

CENTER ACTIVITIES

1989 - 1992

Dennis Wenger, Philip Berke and Jacqueline Henderson

Hazard Reduction & Recovery Center
College of Architecture
Texas A&M University
College Station, Texas 77843-3137

Page 1 of 1

Page 2 of 2

Page 3 of 3

Page 4 of 4

Page 5 of 5

Page 6 of 6

Page 7 of 7

Page 8 of 8

Page 9 of 9

Page 10 of 10

Page 11 of 11

Page 12 of 12

Page 13 of 13

Page 14 of 14

Page 15 of 15

Page 16 of 16

Page 17 of 17

Page 18 of 18

Page 19 of 19

Page 20 of 20

Research, Extension and Staff Activities

1989 - 1992

Hazard Reduction & Recovery Center

The Hazard Reduction & Recovery Center (HRRC) was established within the College of Architecture at Texas A&M University in the fall of 1988. This report chronicles the activities and progress of the Center from that time until the present. In addition to the significant financial and organizational support provided by the College of Architecture, the HRRC also received valuable financial assistance from the Texas Engineering Experiment Station during its first two years.

At the time of its formation, the entire staff of the Center numbered four faculty members and two graduate students. Currently, there are 19 Faculty Fellows on the Texas A&M campus, five Associated Faculty Fellows at other universities, 17 graduate research assistants, and a support staff of four. Over 40 persons are currently associated with the HRRC.

Since 1988 a total of 53 different persons have been on the staff of the Center or in an Associate Faculty Fellow position. The researchers come from a variety of disciplines, including architecture, civil engineering, urban and regional planning, sociology, landscape architecture, geography, journalism, environmental psychology, construction science, environmental design, and policy analysis. The HRRC is now the largest multidisciplinary center studying natural and technological hazards and disasters in the world. Its staff of faculty researchers includes some of the leading experts on hazard mitigation, emergency planning and response, and disaster recovery in the United States. In recognition of these resources, the HRRC became a United Nations (DHA, formerly UNDRO) Collaborating Centre in June of 1990. It is one of only two United Nations Collaborating Centres in the world.

This report lists the accomplishments of the staff. It includes the work of the on-campus faculty and students at Texas A&M University and our Adjunct Faculty Fellows at other universities. However, the overview is limited

to only the hazard and disaster related material produced since the Center's inception. In total, researchers associated with the HRRC produced over 120 articles, books and monographs. They undertook research on 43 different research projects that generated over \$2 million in external funds. Representatives of the HRRC have attended over 100 conferences and workshops since its founding and have presented over 160 papers and lectures at these events and at other universities. Faculty Fellows served as consultants to about 40 public and private agencies, including the National Academy of Science, National Science Foundation, NASA, Lawrence Livermore Laboratory, National Institute of Building Sciences, the Federal Emergency Management Agency, and the States of Alabama and Texas. Representatives of the HRRC served on about 30 advisory panels and committees, including the American Institute of Architects, National Academy of Sciences, National Earthquake Hazards Reduction Program, National Science Foundation, United States Geological Survey, and the National Fire Academy. Personnel from the Center served as publication and proposal reviewers for about 80 different professional journals, publishers and funding agencies. Faculty researchers undertook research at 60 different domestic and foreign sites.

In addition to these research accomplishments, this report also discusses some other important activities of the HRRC, including its library, publication list, extension activities, and mass media contacts. All of the people associated with the Center wish to thank the College of Architecture, Texas Engineering Experiment Station, Texas Agricultural Extension Service, and Texas A&M University for their support and financial assistance in establishing the Center.

Published Articles, Books and Monographs

During the first four years of its existence, researchers associated with the HRRC produced over 125 articles, books and monographs.

- A Compendium of Natural Hazard Programs and Policies, 1989, prepared for U. S. Virgin Islands, VITEMA, Beatley, Timothy and David J. Brower, 1989.
- "A Cross-Societal Comparison of Disaster News: Reporting in Japan and the United States," in Lee Wilkins and Philip Patterson (eds.) Risky Business: Communicating Issues of Science, Risk and Public Policy, New York, New York: Greenwood Press, pp. 97-111, Dennis Wenger and E. L. Quarantelli, 1991.
- "A Deemed-to-Comply Standard for Single and Multifamily Dwellings in High Wind Regions," Journal of Wind Engineering and Industrial Aerodynamics, 36, (1990), pp. 181-188, Dale Perry, J. R. McDonald and C. R. O'Meilie, 1990.
- "A Futuristic Assessment of Latino Ethnic Identity," Hispanic Journal of Social Science (in press), B. Aguirre, E. and R. Saenz, 1990.
- "A Multi-Parameter Analysis of Earthquake Damage and Post-Earthquake Reconstruction: An Evaluation of the Marina District of San Francisco, California," in Proceedings of the Fourth International Conference on Seismic Zonation, pp. 189-194, Sherry Oaks, T. Siller, Y., Hussein, S. Hart-Drabble and P. Nowak, 1991.
- "A National Assessment of Local Earthquake Mitigation: Implications for Planning and Public Policy," Earthquake Spectra, Vol. 8, No. 1, pp. 101-109, Philip R. Berke and Timothy Beatley, 1992.
- "A Study of Local Mass Media Coverage of Two Disasters in the United States," The Bulletin of Faculty of Sociology, Tokyo University, No. 29-1, Tokyo, Japan, pp. 77-138, E.L. Quarantelli and Dennis Wenger, 1992
- A Study of Long-term Recovery of Three Communities in the Aftermath of Hurricane Hugo, Ph.D. Dissertation, Texas A&M University, College Station, Texas, Swaroop Reddy, 1992.
- "Adoption of Emergency Planning Practices for Chemical Hazards in the United States," Journal of Hazardous Materials, Vol. 27, No. 1, pp. 3-26, George Rogers with J. Sorensen, 1991.
- "An Approach for Deriving Emergency Planning Zones for Chemical Munitions Emergencies," Journal of Hazardous Materials, Vol. 30, pp. 223-242, S. A. Carnes, George Rogers and J. S. Sorensen, 1992.
- "An Interactive Environmental Societal Process Model for the Assessment of Vulnerability to Earthquakes and Related Hazards," In National Earthquake Hazard Reduction Program Summaries of Technical Reports, Vol. XXVIII, Washington, DC: U. S. Department of Interior Geological Survey, Sherry Oaks, 1989.
- "An Interactive Environmental Societal Process Model for the Assessment of Vulnerability to Earthquakes and Related Hazards," National Earthquake Hazard Reduction Program Summaries of Technical Reports, Vol. XXIX, Washington, DC: U. S. Department of Interior Geological Survey, Sherry, Oaks, 1989.
- "An Interactive Environmental / Societal Process Model for the Assessment of Vulnerability to Hazards," AAG Annual Meeting Program and Abstracts, 155, Sherry, Oaks, 1989.
- "Aspects of Risk Communication in Two Cultures," International Journal of Mass Emergencies and Disasters, Vol. 10, pp. 437-464, George O. Rogers, 1992.
- "Automated Decision Support Systems for Hurricane Mitigation Planning," Simulation: Journal of the Society for Computer Simulation International, Vol. 53, No. 3, pp. 101-111, Philip Berke and Norris Stubbs, 1989.
- "Automated Decision Support Systems for Hurricane Mitigation planning, " Simulation, pp. 101-109, Philip Berke and Norris Stubbs, September 1992.
- Building Construction for the Fire Suppression Forces: Non combustible and Fire Resistive Construction, Emmitsburg, Maryland: Federal Emergency Management Agency, Larry Grosse, Fred Malven, John Elder and Ed Pendergast, 1990, 1991.
- Building Construction for the Fire Suppression Forces: Principles, Wood and Ordinary Construction, Emmitsburg, Maryland: Federal Emergency Management Agency, Larry Grosse (co-authored), 1991.
- "Cancun Under Gilbert: Preliminary Observations," International Journal of

