Emergency Preparedness & Response

One company's successful approach

By Bill Mitzel

WHAT IS INVOLVED in implementing an effective emergency preparedness plan? This article highlights key elements of a program developed by Unigard Insurance Group, headquartered in Bellevue, WA, and part of Winterthur U.S. Holdings Inc. Unigard's home office facilities include four buildings, totaling 145,000 sq ft and 305 employees.

In 2005, the company received the International Association of Emergency Managers (IAEM) award for Business and Industry Preparedness. This annual award recognizes a company for implementing a business continuity plan that considers multiple hazards, coordinates with local emergency management and is a model for other companies.

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History of the Emergency Response Team

In the late 1980s, the fire chief of Mason County, an emergency medical technician (EMT) from the Bainbridge Island Fire Department and an EMT from the City of Kirkland Fire Department, were employed full time in the information technology department. This group became interested in a 1-week disaster preparedness course offered by the nearby Pierce County Fire Department. Senior executives, including the CEO, agreed to pay for the course.

Following the course, several ideas were shared and it was agreed they would be implemented to enhance the company's emergency preparedness program. Initial steps included establishing fire, medical and search-and-rescue teams as a core emergency response team (ERT). The 54 employee-volunteers that make up the company's ERT are the key to the success of the program. In addition, a 20-ft refrigerated cargo container was purchased to store team equipment and emergency supplies when these teams were initially formed. The public information officer (PIO) and the emergency preparedness manager and community preparedness education coordinator from the Bellevue Fire Department were key contributors to the program's initial development as well.

Defining Moments of the Program

- 1990 (Dec. 18): More than 1 foot of snow fell on the Bellevue and Seattle areas. This boosted senior management interest in the ERT and helped expand the funding of its capabilities.
- 1992: An ERT open house was held with officers and representatives from Bellevue and the neighboring Redmond and Kirkland fire departments. As a result of follow-up conversations, the cities of Bellevue and Kirkland incorporated remotely located cargo containers into their emergency plans.
- 1993: A windstorm brought hurricane-force winds to western Oregon and Washington. The company was without power for 3 days. After this storm, a second 20-ft cargo container was purchased. It would serve as an emergency operations center (EOC) and would be equipped with two generators, providing more than 30 hours of back-up power to the home office facilities. (Thanks to recent upgrades, the generators now provide back-up power for 3 days without refueling.)
- 1996: Satellite phones were purchased and 25 handheld radios were added to improve the ERT's on-site communications.
- 2001 (February): The Nisqually Earthquake, measuring magnitude 6.8 on the Richter Scale with a

Abstract: *This article highlights key elements of an emergency preparedness program developed by Unigard Insurance Group. In addition to detailing the overall Emergency Response Team structure and support, training requirements and roles for specific subteams are described.*

36-mile depth caused $1.4 billion in property damage primarily from Olympia north through Seattle. Although damage in the Bellevue area was minimal, telecommunications and transportation were disrupted for several hours. The quake led to increased executive support for preparedness efforts, including fine-tuning the team's structure and training.

•2001 (September): In response to the attacks of Sept. 11, 2001, security and preparedness rules changed across corporate America. As a result of those events, Unigard's parent company mandated that all of its companies meet higher minimum standards for business continuity, security and emergency preparedness. Because of previous activities in these areas, all but a few of the directives were already met or exceeded. For example, trained response teams were available, vulnerability assessments of the facilities were being completed, and fire and intrusion alarms had been installed and tested, along with related preparedness initiatives.

Team Structure & Support

The ERT is part of the risk management program and has a well-defined structure (Figure 1). Two full employee evacuation drills are completely annually, followed immediately by ERT practice sessions. As part of these sessions, roles are preplanned for several employees who volunteer to be missing and/or injured as the ERT goes into action to address multiple preplanned scenarios developed by the emergency coordinator, team leaders and local fire authorities. Employees who are not ERT members or who are not role-playing during the practice session return to work after no more than 20 minutes.

Practice sessions include multiple search and light rescues, injury evaluation and treatment, utilities that need to be shut down, and varying damage assessment scenarios that result in green-, yellow- or red-tagging of buildings per the guidelines in Applied Technology Council's (ATC, 2005) *Postearthquake Safety Evaluation of Buildings*. The evacuations and practice sessions last 50 to 75 minutes.

