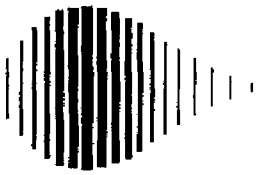
NOTICE

This report was prepared by the National Center for Earthquake Engineering Research (NCEER) Neither NCEER, associates of NCEER, its sponsors, nor any person acting on their behalf·

a. makes any warranty, express or implied, with respect to the use of any information, apparatus, method, or process disclosed in this report or that such use may not infringe upon privately owned rights, or

b. assumes any liabilities of whatsoever kind with respect to the use of, or the damage resulting from the use of, any information, apparatus, method or process disclosed in this report



PROCEEDINGS
from the
CONFERENCE ON DISASTER PREPAREDNESS - THE PLACE OF EARTHQUAKE EDUCATION IN OUR SCHOOLS

held at the
Buffalo Hilton,
Buffalo, New York
on
July 9-11, 1989

Technical Report NCEER-89-0017

Edited By: Katharyn E.K. Ross[1]
December 31, 1989

NCEER Project Number 88-6008

NSF Master Contract Number ECE 86-07591

1 Education Specialist, National Center for Earthquake Engineering Research, State University of New York at Buffalo

NATIONAL CENTER FOR EARTHQUAKE ENGINEERING RESEARCH
State University of New York at Buffalo
Red Jacket Quadrangle, Buffalo, NY 14261

ACKNOWLEDGEMENT

I wish to thank Andrea Dargush, Laurie McGinn, Hector Velasco, and Roseanne Wawrzyniak for their assistance in the preparation of this publication. I also wish to acknowledge the encouragement that was provided by the late Robert L. Ketter. His foresight and dedication to earthquake education in the schools helped make this conference a reality.

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

I. INTRODUCTION TO THE CONFERENCE

Introduction for the Conference:

"DISASTER PREPAREDNESS--THE PLACE OF EARTHQUAKE EDUCATION IN OUR SCHOOLS"

Center for Tomorrow, UB Amherst Campus, July 9, 1989.

Katharyn E. K. Ross
Education Specialist
National Center for Earthquake Engineering Research

Welcome to the inaugural earthquake education conference sponsored by the National Center for Earthquake Engineering Research and co-sponsored by the Federal Emergency Management Agency and Emergency Preparedness Canada. The National Center for Earthquake Engineering Research was established at the State University of New York at Buffalo in September of 1986 by the National Science Foundation. The Center's focus is to minimize damage caused by earthquakes through directed research, implementation of findings, public education and transfer of technology. The National Center for Earthquake Engineering Research also examines socio-economic issues of earthquakes such as emergency preparedness, response and recovery.

Even at this early stage, one can point to a number of successes:

- Setting up a working and well functioning administrative structure,
- Developing a method of funding that relies on organized group efforts,
- Generating substantial amounts of matching funds, and thereby greatly increasing the research support of earthquake engineering,
- Defining critical areas of research,
- Developing cooperation among groups of researchers from different institutions, and from different disciplines,
- Establishing connections with practicing engineers and industry,
- Gaining (rather quickly) a positive reputation among the public and the technical community,
- Achieving great visibility, particularly in the eastern and central parts of the United States, thereby increasing awareness of the seismic risk,
- Engaging many young researchers in earthquake engineering research,
- Publishing a large number of technical reports and journal articles,
- Financing major upgrades at core experimental facilities,
- Organizing workshops, conferences, and forums, and holding of numerous television, radio and other media conferences,
- Creating an on-line earthquake engineering information system, and
- Establishing working relationships, and formal cooperative agreements with peer organizations and institutions in a number of different foreign countries.

Over the first two years, the $5 million per year provided by the National Science Foundation has been leveraged at a rate of approximately 1.7; that is, for the $10 million, there has been raised an additional $16,956,000 in non-federal matching support.

A particularly significant development has been the establishment of NCEER Information Service, which is available via computer link to all researchers, professionals, libraries, government offices, etc. throughout the world. As part of that service is an Information Service data base, Quakeline. It contains a large number of indices and abstracts of published information which are generally not indexed through any other source.

NCEER has published, during the past two-years, more than seventy Technical Reports resulting from its various research projects. Additional reports are currently in review or being prepared.

To date, 114 principal investigators throughout the United States have been involved in the research program (see Figure 1). Thirty U.S. institutions have been involved. There have been 24 industrial "participants."

The Center has entered into formal Agreements or Memoranda of Understanding with a number of foreign countries and/or research institutes: five in Japan, three in China, one in Taiwan, one in Spain, one in Austria, one in Mexico, and one in Greece. A number of other requests for cooperative and collaborative research are currently being considered. These involve researchers in Chile, Great Britain, France, Yugoslavia, Turkey, and India.