- Mass Emergencies and Disasters Vol. 7, No.1, 69-82, Norris Stubbs, 1989.
- Catastrophic Coastal Storms: Hazard Mitigation and Development Management, Durham, NC, Duke University Press, Godschalk, David R., David J. Brower, and Timothy Beatley, 1989.
 - "Coastal Zone Management in Texas," Environmental and Urban Issues, Vol. 20, No. 1, pp. 23-31, Carla Prater, Fall, 1992.
 - "Collective Behavior and Social Movement Theory," Disaster, Collective Behavior and Social Organization, R. R. Dynes, (ed.), University of Delaware Press, Benigno E. Aguirre, 1992.
 - "Collective Behavior and Social Movement Theory," in R. R. Dynes, editor, Disaster, Collective Behavior, and Social Organization (in press), Newark, Delaware: University of Delaware Press, Benigno E. Aguirre, 1990.
 - "Community Decisions During Chemical Emergencies," Hazardous Materials Control, pp. 34-38, George O. Rogers, Jul./Aug. 1992.
 - "Community Preparedness for Hazardous Waste Emergencies," (with Conner Bailey), pp. 139-152 in Dennis L. Peck (ed.), Psychosocial Effects of Hazardous Toxic Waste Disposal on Communities, Springfield, IL: Charles C. Thomas, Faupel, Charles, 1989.
 - "Computer Aided Decision Systems," in Proceedings, National Hurricane Conference, Carlton Ruch, 1991.
 - "Contingencies Affecting Emergency Preparedness for Hazardous Wastes," International Journal of Mass Emergencies and Disasters Vol. 6, No. 2, August, 1988, pp. 131-154, Charles Faupel with Conner Bailey), 1989.
 - "Contingency Planning Guide for Cameron and Willacy Counties," College of Architecture, Texas A&M University, Carl Ruch, May 1992.
 - "Contingency Planning Guide for Chambers, Hardin, Jasper, Jefferson, Newton and Orange Counties," Research Division, HRRC, Carlton Ruch, 1991.
 - "Diffusion of Emergency Warning: Comparing Empirical and Simulation Results," in C. Zervos (ed.) Risk Analysis, New York, NY: Plenum Press, George Rogers with J. Sorensen, 1991.
 - "Disaster Programs as Technology Transfers: the Case of Puerto Rico in the Aftermath of Hurricane Hugo," International Journal of Mass Emergencies and Disasters, Vol. 10, No. 1, pp. 161-178, Benigno E. Aguirre and D. Bush, 1992
 - "Early Warning Energy Shortage Study," College of Architecture, TAMU, Carlton Ruch and Paul Woods, 1991.
 - "Emergency Fuel Allocation System Final Report," College of Architecture, TAMU, Carlton Ruch, Paul Woods, J. Chara, T. Huang, and C. Lancaster, 1991.
 - "Emergency Planning and Response in Puerto Rico," Natural Disaster Studies, Chap. 4, pp. 73-95, Benigno E. Aguirre, 1992.
 - "Emergency Preparedness to Address Climate Change," in Coping with Climate Change by John C. Topping, Jr. (ed.), Washington, DC, Climate Institute, pp. 377-381, Sherry Oaks, 1989.
 - "Emergent and Volunteer Behavior During Disaster: Research Findings and Planning Implications," Proceedings of the IDNDR Summit Conference on Earthquake and Natural Disaster Countermeasures 1991 Japan, pp. 151-157, Tokyo, Japan, Dennis Wenger, 1991.
 - "Environmental Politics in Alabama's Blackbelt," Confronting Environmental Racism, pp. 107-152, Robert D. Bullard and Beverly Wright, (eds.), Conner Bailey, Charles Faupel and James Gundlach, 1992.
 - "Environmentalism and Civil Rights in Sumter County, Alabama," Chapter 10 in Proceedings of the Michigan Conference on Race and the Incidence of Environmental Hazards, Faupel, Charles and Conner Bailey, 1990.
 - "Environmentalism and Civil Rights in Sumter County, Alabama," Race and the Incidence of Environmental Hazards: A Time for Discourse, Bunyan Bryant and Paul Mohai (eds.), Boulder, Colorado: Westview Press, pp. 140-152, Conner Bailey and Charles Faupel, 1992.
 - "Evacuation in Cancun During Hurricane Gilbert," International Journal of Mass Emergencies and Disasters, Vol. 9 (1): 31-45, Benigno Aguirre, 1991.
 - "Faces in The News: Network Television News Coverage of Hurricane Hugo and the Loma Preita Earthquake," Journal of

