

MODELING EARTHQUAKE CASUALTIES FOR PLANNING AND RESPONSE MODEL DEFINITION AND USER OUTPUT REQUIREMENTS

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Included is a summary of current casualty estimation data, a description of a generic model, used in a Geographic Information System; a ten step approach to model development, and a brief discussion of the first three steps in that process.

Introduction

The pre-event estimation of earthquake casualties for planning purposes is a difficult problem. Also difficult, is trying to estimate probable casualties at the time of the emergency when there is no or very little casualty information coming in from the affected area.

My perspective on these problems comes from involvement in developing emergency plans with local jurisdictions and several large industries over the last eight years. I am also a strong advocate for the application of geo-processing system technology in emergency preparedness planning.

Current Approach to the Problem

For every client whether it is a municipality or a company, an essential first part of the response planning process is the hazards analysis and risk assessment. This is a required element in the planning process.

The estimation of possible casualties is an integral part of the hazards analysis. It provides a baseline from which all planning proceeds.

How is pre-event casualty estimating being done now? To a large extent it is not being done, or at least not being done very well. Sometimes the estimating approach at the local jurisdictional level