External observers—generally specialists from other companies in the business continuity and/or emergency response fields (including regional fire authorities)—are invited to the drills. The June 2006 drill was observed by specialists from Microsoft, the University of Washington, Starbucks and the Bellevue fire chief. Their feedback is included in the post-drill/practice session debriefings that are conducted within 1 week. Post-drill debriefings also include critical feedback from team members and team leaders.

Training for each subteam of the ERT is based on the Community Emergency Response Team (CERT) program, developed by the Los Angeles Fire Department in 1985, with some additional training for company-specific operations (Citizen Corps).

The company's ERT has several unique differences from traditional CERT programs. Only a specific segment of the full 20- to 25-hour CERT training (such as the disaster medical segment or search-and-rescue segment) is required to be a member of a specific ERT subteam (such as the medical or search-and-rescue team).

While training in the specific segments is as detailed or more so than in the full CERT program, there is no requirement to complete multiple segments as there is with the full CERT training. However, slightly more than 15% of team members are cross-trained on two or more subteams, and four members are trained for all subteams—which is "the equivalent of completing the full CERT program"

according to the Bellevue Fire Department's community preparedness coordinator.

This customized training approach removes employees from their jobs for only 4 to 5 hours to complete initial training. It is much more accommodating for employees and their supervisors than completing the full CERT training course. After initial team training and orientation, members spend an average of 8 to 10 hours per year participating in drills/practice sessions, refresher training and related pre- or post-drill meetings/debriefings.

The company also strives to minimize turnover on the teams—it currently is below 10% annually. This is achieved by following the drills with meetings that encourage new approaches/ideas; providing lunch for team members after the drill; and taking comments and suggestions from drill observers to continually improve the program. Active members also receive annual letters of appreciation sent by senior management to their supervisors.

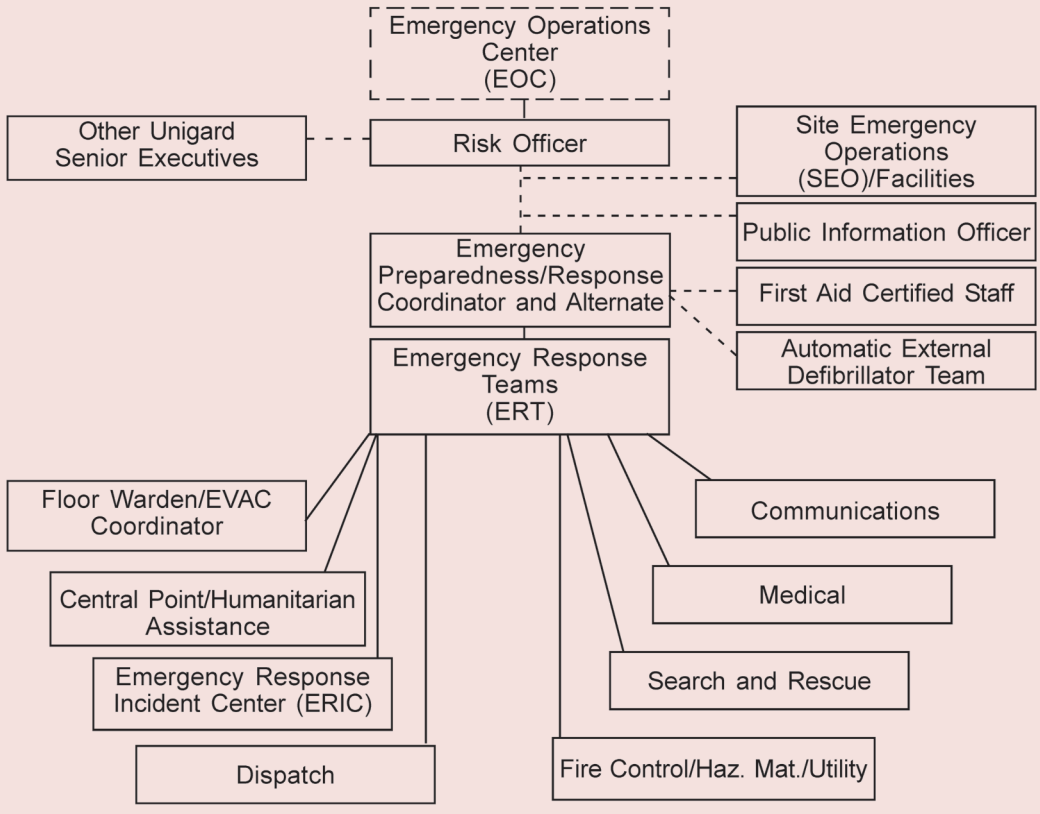
National Fire Protection Association (NFPA) 1600, Standard on Disaster/Emergency Management and Business Continuity Programs, 2004 Edition, serves as a guideline for the program. However, the local fire department has approved customized protocols and training procedures for some planning and operations. Each team's protocol is stated on one page. It specifies steps to take when the ERT is activated; details responsibilities if serving on a Red/Blue Initial Assessment Team (established for quick response and made up of the first members to respond, resulting in an expedited evaluation of the condition of buildings and life-safety concerns); lists required PPE and radio check requirements; and includes references to guidelines and resources such as the ATC 20-1 field manual for building damage assessment. Adherence to the National Incident Management System (NIMS) is also under review with Bellevue Fire Department personnel.