- Broadcasting and Electronic Media, Susanna Hornig, (forthcoming).
- "Global Climate Change and Drought Hazards: Approaches for Determining Environmental and Societal Factors for Sustainable Development Planning," Transactions, American Geophysical Union 70 (43): 1119, Sherry Oaks, 1989.
 - "Global Damage Detection in Solids - Experimental Verification," The International Journal of Analytical and Experimental Modal Analysis, Vol. 5, No. 2, pp. 81-97, Norris Stubbs with R. Osegueda, 1990.
 - "Global Environmental Change: Opportunities for Social Science Research," Western Social Science Association Meeting Abstracts - Resources and Public Land Use, Sherry Oaks, 1989.
 - "Global Nondestructive Flaw Detection," Chemical Processing, Vol. 53, No. 7, May, pp. 35-39, Norris Stubbs, 1990.
 - Guide to the Use of the Wind Load Provisions of ASCE 7-88, ASCE, New York, NY, K. Metha, R. Marshall and Dale Perry, 1991.
 - "Hazard Reduction and Everyday Life: Opportunities for Integration During the Decade for Natural Disaster Reduction," Natural Hazards Observer Vol. XIV, No. 1, pp. 6-7, Sherry Oaks, 1989.
 - "Hazardous Wastes and Differing Perceptions of Risk in Sumter County, Alabama," Sociological Spectrum, No. 11, pp. 293-319 Conner Bailey, Charles Faupel and Gary Griffin, 1992.
 - "Hazards and Sustainable Development: Multiple Considerations of Environmental and Societal Factors," in Ecotourism and Resource Conservation (comp.), New York, NY: Association of Wetland Managers, Sherry Oaks, 1991.
 - "How the Public Values Urban Forests: A Case Study in Charleston following Hurricane Hugo," International Journal of Arboriculture, Vol. 18, No. 2, pp. 98-101, R. Bruce Hull IV, 1991.
 - "Hurricane Contingency Planning Guide for Calhoun, Jackson, Matagorda, and Victoria Counties," Research Division, HRRC, Carlton Ruch, 1989, 1990.
 - "Hurricane Elena, September 3, 1985," Investigative Series of the Committee on Natural Disasters, Vol. 2, Washington, DC: National Academy Press, P. Sparks, Dale Perry, J. Belville and E. Baker, 1991.
 - "Hurricane Gilbert Strikes Jamaica: Linking Disaster Recovery to Development," Coastal Management, Vol. 21, pp. 1-23, Philip R. Berke, Timothy Beatley and Clarence Feagin, 1992.
 - "Hurricane Hazard: A Theory of Occupant Safety," Making Buildings Safer for People, eds. A. S. Nowak and T. V. Galambos, Van Nostrand Reinhold, New York, NY, pp. 28-58, Norris Stubbs, 1990.
 - "Hurricane Hugo - Lessons Learned and as Yet Unlearned," Proceedings, Virginia Tech Structural Engineering Conference, Dale Perry, 1991.
 - Hurricane Hugo and Shoreline Retreat: Evaluating the Effectiveness of the South Carolina Beachfront Management Act, Report prepared for the National Science Foundation, Timothy Beatley, 1992.
 - "Hurricane Vertical Shelter Policy: The Experience of Florida and Texas," Journal of Coastal Management, Vol. 17, No. 3, pp. 118-159, Philip Berke, 1989.
 - Individual and Household Response to Hurricane Hugo, Final Report submitted to the National Science Foundation, Grant #BCS-9005107, Charles Faupel and Susan Kelley, 1991.
 - "Influences on Local Adoption of Planning Measures for Earthquake Hazard Mitigation," International Journal of Mass Emergencies and Disasters, Vol. 7, No. 1, pp. 33-56, Berke, Philip, Timothy Beatley and Suzanne Wilhite, 1989.
 - "Initiation of Strategic Planning for Earthquake Mitigation," Awareness, Preparedness, and Public Education for Earthquake Hazards, David Gillespie and Dennis Mileti (eds.), U.S. Geological Survey Monograph Series, Palo Alto, California, Philip Berke and Timothy Beatley, 1992.
 - "Is the Incident Command System a Plan for All Seasons and Emergency Situations?" Hazard Monthly, March, 1990, pp. 8-12, Dennis Wenger, E. L. Quarantelli and Russell R. Dynes, 1990.
 - "Lessons Learned about the Building Code Process - The Good, The Bad, and The Ugly," in Proceedings, Hugo One Year Later, P. Sparks (ed.), New York, NY: ASCE, Dale Perry, 1991.
 - "Linking Hurricane Disaster Recovery to Sustainable Development Strategies:

