

Earthquake Hazards Information Outreach for Small Businesses – San Francisco Bay Area

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Key Words – Education, Mitigation, Emergency Preparedness, Recovery and Reconstruction

Investigations Undertaken

The effort has three main objectives:

1. Effectively communicate the risk of earthquake hazards to the small businesses community in the Bay Area using the Internet to enable that information to be neighborhood specific.
2. Provide mitigation and preparedness information appropriate to those businesses in an easily accessible format on the same Internet site, linking mitigation to loss reduction.
3. Motivate those businesses to use that information.

During the period from October 1, 2002 through September 30, 2003, this project focused on the following tasks:

1. Using the materials from a focus group held with small businesses in the Oakland-Berkeley area in January 2002 to begin to design appropriate materials.
2. Developing and evaluating a number of new ways to access the earthquake hazard information, including both ground shaking and liquefaction, risk, based on the geographic location of the business.
3. Rethinking ways to provide information on typical nonstructural damage for the shaking hazard level, as well as basic mitigation measures related to building contents (such as tie-downs for shelving and file cabinets).
4. Weighing the pros and cons for providing information on the types of damage to buildings typically occupied by small businesses by their shaking hazard level, as well as basic ways to contact engineers, contractors, and building departments to initiate further analysis.
5. Developing basic information on the effects of liquefaction and shaking on transportation and utilities in the neighborhood of businesses, as well as associated preparedness information.
6. Investigating ways to collect personal accounts of preparedness activities in order to use them to help motivate other businesses to act on the information provided.
7. Developing ways to publicize the availability of these data in creative ways.

Results – October 2002 Through September 2003

Focus Group and Other Changes in Business Preparedness Issues – The focus group discussion led to three key findings that have delayed the “release” of the web-based materials. First, the group strongly emphasized that the preparedness message had to include a strong multi-hazard section that dealt with preparedness to *all* natural hazards. Second, there was also a strong suggestion to have any probability information as specific as possible, pointing to a need to postpone the outreach until

USGS finalized the latest round of probability information in April 2003, as well as the need to work with USGS in creating additional probability information. Third, the businesses were still in shock following the events of September 11, 2001, and felt that it would take some time for small businesses to internalize the implications of terrorism on natural disaster planning.

Accessing Ground Shaking and Liquefaction Hazard Information – The way in which the ground shaking and liquefaction hazard maps are accessed has been modified. The new “driver” for these maps asks the question about city and earthquake scenario on the same graphics-based web page, thus simplifying access for the user. Clearer links to “Frequently Asked Questions” and other information are now available. In addition, new ways to access the maps using zip code and address have been programmed. These new search tools are not yet “live” due to technical and policy considerations related to scenarios versus “maximum” or probabilistic shaking maps, as well as related to the appropriate resolution of the maps, that will again be discussed by the Review Committee for this project at its December 2003 meeting.

Nonstructural Damage and Mitigation Information – Prior to work on this project, ABAG had posted general ways of bracing and anchoring typical building contents on its web site. As a first step in improving that information, typical “solutions” have been separated so that bracing and anchoring of residential contents is now separate from office contents. The new business pages are being dramatically expanded. A new section related to hazardous materials is being developed at this time.

Structural Damage and Mitigation Information – Two factors are causing delay in implementing the section on structural damage. First, the focus group expressed reservations in dealing with an issue where small businesses have so little control. They pointed out that, in the neighborhoods where they did business, approximately 80% of the businesses were in space that they rented, while only 20% of the businesses owned their building. Second, the structural variety of commercial structures in the Bay Area is quite large and complex. The consensus of those working on this project was that the techniques for dealing with structural damage information should be developed for residential, particularly multifamily residential, prior to use for this outreach effort dealing with small businesses. As of October 2003, an innovative quiz-based technique for communicating structural damage information on multifamily residential structures was completed.

Infrastructure Damage and Mitigation Information – In an earlier effort, ABAG developed a checklist for businesses on dealing with transportation disruptions following earthquakes with the assistance of several large businesses in the Bay Area, as well as transportation providers. That checklist is being modified and expanded to deal with transportation as well as utility disruptions.

Success (and Failure) Information – Several studies have been undertaken on the impact of earthquakes on small businesses. ABAG has collected information from a few of the larger ones that highlight tales of success. The current issue is access to, and approval by, the affected businesses so that their stories can be posted on the web.

Publicity Planning – Several ideas for publicizing the results of this project have been developed. In spite of the fact that the resources will be primarily web based, the publicity for that information

needs to be handled through the traditional media, as well as through city business licenses and organizations serving small businesses. Work on this effort is continuing.

Non-Technical Summary

The Association of Bay Area Governments (ABAG) is developing web-based *Tools for Businesses to Tame Disasters*. Many of these resources for small businesses will be multi-hazard in focus, particularly those dealing with speeding business recovery. Others will focus on increasing employee and customer safety during earthquakes. Recovery tools will focus on strategies to manage business disruption, plan for transportation and utility disruption, and plan for reoccupying buildings. Safety tools will include information on bracing and anchoring building contents, natural gas safety, special hazardous materials issues, tort liability, and calculating the benefits and costs of mitigation.

Reports Published

No reports have been published.