter provides disaster preparedness and response information including first aid training courses and ways to become actively involved such as Disaster Action Team and training for shelter operations: <http://www.bayarea-redcross.org/> and [www.preparebayarea.org](http://www.preparebayarea.org) or 1-877 PREPBAY
- Building Owners and Managers Association of San Francisco has a Disaster Preparedness and Emergency Resource Links button on its homepage: [www.bomasf.org](http://www.bomasf.org)
- Business Recovery Managers Association Business (BRMA) provides business disaster recovery guidance: [www.brma.com](http://www.brma.com)
- Emergency Digital Information Service (EDIS) is a state service for residents in any county to sign up for alerts via email or wireless devices: [www.edis.ca.gov](http://www.edis.ca.gov)
- Federal Emergency Management Agency provides information and help after a disaster: <http://www.fema.gov/assistance/process/guide.shtm>

- Prepare Now has emergency preparedness information for vulnerable populations: [www.preparenow.org](http://www.preparenow.org)
- SFCARD/San Francisco Community Agencies Responding to Disasters provides training for human services agencies and assistance in the development of agency emergency plans. 415-955-8946 or [www.sfcad.org](http://www.sfcad.org)
- United States Geological Service (USGS) developed, with numerous disaster organizations, an outstanding publication, "Putting Down Roots in Earthquake Country: Your Handbook for the San Francisco Bay Region". It is a comprehensive guide for preparing and responding to life in "Earthquake Country". It may be ordered from the USGS: <http://earthquake.usgs/regional/nca/prepare>

### **APPENDIX 3:**

#### **EMERGENCY PLANNING EFFORTS AT FISHERMAN'S WHARF**

The Fisherman's Wharf Community Benefit District sponsors a committee called PIERsafe (Partners in Emergency Response), which meets regularly to develop emergency plans, conduct disaster exercises and train as many people as possible within the area.

PIERsafe includes representatives of the hotels, restaurants, ferry and boat operators, tourist attractions, retail stores and other businesses at Fisherman's Wharf. The National Park Service, San Francisco Police and Fire Departments and other public sector partners are active participants.

PIERsafe's goals include the following: updating the community's emergency plan, recruiting new members to become NERT trained, conducting an earthquake exercise in the fall of 2008, increasing the involvement from the community in the PIERsafe program, and continuing to publish a quarterly PIERsafe newsletter with preparedness information and safety tips for the Fisherman's Wharf Community.

In 2008, NERT training was conducted at Fisherman's Wharf in April, a Red Cross first aid course was offered in June, and the annual earthquake exercise will be held in October. PIERsafe planning meetings are held each month at Fisherman's Wharf. PIERsafe can be found online at <http://visitfishermanswharf.com/aboutus/latestupdates.aspx> The Fisherman's Wharf PIERsafe is an example that other business associations, large buildings and business/employer groups could emulate. Participation by businesses in the emerging Community Disaster Response Hubs brings valuable resources and insights that will further San Francisco's preparedness and response. There are cases where a business district (ie. Union Square, Financial) could become a hub serving employers, employees, visitors and residents in the area.

### **APPENDIX 4:**

#### **LESSONS LEARNED**

##### **LESSONS LEARNED: JAPAN**

Despite well-laid plans, Japan learned painful lessons from the 1995 magnitude-7.2 earthquake, which devastated Kobe and killed 6,433 people. The badly botched emergency response and relief effort was Japan's version of Hurricane Katrina, leading to public outrage and a seriously weakened national government. As a result, Japan revamped its disaster response systems, emphasizing a preventative program of seismic retrofitting, building code upgrades, seismic warning technology, hazard/risk maps, adoption of California's Incident Command System, and communications and coordination strategies. Japan budgets \$22 billion dollars annually for "disaster management", funding divisions to detect and minimize damage.

Japan, approximately the same geographic size and latitude as California, has a population of 127 million—over three times that of California's 38 million people. Yet, Japan has successfully institutionalized a national disaster drill, on National Disaster Prevention Day, held each year to mark the 1923 Kanto earthquake that flattened Tokyo and caused 100,000 deaths. Reinforcing national awareness, one million people participate in the disaster preparedness drills, evacuation drills, table-top exercises, search/ rescue, self-help, and mutual assistance systems. Similarly, during the year, education, tests and drills focus on a myriad of disaster scenarios throughout the country. Drills are mandatory and department stores carry earthquake preparedness kits. Starting early in life, school education, coupled with self/family/community education, fosters a "culture of disaster preparedness."

"To lead an untrained people to war is to throw them away."