- Antigua, West Indies," College Station, Texas: Hazard Reduction & Recovery Center, Dennis Wenger and Philip Berke, 1992.
- "Linking Hurricane Disaster Recovery to Sustainable Development Strategies: St. Kitts and Nevis, West Indies," College Station, Texas: Hazard Reduction & Recovery Center, Dennis Wenger and Philip Berke, 1991.
 - "Local Media Roles in Defining Hazardous Waste as a Social Problem: The Case of Sumter County, Alabama," Sociological Spectrum, Vol. 11, No. 4, Charles Faupel, Conner Bailey and Gary Griffin, 1991.
 - "Managing Reconstruction Along the South Carolina Coast: Preliminary Observations on the Effectiveness of the South Carolina Beachfront Management Act," Quick Response Report, Boulder, Colorado: Natural Hazards Research and Applications Information Center, University of Colorado, Timothy Beatley, 1990.
 - "Measurement of Area Fluctuation of Great Salt Lake, Utah, Using Rectified Space Photography," Houston Geological Society Bulletin, March 1990, pp. 16-19, 52, J. R. Giardino, M. R. Helfert and Robert R. J. Mohler, 1990.
 - "Mitigation, Preparedness, Response and Recovery," Wind and the Built Environment: U.S. Needs in Wind Engineering and Hazard Mitigation, National Academy of Science, Commission on Engineering and Technical Systems, pp. 79-94 Dennis Wenger, 1992.
 - "Montserrat: Emergency Planning, Response and Recovery Related to Hurricane Hugo," College Station, Texas: Hazard Reduction & Recovery Center, Dennis Wenger and Philip Berke, 1991.
 - "Movers and Shakers and PCB Takers: Hazardous Waste and Community Power," Sociological Spectrum, Vol. 13, No. 1, Conner Bailey and Charles Faupel, (forthcoming).
 - "Natural Hazards, Law and Policy Implementation," The Natural Environment, Law and Social Science, (eds.) Bruce Sales, Terry Daniels and John Hetherington, Plenum Press, New York, NY, Philip Berke, Timothy Beatley and Dennis Wenger, (forthcoming).
 - "Nondestructive Construction Error Detection in Large Space Structures," AIAA Journal, Vol. 28, No. 1, 1990, pp. 146-152, Norris Stubbs with T. H. Broome and R. Osegueda, 1990.
 - "Nondestructive Damage Analysis Using Modal Parameters of Orbiter OV-102 Body Flap," Technical Report MM-32525-40210NAS-2, Submitted to Vibration and Acoustics Test Facility NASA-JSC, Mechanics and Materials Center Texas A&M University, J.T. Kim, Norris Stubbs, and K.G. Topole, January 1992.
 - "Nondestructive Damage Assessment of a Bridge Using Modal Testing and Structural Reliability," Proceedings: Third NSF Workshop on Bridge Engineering Research in Progress, La Jolla, California, , pp. 125-136, M. Richardson, C. Sikorsky and Norris Stubbs, November 1992.
 - "Nondestructive Damage Assessment of the Consumers River Bridge at Rancho Murieta," Final Report, submitted to Robert Young Engineers, Sacramento, California, J.T. Kim, C. Sikorsky and Norris Stubbs, July 1992.
 - "Nondestructive Damage Assessment of the Fair Oakes Bridge in Sacramento County," Final Report, submitted to Department of Public Works, County of Sacramento, Sacramento, California, Norris Stubbs, M. Richardson and C. Sikorsky, December 1992.
 - "Nondestructive Evaluation of Damage in Composite Structures Using Modal Parameters," Experimental Mechanics, Vol. 32, No. 3, pp. 240-252, D. R. Sanders, Y.I. Kim, and Norris Stubbs, 1992.
 - "Official's Hurricane Evacuation Update and Decision Making Aids for Calhoun, Jackson, Matagorda, and Victoria Counties," Research Division, HRRC, Carlton Ruch, 1989, 1990.
 - "Official's Hurricane Evacuation Update and Decision Making Aids for Chambers, Hardin, Jasper, Jefferson, Newton and Orange Counties," Research Division, HRRC, Carlton Ruch, 1991.
 - "Official's Hurricane Evacuation Update and Decision-Making Aids for Aransas, Kenedy, Kleberg, Neuces, San Patricio and Refugio Counties," Research Division, HRRC, Carlton Ruch, 1989, 1990.
 - "Official's Hurricane Evacuation Update and Decision-Making Aids for Cameron and Willacy Counties," College of Architecture, Texas A&M University, Carl Ruch, May 1992.

- "On the Question of Hurricane Induced Wind Speeds," in Proceedings, American Meteorological Society Annual Conference, Dale Perry and W. Beason, 1991.
- "Organizational Preparedness and Response to the West Memphis, Arkansas Tornado," International Journal of Mass Emergencies and Disasters 6,2: 185-195, Charles Faupel, 1989.
- "Out of Sight is Not Out of Mind: Public Opposition to Ocean Incineration," Journal of Coastal Management Vol. 17, Charles Faupel, with Conner Bailey, 1989.
- "Performance of Metal Building Systems During Extreme Winds - Strategies for Mitigating Wind Damage," Journal of Wind Engineering and Industrial Aerodynamics, Vol. 36, pp. 985-999, Dale Perry, J. R. McDonald and H. S. Saffir, 1990.
- "Planning for Cooperation in Environmental Dilemmas," Journal of Planning Literature, Vol. 5, No. 3, Jack Kartez, 1991.
- Planning for Earthquakes: Risk, Politics and Policy, Johns Hopkins University Press, Baltimore, Maryland, Timothy Beatley and Philip Berke, 1992.
- Planning for Earthquakes: Risk, Politics, and Policy, Baltimore, Maryland: Johns Hopkins University Press, Philip Berke and Timothy Beatley, 1991.
- "Planning Implications for Disaster Recovery in the Eastern Caribbean," in Proceedings, National Hurricane Conference, Philip Berke, 1991.
- "Protecting Civilian Populations During Chemical Agent Emergencies," Chemical Warfare Agents, S. M. Sumani, (ed.) Academic Press, Inc. George O. Rogers, J. H. Sorensen and A. P. Watson, 1992.
- Public Opinions and Attitudes Regarding Hazardous Waste in Alabama: Results from Three 1988 Surveys, (with Conner Bailey, Susan Holland), Rural Sociology Series #14, Auburn, Alabama: Alabama Agricultural Experiment Station, Charles Faupel, 1989.
- "Reading Risk: Public Response to Print Media Accounts of Technological Risk," Public Understanding of Risk, Susanna Hornig, (forthcoming).
- "Recovery after Disaster: Achieving Sustainable Development, Mitigation and Equity," Disasters, Vol. 17, No. 2, pp. 93-109, Philip R. Berke, Jack Kartez and Dennis Wenger, 1992.
- Report of the Colorado Workshop on Hazard Mitigation in the 1990's: Toward the U.S. Decade for Natural Disaster Reduction, ed., Boulder, Colorado: Natural Hazards Research and Applications Information Center, Oaks, Sherry. Co-editors: Mary Fran Myers, William E. Riebsame, and David Butler, 1989.
- Risk Allocation Policy in the Coastal Zone: The Current Framework and Future Directions, Prepared for the Office of Technology Assessment, Congress of the United States, Timothy Beatley, 1992.
- "Search and Rescue: A Multidisciplinary Annotated Bibliography," College Station, Texas: Hazard Reduction & Recovery Center, Carla Prater, Gabriela Vigo, Margaret Hall and John Edmiston, 1991.
- "Seismic Hazard Mitigation: Planning and Policy Implementation", Issues of Science and Technology: Journal of the National Academy of Sciences, Timothy Beatley and Philip Berke, (forthcoming).
- "Seismic Safety Through Public Incentives: The Palo Alto Seismic Hazard Identification Program," Earthquake Spectra, Vol. 6, No. 1, pp. 57-79, Timothy Beatley and Philip Berke, 1990.
- Sharing Environmental Risks, Boulder, Colorado: Westview Press, Jack Kartez (co-authored), 1991.
- "Simulation of Fatalities in Structures Subjected to Hurricane Loading," Simulation in Emergency Management and Technology, Stubbs, Norris, Charles Sikorsky, Philip Lipnick and Patricia Lombard, 1989.
- Strategies, Critical Issues and Required Information for the Management of Land in Fire-Prone Environments, in Integrating Research on Fire Prone Forest Environments: Interactions Between Biological and Human Values in the Wildland/Urban Interface, Eds.: T. Daniel, I. Ferguson, M. McCarthy and I. Williamson. In press, to be released as a Man and the Biosphere (MAB) publication, McCarthy, M. M., 1989.
- "Structural Damage Assessment - A Case Study," Contribution to "Socioeconomic Impacts and Emergency Response," Loma Prieta Earthquake Reconnaissance Report of Earthquake Spectra Vol. 6