Employee Emergency Training & Community Partners in Preparedness

All employees receive training in emergency procedures. This addresses medical emergencies (the AED team is dispatched via an enhanced 9-1-1 dispatch system at the company's home office), fires, earthquakes and improvised incendiary device/bomb threats. In 2005, this training was expanded to include workplace violence prevention. Technical assistance was received from the PIO of the Bellevue Police Department, the human resources training manager from the parent company and input from many other professional preparedness and training experts. The training program is completed in 1 hour.

Figure 1

Emergency Response Structure



Disaster Assessment Training Outline

The following topics—from ATC's *Field Manual for Postearthquake Safety Evaluation of Buildings*—are covered in DAT.

Overview of Building Safety Evaluation
- Safety evaluation procedures
- Essential facilities
- Right to inspect
- Posting system
- Posting/barricading procedures
- Changing posting classification
- Aftershocks
- Use of judgment required

Rapid Evaluation Method
- Rapid evaluation criteria
- Inspection procedure

Detailed Evaluation Method
- Detailed evaluation criteria
- When the structural system is not viewable
- Posting criteria
- Inspection procedure

Inspection & Posting
- Dwellings and small buildings
- Large wood-frame structures
- Masonry structures
- Tilt-up structures
- Concrete structures
- Steel-frame structures
- Geotechnical hazards
- Nonstructural hazards
- Essential facilities

Related Topics
- Human factors following earthquakes
- Field safety for damage inspectors

1) Example 1: Rapid evaluation
2) Example 2: Detailed evaluation

ERT members receive training on the use of portable radios as well. ERT staff experienced with EMS/dispatch and radio use conducts this 30-minute hands-on training. Annual refresher training is provided to all members.

Building damage assessment training (DAT) is recommended for all members of the Fire and Search-and-Rescue teams; other ERT members are encouraged to attend as well. ATC provides this DAT every 4 years. This training demonstrates proper techniques in completing "rapid evaluation" and "detailed evaluation." A list of topics covered is provided above. An even more detailed engineering evaluation, if needed, would be contracted out to preapproved engineers. In addition, each DAT member receives ATC's *Postearthquake Safety Evaluation of Buildings* field manual.

DAT lasts 4 hours and includes surveying buildings and discussing potential earthquake damage given the building's type and year of construction. During drills, mock damage to buildings is reported to the initial assessment team and postings indicating restrictions are displayed (Photo 1). During drills, ERT practice sessions and emergencies, ERT members who have completed the damage assessment course wear an orange armband on their left upper arm to distinguish them from other team members (Photo 2).

Specific Team Training & Roles

On-campus training provided by the Bellevue Fire Department is open to neighboring businesses if the classes are not full.

Floor Wardens

Buildings are divided into evacuation areas, and each floor has two to four evacuation areas. Each evacuation area has an assigned floor warden and an alternate. Both wardens and alternates complete formal evacuation training biannually. This training is provided by a firm that specializes in emergency evacuation planning and training.

The training begins by reinforcing the all-employee emergency procedure training. It also addresses nonambulatory/ambulatory evacuation, first aid and floor plan/exit awareness, and includes a review of foreseeable evacuation scenarios, emphasizing postearthquake procedures. The floor admiral (an evolved informal position title) provides guidance to the 36 floor wardens and alternates. Floor warden/alternate training is 3 hours biannually. An annual audit of the evacuation areas by the emergency coordinator, alternate coordinator and floor admiral helps floor wardens and alternates maintain accurate records of employees, remain aware of rooms and other areas within their evacuation areas, and stay abreast of primary, secondary and/or other exits from their area.