NCEER is a collaborative team effort of academics, practicing professionals, government officials and other experts. Their mutual objective is to enhance basic knowledge of earthquakes, perfect engineering practices and implement earthquake hazards mitigation procedures. Studies include investigation of earthquake ground motion, soil behavior, structural performance and design principles, education, response and recovery programs. NCEER is equally interested in the broad-based dissemination of information and technology, sponsoring national and international conferences, meetings with private and public sector leaders, public seminars on earthquakes and offering a computer-based information service as a reference resource on engineering, geological, political and socioeconomic aspects of earthquakes.

Only a concentrated and continued flow of information about earthquakes will raise the consciousness of people throughout this country and the world to the level required to bring about changes; changes in building codes to ensure safer more earthquake-resistant built environments, changes in emergency response training to include earthquake preparedness drills, and changes in earthquake preparedness levels in schools as well as homes and businesses.

History and research have proven that earthquakes are not just a California problem. Unless and until serious steps are taken to counter an earthquake's destructive powers, we are vulnerable to devastation similar to that felt in Armenia. It is hoped that this conference will provide the information that's needed to insure the place of earthquake education in our schools.

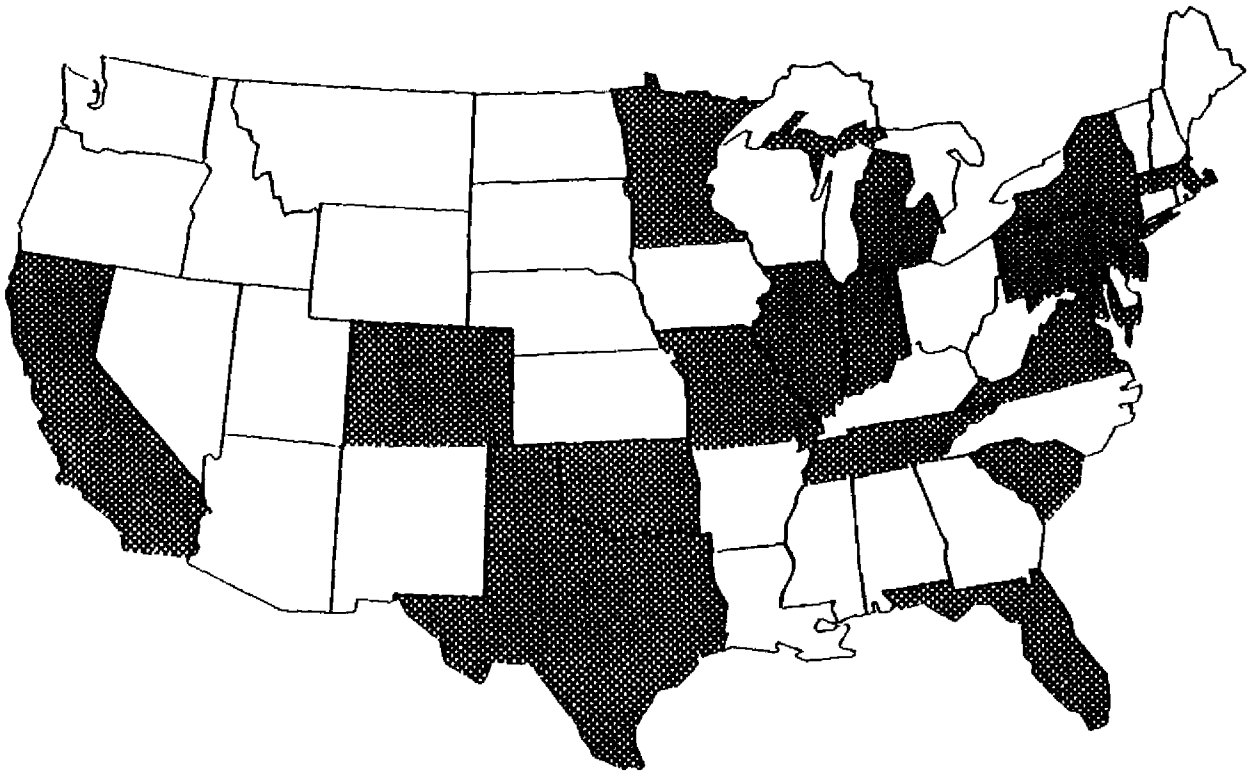


FIGURE 1 States in Which NCEER Research Projects Are Carried Out (September 1986 - August 1989)