- (Supplement), pp. 393-431, Sherry Oaks, 1990.
- "Structural Vulnerability in the Marina District of San Francisco, California: Analyses of Building Damage, Structural Attributes, and Related Geotechnical Factors," EOS Transactions, American Geophysical Union Vol.71, No. 43, pp. 1456, Sherry Oaks and Thomas D. O'Rourke, 1990.
 - "Technical and Policy-Related Issues in the Application of ATC-20 Post Earthquake Safety Evaluation Guidelines After the Loma Prieta Earthquake," in IEEE Transactions on Professional Communication, Vol. 34 No. 4 pp. 217-223, Sherry Oaks and L. Kornfield, 1991.
 - "Texas Energy Policy and Programs," College of Architecture, TAMU, Carlton Ruch and Paul Woods, 1991.
 - "The Damage Assessment Process After the October 17, 1989, Loma Prieta Earthquake: An Analysis of the Application of ATC-20," Seismological Research Letters, Vol. Vol. 61, No. 1, 13, Sherry Oaks, 1990.
 - "The Damage Assessment Process: The Application of ATC-20 and Effects on Relief and Recovery," in The Loma Prieta Earthquake: Studies of Short-Term Impacts by Robert Bolin (ed.), Natural Hazards Monograph #50, Boulder, Colorado: University of Colorado, pp. 6-16, Sherry Oaks, 1990.
 - "The Damage Assessment Process in San Francisco, California after the October 17, 1989, Loma Prieta earthquake: a case study," EOS Transactions, American Geophysical Union, Vol. 71, No.8, pp.289, Sherry Oaks, 1990.
 - "The Dynamics of Mexican Ethnic Identity," Ethnic Groups (in press), Saenz, Rogelio and B. E. Aguirre, 1990.
 - The Feasibility of Vertical Evacuation, Institute of Behavioral Science, University of Colorado Press, Carlton Ruch, Philip Berke, N. Farber, M. Haflich, J. Miller and Norris Stubbs, 1991.
 - "The Folly at Folly Beach: and Other Failings of U.S. Coastal Erosion Policy," in Environment, Vol. 33, No. 9, pp. 7-32, Timothy Beatley, H. Crane Miller and Rutherford H. Platt, November 1991.
 - The Ghosts of the Possible: An Alternative Recovery Program for Saragosa," Natural Hazards Observer, Vol. 14, July, 1990, pp. 8-9, Jana Percu.
 - "The Impact of Disaster Education on Household Preparedness for Hurricane Hugo," International Journal of Mass Emergencies and Disasters, Vol. 10, No. 1 pp. 5-24, Charles Faupel, Susan Kelley and Thomas Pette, March 1992.
 - "The Importance of an Integrated Approach to Title III Planning: Lessons from Natural Hazards Research," Hazardous Materials Dialogue, Vol. 2, No. 1: 6-7, Jack Kartez, 1991.
 - "The Incident Command System," Hazards Monthly, Dennis Wenger, 1989.
 - "The Loma Prieta Earthquake and the IDNDR: Information Needs for Post disaster Damage Assessment and Recovery," Urban and Regional Information Systems Association Meeting Abstracts, Sherry Oaks, 1990.
 - "The Organization and Public Response to the September 1985 Earthquake in Mexico City," in Proceedings of the Joint Mexico-US Conference, Dennis Wenger, 1989.
 - The Politics of Earthquake Prediction by Richard S. Olson, Bruno Podesta, and Joanne M. Nigg. Earthquake Spectra Vol.6, No. 1, pp. 153-155. Sherry Oaks, reviewer, 1990.
 - "The Role of Archives for Comparative Studies of Social Structure and Disaster," in G. A. Kreps (ed.) Social Structure and Disaster, Newark, DE: The University of Delaware Press, pp. 238-250, Dennis Wenger, 1989.
 - "The Role of Expectations and Promises in Land Use Decision making," Policy Sciences, Vol. 22, pp. 27-50, Timothy Beatley, 1989.
 - "The Saragosa, Texas Tornado, May 22, 1987," National Disaster Review, Vol. 9, January, Benigno Aguirre, W. Anderson, S. Balandran, B. Peters and H. White, 1991.
 - "The Strange Life of Hurricane Gilbert," Journal of Wind Engineering and Industrial Aerodynamics, Vol. 36, pp. 255-268, Dale Perry, J. R. McDonald and R. E. Peterson, 1990.
 - "Time to Shake Up Earthquake Planning," Issues of Science and Technology, Vol 9, No. 2, pp. 82-89, Timothy Beatley and Philip R. Berke, 1992.
 - "Title I Wind/Tornado Design Guidelines for New Production Reactors," Document No. NPR 91-615 DSN, Wind/Tornado

Working Group, Lawrence Livermore Radiation National Laboratory, Dale Perry, 1991.

- "Towards a Moral Philosophy of Natural Disaster," International Journal of Mass Emergencies and Disasters, Vol. 7, No. 1, pp. 33-56, Benigno Aguirre, 1989.
- "United States Postal Service Procedures for Post-Earthquake Safety Evaluation of Postal Service Facilities, Appendices F and G. General Guidelines for the Evaluation of Flood and Windstorm Damage," ATC 26-2-1, Redwood City, CA: Applied Technology Council, Dale Perry and W. Beason, 1991.
- "Update of Wind Loads Code/Standard Provisions," in Proceedings, Ho'olaulea 5-Western Roundup of the Western States Conference, Structural Engineering Association, Dale Perry and A. Chiu, 1991.
- "Voices in the News: Newspaper Coverage of Hurricane Hugo and the Loma Prieta Earthquake," in Newspaper Research Journal, pp. 32-45 Susanna Hornig, Julie Templin and Lynne Walters, Summer, 1991.
- "Wind Speed Data-Inclusion in Codes and Standards," in Proceedings, National Hurricane Conference, Dale Perry, 1991.

