

Helena Area HAZUS Analysis



Project Summary Report

written by

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for
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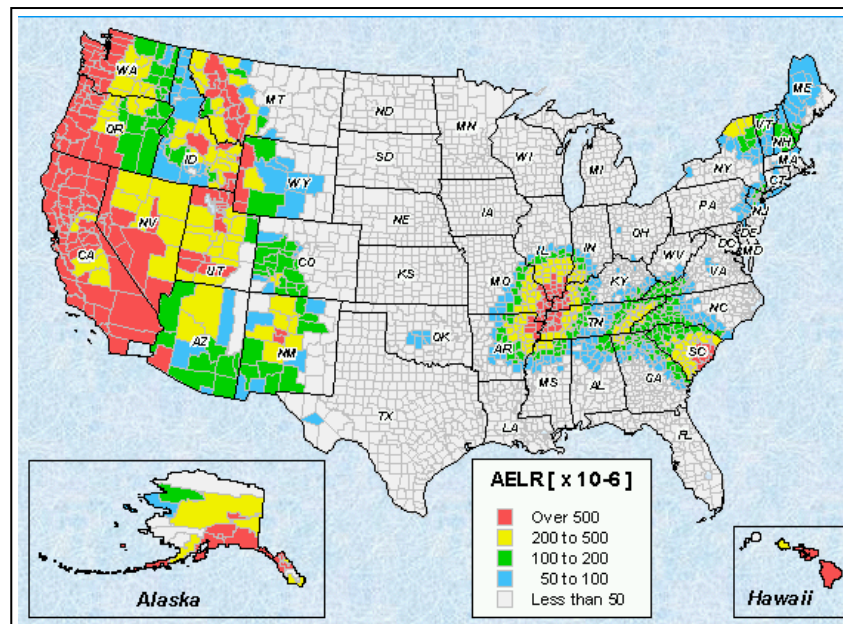
PREFACE

Earthquakes are inevitable and sometimes destructive events in Montana¹. On this premise, concerned citizens in Lewis and Clark County selected a pilot study area to implement HAZUS for estimating potential earthquake losses. The cooperators also used HAZUS to explore earthquake mitigation opportunities, and for planning emergency response.

The Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS) developed HAZUS (HAZards United States) as a nationally standardized method for assessing earthquake risks. FEMA provided HAZUS software and user assistance to the Helena Area HAZUS Analysis Project in a cooperative effort to advance natural hazard mitigation, and to promote the integration of HAZUS in community decision-making. Funds to establish and implement the project were granted in 2001, initially for a six-month period by the City of Helena, Lewis & Clark County, and the State of Montana. The project period and funds were extended by four months until August 15, 2002.

Copies of this report are available online (<http://www.hazus.org/BigSkyHUG/index.htm>). A limited number of reports were printed for the funding agencies.

Keywords: HAZUS, natural disaster, earthquake, risk analysis, GIS, Montana.



Map 1 Projected Annualized Earthquake Loss Reduction (AELR dollars)

STAFF STUDIES QUAKES

"Monday night's earthquake was as much a coincidence as a shock to members of the city building inspector's staff. They recalled Tuesday they had spent part of Monday afternoon checking earthquake probabilities for the Bozeman area. "We don't often get requests like that," explained Mrs. Florence Scott, department secretary, "but an architect wanted the information in connection with a building at the state college. "Earthquakes were on the tip of our tongue when we stopped work Monday afternoon, but we never dreamed there would really be one only a few hours later." [quote from Billings Gazette; August 19, 1959 on the Hebgen Lake Earthquake 8/17/5, 11:37 PM]

ACKNOWLEDGEMENTS

The work done to complete the project, including this report was due to the participation and dedication of many individuals. More than 100 people were involved in some phase of the work, including project guidance, data compilation, product review, and project presentations.

Project Stakeholders and Participants (by category):

Local Government

City Manager
City and County Planning
Community Development
City and County Commissioners
City and County Fire Departments
City Police Department
City and County GIS Program
Helena Public Works
City and County Public Works
Superintendent of Schools
County Search and Rescue
County Health Services
County Disaster & Emergency Services
County Sheriff's Office
Rural Fire Council
Water Quality Protection District

State Government

Natural Resource Information System
Commerce and Economics Information Center
State Capitol Complex Security Management
Department of Revenue
State Building Codes
Labor & Industry
Disaster & Emergency Services
Environmental Quality
Transportation
Governor's Risk Management Advisory Council
Natural Resources and Conservation

Federal Government

Federal Emergency Management Agency
Federal Housing and Urban Development

Others

Helena Chamber of Commerce
Local Engineering Firms
Architectural Association
GIS Software Representatives
Communications Utilities
Industrial Manufacturers
Airport Authority
Local Banking Business
Railroad Companies
Petroleum Distributors
College and Universities
Geophysicists
Civil Engineers
Geologists

Steering Committee and Associates

The following individuals contributed project guidance on behalf of the stakeholders by their expertise, consistent logistical support, and quality control over the analysis process and products: Paul Spengler, RJ Zimmer, Jens Bolstad, Mark Peck, Pat Crowley, JJ Conner, Doug Bausch, Jawhar Bouabid.

Invaluable HAZUS User Assistance was provided by Doug Bausch, FEMA and Jawhar Bouabid, Durham Technologies, Inc. Formal evaluations of map, chart, and tabular HAZUS analysis results were reviewed by a selected group of experts, and the evaluations with credits appear in this report.

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