— *Confucius*

##### **LESSONS LEARNED: CUBA**

During a hurricane alert in Cuba, a foreigner wrote admirably about the large number of Cubans who safeguarded tourists, constantly advising them of emergency procedures. Like village elders in the Indonesian islands who moved people to high ground when the ocean receded, prior to the massive 2004 Asian Tsunami, many seeds of leadership and knowledge need to be planted throughout the society. With proper nurturing, these seeds trigger a ripple effect of self-sustaining emergency awareness and responsibility.

"In 2004, Oxfam International, a nongovernmental organization that helps developing nations recover from disaster, released a report about the Cuban model of Community-Based Disaster Management. Unlike the United States, where disaster relief means externally supporting disaster victims and throwing large amounts of resources in a one-size-fits-all method after disaster strikes, Cuba focuses on localized disaster-preparedness systems and tailored, specialized relief based on prior community organization. For instance, adequate shelters and supplies are available in every community. People know where these are before hand and know what to do. Everybody has a prearranged role. Also, nongovernmental people serve as leaders."

—*San Francisco Chronicle, November 9, 2005*

Before the 2004 Hurricane Ivan's 160 mph winds hit Cuba, the government evacuated 2 million people. As a result: not a single death or serious injury. The "Oxfam" Study noted: "The single most important thing about disaster response in Cuba is that people cooperate en masse". Also, "The Cuban population clearly has developed a 'culture of safety'." People at all levels of government and society, including children, embrace roles in reducing risks and saving lives. Preparedness begins in grade school, continuing through higher education, the workplace and adult education at the community level. Healthcare professionals have routine disaster-response training. Over 95 percent of the population has been trained in a four-step framework: information, alert, alarm

and recovery.

Under a 1976 law, every adult has civil defense training. Also, local and provincial officials serve as the civil defense officials, providing continuity of recognized leadership with intimate knowledge of their region. Cuban emergency preparedness focuses on citizen education, community risk mapping, annually updated emergency plans, simulation drills and local leadership—through investment in social capital. Community-Based Disaster Management enables communities to mesh with other residents, local employers and indigenous community-based organizations, forging a social foundation for disaster preparedness.

#### **LESSONS LEARNED: MAURITIUS**

Mauritius, a small Indian Ocean island, resides in weather zone that meteorologists call a "cyclone factory". This poor, non-industrial society has a sophisticated disaster preparedness program, which rich, technologically-advanced nations can, but have yet to, emulate. Mauritius' islanders have evolved towards a sophisticated system of precautions—with a network of cyclone shelters, education, regular drills, early warning systems and mandatory closings of businesses and schools prior to threatening storms. The monstrous 2007 Cyclone Gamede, which set global meteorological records for rainfall, caused only two deaths on the island.

"I happened to be in Mauritius when Hurricane Katrina struck, I still remember the open-mouthed disbelief with which people there watched the unfolding of the events in Louisiana. Mauritius is a country that has learned, through trial and experience, that early warnings are not enough—preparation also demands public education and political will. In an age when extreme weather events are clearly increasing in frequency, the world would do well to learn from it."

—Amitav Ghosh, *Op-Ed Contributor, New York Times, May 10, 2008*

#### **LESSONS LEARNED: BERKELEY**

Bolstered by strong political leadership, particularly a single Council member, in the 1980s and reinforced by the Loma Prieta Earthquake in 1989 and the East Bay hills firestorm in 1991, the City of Berkeley has been a local pioneer in mitigation measures and community-based disaster preparedness. Berkeley citizens have been willing to tax themselves "to protect their way of life". Bond measures of \$362 million have enabled a sustained program of seismic safety and mitigation, retrofitting public buildings and constructing above-ground water systems. A majority of private homes have been seismically retrofitted, facilitated through a subsidy system that provides a rebate of 0.5 percent of the total price of a newly purchased house.

"The city of Berkeley, California, has piloted seismic and fire safety efforts in all sectors of the community. The municipal government, the local school district, and the University of California, Berkeley, campus have instituted mitigation policies and safety programs that collectively have reduced community risk. Using innovative political, financial, and legislative approaches, Berkeley is systematically reconstructing or eliminating its most hazardous buildings. Much of this progress can be attributed to an atmosphere in which leaders take responsibility for reducing risk..."

—*American Society of Civil Engineers, 2002*

Berkeley's "Community Disaster Supply Program" fosters neighborhood self-help and leadership. To qualify for free pre-positioned 6'x6'x6' caches of emergency supplies, a competition process identifies motivated neighborhood groups, who are city-trained, organized and willing to commit to a "Letter of Understanding" for specified responsibilities in disaster preparedness and response. The Office of Emergency Services promoted the "You're On Your Own!" message with flyers and "Are You Ready?" door hangers—attracting community volunteers to Community Emergency Response Training (CERT) classes. \*

#### **ABOUT THE AUTHORS**

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