Research Proposals Submitted

- "An Assessment of the Impact of Earthquake Education on Hurricane Preparedness in Charleston, South Carolina," National Science Foundation, 1989.
- "Anthropogenic-Induced Effects on Ecosystems and Climate Sensitive Surficial Processes in Arid and Semi-Arid Regions of the Western United States: Urbanization and Desertification," U. S. Geological Survey, 1989.
- "Camp Planet Earth," National Science Foundation, 1992
- "Citizen Involvement in Environmental Management," Alabama Environmental Protection Agency, 1992.
- "Community Recovery Following Disaster," Texas Advanced Research Program, 1989.
- Constructing a Record of Tropical Deforestation Using LANDSAT AVHRR, Shuttle Photography and Forest-Lobbying

Concession Leases to Develop a Deforestation Sedimentation Model, Indonesia National Aeronautical and Space Administration, 1992.

- "Hazard Communication for Agriculture Extension Services," Federal Emergency Management Agency, 1990.
- "Impact of Residential Development on Health and Well-Being," Texas Advances Research Program, 1989.
- Linking Disaster Recovery to Development Through Planning: A Comparative Analysis of U.S. and Caribbean Communities, National Science Foundation, 1992.
- "New Material for Improving the Teaching of Geography and Geosciences in High Schools and Colleges," NASA.
- "Outside the Fence: Community Decisions and Public Response During Chemical Emergencies," Environmental Protection Agency, 1991.
- "Public Concern and Citizen Mobilization in Response to Perceived Threats of Groundwater and Surfacewater Pollution in the Southeastern United States," U. S. Geological Survey, 1991.
- "Search and Rescue: An Integrated Study of the Loma Prieta Earthquake," National Science Foundation, 1990.
- "Survey of Main Racial & Ethnic Groups in Texas," Texas A&M University, 1992.
- "The Damage Assessment Process after the October 17, 1989, Loma Prieta Earthquake: Effects on Relief, Reconstruction, and Recovery," National Science Foundation, 1989.
- "The Feasibility of Developing an Historical Data Base and Electronic Newsletter for UNDRO," Office of the Disaster Relief Co-ordinator of the United Nations, 1990.
- "The Use of Land-Use Planning and State Planning Mandates in Hazard Mitigation: A Comparative Evaluation of State and Local Experience," National Science Foundation, 1989.
- "Urban Search and Rescue: Lessons Learned from Six Case Studies," Federal Emergency Management Agency, 1991
- "Workshop on Low-Cost Housing Vulnerability Reduction for Island Countries of the South Pacific Region," U. S. Office of Foreign Disaster Assistance, 1989.

Research Proposals Funded

Faculty Fellows associated with the HRRC have received funding for over forty projects since 1989. Thirteen of these projects were funded by the National Science Foundation. Additional sources of major funding have been received from the Governor's Division, Texas Emergency Management. As can be seen below, a wide variety of sources have funded HRRC research. The total volume of research undertaken at the Center since 1989 that has produced direct and indirect funds to Texas A&M University is in excess of \$2 million. The list of funded projects includes the following:

- "Accepting Energy Production Risks: From Incentives to Regulation and Compensation," State of Texas, 1991, 1992.
- "An Assessment of the Impact of Earthquake Education on Hurricane Preparedness in Charleston, South Carolina," National Science Foundation, 1990.
- "An Interactive Environmental/Societal Process Model for the Assessment of Vulnerability to Earthquakes and Related Hazards," U. S. Geological Survey, 1989.
- "Assessment of Wind Engineering Issues in the United States," National Science Foundation, 1991, 1992.
- "Columbus Project, 1990," Institute of Nautical Archaeology, 1990.
- "Community Based Environmental Action: Grass Roots of a Social Movement," Alabama Agricultural Experiment Station, 1991.
- "Crisis Fuel Allocation Model for the State of Texas," Research Division, HRRC, State Division, Emergency Management, 1989, 1990.
- "Development of a Numerical Model for Damage Prediction," United States Navy, 1990.
- "Economies of Expertise: Factors Promoting Comprehensive Local Hazards Management," National Science Foundation, 1992.
- "Effectiveness of Building Codes and Construction Practices in the Prevention of Hurricane Wind Damage to Non-Engineered Construction," FEMA/NCOP/- AIRAC (with Texas Tech/SBCCI), 1991.
- "Emergency Preparedness and Response for Extension Agents," U. S. Department of Agriculture/Texas Agriculture Extension Service, 1991, 1992.
- "Emergency Response and Recovery from Hurricane Hugo in the Eastern Caribbean," Office of the Disaster Relief Co-ordinator of the United Nations, 1990.
- "Evaluation of Interventions in Las Colonias to Improve Service Delivery," State of Texas, 1991, 1992.
- "Examination of the South Carolina Beachfront Management Act Following Hurricane Hugo," National Science Foundation, 1990.
- "Experimental Evaluation of a Damage Prediction Model Using Data Generated by Hurricane Gilbert and Its Implication to Other Hazards," National Science Foundation, 1989.
- "Full Scale Research and Testing of Fire Detection Systems in a Residential Structure," MasterGuard Corporation, 1991.
- "Galveston Bay SLOSH: Study Update," State Division, Texas Emergency Management, 1990, 1991, 1992.
- "Hurricane Contingency Planning for the Matagorda Area on the Texas Coast," Research Division, HRRC, State Division, Emergency Management, 1989.
- "Impact of Natural Disasters - UCLA International Conference," National Science Foundation, 1990, 1991.
- "Impacts of Global Climate Change on Forest Ecosystems," Environmental Protection Agency, first year of a three year project, 1990.
- "Implication of Climate Change on Forests: The Development of Forest Simulation Models for Evaluating Climate in Global Forest Ecosystems," Environmental Protection Agency, 1989.
- "Lake Sabine: Hurricane Study Update," State Division, Texas Emergency Management, 1990, 1991.
- "Manufactured Housing - Search and Rescue Training Aid," U. S. Fire Administration, 1991.
- "Matagorda Study," State of Texas, Governor's Office of Emergency Management, 1992.
- "Perceived Risk and Response to Emergency Events: A Chemical Fire in Odessa, Texas," National Science Foundation.
- "Preliminary Computer-Simulated Hurricane Studies in the Houston-Galveston Area," Research Division,