Central Point/Humanitarian Assistance

This team is made up primarily of human resources (HR) staff. There was a natural tendency for HR staff to be involved in accounting for employees and collecting floor warden reports after evacuation (in acting as the Central Point Team). After this task is accomplished, they are available to provide employee assistance (acting as the Humanitarian Assistance Team). Updated employee evacuation area lists are maintained in an off-site lock box that can be accessed by this team.

Members of this team also complete crisis-communications training, which is provided by local police and fire personnel. It addresses human behavior during and immediately following a disaster, and helps team members understand and prepare for various emergency/disaster behavioral scenarios. This training takes 3 hours and is offered every 3 years. Many other ERT members have also completed crisis-communications training.

According to those involved, the training has "exceeded expectations." The team co-captain reports that in one session the trainer "gave several examples of what to expect in a disaster based on his experience on trauma response teams, such as leading and preparing counselors and chaplains at the San Francisco airport as they awaited the arrival of family and friends of passengers from Flight 93 on Sept. 11, 2001.

In addition, a contingency plan is in place with a nearby drug store. This arrangement and a secured emergency cash reserve gives the Humanitarian Assistance Team and the incident commander options for obtaining food and supplies during prolonged operations. The Medical Team can also be resupplied with this resource.

Photo 1 (top): Mock damage to buildings is reported to the initial assessment team and postings indicating restrictions are displayed.

Photo 2: During drills and emergencies, ERT members who have completed the damage assessment course wear an orange armband to distinguish them from other team members.

Photo 3 (above, left): All members of the medical team complete first-aid, CPR and disaster medical operations training. One of the team's objectives is to set up the triage area within 15 minutes of an event.

Photo 4 (above, right): Emergency operations center and emergency response incident containers.

Medical

All members of this team must complete first-aid, CPR and disaster medical operations training. Renton Fire Department staff offer the disaster medical operations training, which is based on the START (simple, triage and rapid treatment) system and is provided every 3 years. First-aid, CPR and AED certification and recertification are provided annually on site as well through a contracted vendor. Most Medical Team members also serve on the company's AED Team.

One of the Medical Team's objectives is to set up the triage area within 15 minutes of an event (Photo 3). For the last two drills, team members report that the area has been set up within guidelines in under 12 minutes, just as the preplanned "walking wounded" began to arrive.

Search & Rescue

All team members must complete simple search-and-rescue training provided by local fire department personnel. This training emphasizes rescuer safety, light search-and-rescue operations, search methodology and markings, and use of effective cribbing and leverage tools. This hands-on, 3-hour training program is offered every 3 years. Most team members have also completed first-aid and CPR training.

Fire/Utility Shut-Off

Team members must complete fire extinguisher use training (provided by the Bellevue Fire Department) and emergency utility shut-off training that has been customized to the company's facilities. A detailed emergency utility shutdown guide, broken down by building and by utility, includes photos and lock-out/tagout requirements. Both incoming natural gas valves at the company's facilities are earthquake valves that turn the gas supply off automatically when earth movement equal to or greater than a magnitude 5.2 earthquake is sensed. These valves limit post-earthquake fire-follow exposures.

Dispatch

This team completes periodic training on the use of handheld radios, setting up a base radio, troubleshooting and logging communications. Team members also stay updated on training competencies of other ERT members and resources available from the ERIC team. Most team members are cross-trained with at least one other team to improve their understanding of other teams' operations and protocols. This cross-training has helped team members to prioritize dispatches with an emphasis on recognizing life safety concerns.

Emergency Response Incident Container

This team is responsible for managing the equipment container that supports the ERT. Team members initially distribute team-specific supply containers to support rapid dispatch. Medical Team equipment is loaded first onto that team's cart to expedite transport to the triage area and support the objective to set up within 15 minutes. The ERIC Team then monitors radio traffic and prepares, checks out and tracks all equipment. Photo 4 shows the ERIC and EOC containers.

Communications

This team reports to EOC along with the incident commander, the alternate incident commander and the site operations coordinator. Team members are trained to set up satellite phones and computers; use scanners to monitor area law enforcement and emergency medical services activity; and use mapping software to help employees find safe routes home based on road and/or bridge closures. Within 10 minutes of activation, the EOC also has local TV/radio, weather radio and amateur radio equipment available.