- HRRC, State Division, Emergency Management, 1989.
- "Public Involvement in Hazardous Material Management," Fourth year of a five year project funded by the Alabama Agricultural Experiment Station, 1989.
- "Public Risk Acceptance: Strategies for Technological Development," State of Texas, 1991.
- "Public Risk Acceptance: Strategies for Technological Development," State of Texas, 1992.
- "Quality Affordable Housing in Response to Disaster or Crisis," funded by ORP Funds. Resulted in report: "A Study in Contrasts: A Report on the Saragosa and Wichita Falls, Texas, Tornadoes", 1989.
- Quick Response Research Grant for the October 17, 1989 Loma Prieta Earthquake, administered by the National Hazard Research and Applications Information Center at the University of Colorado, National Science Foundation, 1989, 1990.
- Quick-response grant to study rebuilding in South Carolina, Natural Hazards Research and Applications Information Center, University of Colorado, 1990.
- "Reconstruction after Hurricane Hugo: An Assessment of the Mitigation and Long-Term Recovery Process in Relation to Prior Seismic Mitigation Activities and Place Specific Sense of Community," National Science Foundation, 1989, 1990.
- "Reconstruction Following Hurricane Gilbert," National Science Foundation, 1989.
- "Role of LEPCs in Toxic Hazard Management Strategies," Environmental Protection Agency, 1991.
- "Search & Rescue: An Integrated Multidisciplinary Study," National Science Foundation, 1990, 1991, 1992.
- "Search and Rescue Training Model for Manufactured Housing," United Fire Administration, 1990.
- "State-of-the-Art Assessment of Risk Communication of Earthquake Hazards," National Center for Earthquake Engineering Research (NCEER), 1989.
- "The Mitigation of Tornado Effects Through Human Ecology," National Science Foundation, 1990, 1991, 1992.
- "The Use of Land Use Planning and State Mandates and Hazard Mitigation," National Science Foundation, 1990, 1991.
- "Trends of Community Chemical Emergency Management," Environmental Protection Agency, 1992.

- "Update of Hurricane Studies in the Corpus Christi Area of the Texas Coast," Research Division, HRRC, State Division, Emergency Management, 1989.

Conference/Workshop Attendance

- 3rd US/Japan Workshop on Urban Earthquake Hazard Reduction, EERI, 1991.
- Advance Modal Analysis Conference, 1990.
- Alabama-Mississippi Sociological Association, 1990.
- American Collegiate Schools of Architecture, 1992.
- American Geophysical Union, 1990.
- American Geophysical Union, Annual Meeting, San Francisco, California, 1989.
- American Geophysical Union, Front Range Branch, 1990.
- American Meteorological Society, 1991.
- American Meteorological Society, Special Program on Hurricane Hugo, 1990.
- American Planning Association and European Society of Planners (joint conference), 1991.
- American Society for Nondestructive Testing, 1990.
- American Sociological Association Annual Meeting, Research Committee on Disaster, 1989.
- American Sociological Association, 1989, 1990.*
- Annual Emergency Management Conference, Austin, Texas, 1989.
- Architectural Research Centers Consortium Annual Meeting, Washington, DC, 1989.
- ASCE Standard 7 Workshop, 1991.
- Assessment of Research and Applications for Natural Hazards Workshop, 1992.*
- Association of Collegiate Schools of Planning Annual Meeting, 1989.
- Association of Collegiate Schools of Planning Conference, 1992.*
- Association of Women Geoscientists, 1990.
- Career Horizons Workshop, 1991.
- City of Los Angeles Mayor's Emergency Management Council Retreat and Workshop, 1992.
- Commission on the Urban Agenda of the National Association of State Universities and Land Grant Colleges, 1992.

- Connections (Career Opportunities) Workshop, 1991.
- Disaster Education Workshop, Red Cross and FEMA, 1991.
- Disaster Research and Planning Seminar, National Center for Earthquake Engineering Research, 1990.
- Earthquake Engineering Research Institute Conference, 1992.
- Family Protection Conference, FEMA, 1990, 1991.
- Fifth Annual Workshop on Earthquake Hazards and Risk Along the Wasatch Front, Salt Lake City, Utah, 1989.
- Florida Shore and Beach Preservation Association, 1989.*
- German Humboldt Foundation Workshop on Novel Approaches to Citizen Participation, 1992.
- Health Consequences of Earthquakes: Implications for Medical Care and Emergency Search and Rescue, 1991.*
- Health, Environment, and Safety Conference, Marathon Oil, 1991.*
- Ho'olaulea 5-Western Roundup of the Western States Conference, 1991.
- Implications for Medical Care and Search and Rescue Conference, 1990.*
- International Congress of Building Officials, Colorado Chapter, 1990.
- International Sociological Association, Research Committee on Disasters, 1992.*
- International Sociological Association, XXII World Congress, 1990.*
- International Wildfire Conference, 1989
- International Workshop on Earthquake Injury Epidemiology, Johns Hopkins University, Baltimore, Maryland, 1989.
- International Workshop on Ecotourism and Resource Conservation in the Yucatan Peninsula and Mayan Region: Developing Cooperative International Relationships, Merida, Mexico, 1989.
- Investment Priorities for Natural Hazards Mitigation in the Shelter Sector, Center for Development Policy, 1992.
- MasterGuard Corporation Fire Detection Workshop, 1991.
- Mid-South Sociological Society, 1989, 1990, 1991, 1992.*
- Mid-Southern Rural Sociological Association, 1992.
- Midwest Sociological Association Conference, 1991.
- Missouri Emergency Preparedness Association Annual Workshop, 1992.
- National Association of State Title III Program Officials, 1991.
- National Association of State Universities and Land-Grant Colleges, 1992.
- National Center for Earthquake Engineering Research Conference, 1989.*
- National Conference on Hurricane Hugo, 1990.
- National Earthquake Hazard Mitigation Workshop, 1991.
- National Emergency Training Center, 1992.
- National Governors Association, Annual Conference on State Implementation of SARA Title III, 1991.
- National Hurricane Conference, Miami, Florida, 1989, 1990, 1991.*
- National Research and Development Conference on the Control of Hazardous Materials, 1992.
- National Science Foundation Mexico-US Workshop, Mexico City, Mexico, 1989.
- National Workshop on Managing Donated Goods and Services, 1991.
- Natural Hazards Research and Applications Workshop, 1989, 1990, 1991, 1992.*
- Nevada State Hazardous Material Training Center Structures Workshop, 1991.
- New England Regional Seminar on Seismic Engineering, 1992.
- Oak Ridge National Laboratory, 1989.
- Pacific Science Conference, 1991.
- Partners of the Americas Urban Infrastructure Renewal Program, 1992.
- Planning Association of Washington, 1990.
- Quantitative Risk Assessment Workshop, 1989.*
- Regional Disaster Institute, 1992.
- Rural Sociology Society, 1990.
- Seismological Society of America, 1990.
- Society for Risk Analysis, 1991, 1992.
- Society for the Study of Social Problems, 1992.
- Society of Computer Simulation, 1989.*
- Sooner Disaster College, 1992.
- Special Seminar on Nondestructive Testing for Aircraft Structures, Minority Research Center of Excellence in Materials Science, 1990.
- Summit Conference on Earthquake and Natural Disaster Countermeasures, 1991
- Symposium on Race and Environmental Quality, 1990.
- Tenth World Conference on Earthquake Engineering, 1992.
- Trends in Community Chemical Emergency Management: A One Day Technical Workshop, 1992.*