The Program's Primary Focus

To expedite the initial assessment of building damage, two Initial Assessment Teams (Red and Blue) made up of DAT-trained Fire Team and Search-and-Rescue Team personnel are dispatched on pre-

arranged and complementary routes. These teams are typically equipped, organized and dispatched within 12 minutes of the start of a drill.

From a human-loss standpoint, the main concern for businesses operating along the northwest coast of the U.S. is a mega-thrust earthquake (although a potential avian flu pandemic is also of concern). The Northwest is well into the average cycle for a mega-thrust occurrence. Therefore, being properly prepared is not an option.

A lesser but still catastrophic event, such as a rupture of the nearby Seattle Fault that is 4 miles south of the home office, requires the same degree of preparedness. A study by the Earthquake Engineering Research Institute (EERI) and the Washington Military Department Emergency Management Division (2005) used a "foreseeable" 6.7 magnitude earthquake on the Seattle Fault (shallow quake with fault rupture) scenario. Projected losses were as follows:

- property damage and economic loss of about $33 billion;
- more than 1,600 deaths and more than 24,000 injuries;
- nearly 9,700 buildings destroyed;
- more than 29,000 buildings severely damaged and unsafe to occupy and another 154,500 buildings moderately damaged whose use is restricted;
- nearly 130 fires causing $500 million in property damage.

To encompass all reasonably foreseeable hazards (a slight adjustment to an "all hazards" approach), events less serious than major earthquakes are also addressed in the preparedness/response program based on periodic vulnerability assessments.

Outside of the company's Bellevue facility, the company has six branch offices with 7 to 25 employees each. Emergency procedure training is provided to these employees as well. The procedures are customized for each office based on the number of employees, environment and cooperative efforts with landlords.

Resources for Readers

Cascadia: The Hidden Fire
This DVD uses earthquake survivors' accounts and interviews with experts to uncover the significant earthquake dangers that are unique to Cascadia, the region that surrounds the Cascade mountain range, extending from southern British Columbia to northern California. The documentary discusses the effects of previous earthquakes in the region, including the 1964 Alaska earthquake and the 2001 Nisqually Quake.

Postearthquake Safety Evaluation of Buildings, 2nd Edition
Published by the Applied Technology Council in 2005, this pocket-sized field manual summarizes postearthquake safety evaluation procedures in concise format designed for ease of use in the field. More information is available at www.atcouncil.org.

Community Emergency Response Team
This program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can help others in their neighborhood or workplace following an event when professional responders are not immediately available to help. More information is available at www.citizencorps.gov/cert/index.shtm.

NFPA 1600
Titled Standard on Emergency Management and Business Continuity Programs, this standard establishes a common set of criteria for disaster management, emergency management and business continuity programs. More information is available at www.nfpa.org.

National Incident Management System
Although most emergency situations are handled locally, if a major incident occurs help may be needed from other jurisdictions, the state and the federal government. NIMS was developed so responders from different jurisdictions and disciplines can work together better to respond to natural disasters and emergencies, including acts of terrorism. NIMS benefits include a unified approach to incident management; standard command and management structures; and emphasis on preparedness, mutual aid and resource management. More information is available at www.fema.gov/emergency/nims/index.shtm.

Scenario for a 6.7 Magnitude Earthquake on the Seattle Fault Study
Published by Earthquake Engineering Research Institute and the Washington Military Department Emergency Management Division in 2005, this 168-page report examines the Puget Sound region's and the State of Washington's vulnerability to the Seattle Fault. The report describes the effects a magnitude 6.7 earthquake would have on the region's communities in several areas, including emergency response, economic impacts, ground failures, performance of utilities, transportation, buildings and essential facilities. The report also includes recommendations and a call to action.

Going Forward

Providing advanced emergency preparedness/business continuity consultation to independent agents and commercial lines insureds is planned for mid- to late-2007. Proven elements of the in-house program will be used as a template (adjusted based on business size) in association with proven and easy-to-use features from available packaged programs (such as those from American Red Cross and Federal Emergency Management Agency) to deliver a best practices product. For insureds that have advanced and active preparedness/continuity programs, the company is considering a potential reduction in business interruption insurance premium (a component of property coverage). Semiannual ERT drills and exercises will continue, as will follow-up debriefings, to promote continuous improvement. ■

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