- U. S. National Workshop on the National Earthquake Hazards Reduction Program, 1990.
- UCLA International Conference on the Impact of Natural Disasters: Agenda for the Future, 1991.*
- United Nation's Department of Humanitarian Affairs, 1992.*
- University of Colorado School of Law, 1989.
- University of Texas Growth Management Forum, 1992.
- Urban and Regional Information Systems Association, 1990, 1991.
- US/Australia Workshop on Integrating Research on Fire-Prone Forest Environments, 1989.
- Virginia Tech Structural Engineering Conference, 1991.
- Western Social Science Association Annual Meeting, 1989.
- Wind Engineering Practice Workshop, 1991.
- Wind Engineering Research Council, 1990.
- Workshop on Earthquake Recovery, EERI, 1991.
- World Congress on Natural Hazard Reduction, 1992.*
- XIV Reunion de Estudios Cubanos, 1992.

*Denotes multiple attendance

Presentations, Conferences, Conventions Workshops, other Universities

The Faculty Fellows and Graduate Research Assistants have presented more than 160 papers, lectures and presentations at conferences, conventions, workshops and other universities. The HRRC presentations were made in 28 states, Puerto Rico and the District of Columbia. In addition, presentations were made in the following countries: Australia, Brazil, Canada, England, India, Jamaica, Japan, Mexico, Spain, and Switzerland.

- "A Comparative Study of Mass Media Organization in Disaster: An Empirical Examination of Some Recent Observation in the Literature." 12th World Congress of Sociology, Madrid, Spain, 1990.
- "A Microzonation of Earthquake Vulnerability and Post Earthquake Reconstruction in the Marina District of

San Francisco, California," Urban and Regional Information Systems Association, San Francisco, California, 1991.

- "A Multi-Parameter Analysis of Earthquake Damage and Post Earthquake Reconstruction: An Evaluation of the Marina District of San Francisco, California," Fourth International Conference on Seismic Zonation, Stanford University, Stanford, California, 1990.
- "A Preliminary Assessment of the Impact of Hurricane Gilbert on Cancun, Mexico," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
- "A Social Science View of Disaster Preparedness in Puerto Rico," National Conference on Hurricane Hugo, Mayaguez, Puerto Rico, 1990.
- "Advantages of Global Nondestructive Methods in Large Scale Structures," Special Seminar on Nondestructive Testing for Aircraft Structures, Minority Research Center of Excellence in Materials Science, El Paso, Texas, 1990.
- "Alternative Tools and Techniques for Reducing Seismic Hazards," National Earthquake Hazard Mitigation Workshop, Portland, Oregon, 1990.
- "An Assessment of the Impact of Earthquake Education on Hurricane Preparedness in Charleston, South Carolina," National Science Foundation, Washington, DC, 1990.
- "An Integrated Study of Search and Rescue Efforts," Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1990.
- "An Interactive Environmental/Societal Process Model for the Assessment of Vulnerability to Hazards," Association of American Geographers Annual Meeting, Baltimore, Maryland, 1989.
- "Assessing Pre- and Post-Earthquake Vulnerability in the Marina District of San Francisco," Department of Earth and Space Sciences, University of California at Los Angeles, Los Angeles, California, 1991.
- "Assessment of the Wind Environment," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
- "Behavioral Responses and Vertical Refuge," National Hurricane Conference, Miami, Florida, 1989.

- "Black Political Empowerment and White Environmental Activism in Sumter County, Alabama: Obstacles to Formation of a Natural Alliance," American Society for Environmental History, Houston, Texas, 1991.
- "Buffalo Creek Revisited in Xenia: A Comparison of Disaster Mental Health Effects," XXII World Congress of Sociology, International Sociological Association, Madrid, Spain, 1990.
- "Building Construction for Fire Suppression Forces: Principles" and "Building Construction for Fire Suppression Forces: Noncombustibles," Fire Protection Training Division, Texas Engineering Extension Service, Brayton Fire Training Facility, Texas A&M University, 1990.
- "Building Construction for Fire Suppression Forces: Principles, Wood and Ordinary Construction," Arkansas Fire Academy, Springdale, Arkansas, two day seminar, 1989.
- "Building Construction for Fire Suppression Forces: Principles, Wood and Ordinary Construction," Iowa State University, Ames, Iowa, two day seminar, 1989.
- "Building Construction for Fire Suppression," Montana State University, Great Falls, Montana, 1990.
- "Building Construction for the Fire Suppression Forces: Non combustible and Fire Resistive Construction," Arkansas Fire Academy, Springdale, Arkansas, two day seminar, 1989.
- "Building Construction: Non-Combustibles," New Mexico State Fire Academy, Socorro, New Mexico, and Wyoming Fire Academy, Wheatland, Wyoming, 1991.
- "Building Construction: Noncombustibles," Arkansas Fire Academy, Springdale, Arkansas, 1990.
- "Building Construction: Principles," Iowa State University, Ames, Iowa, 1990.
- "Building Construction: Principles," Nevada State Fire Marshal's Division, Carson City, Nevada, New Mexico State Fire Academy, Socorro, New Mexico, Florida State Fire College, Sarasota, Florida, Wyoming Fire Academy, Cody, Wyoming, and Tennessee State Fire Marshal's Office, Morristown, Tennessee, 1991.
- "Civil Rights and Environmental Action," Annual Meeting of Mid-Southern Rural Sociological Community Association, Birmingham, Alabama, 1992.
- "Community Decisions During Chemical Emergencies," National R&D Conference on the Control of Hazardous Materials, San Francisco, California, 1992.
- "Computer Aided Decision Systems," National Hurricane Conference, Miami, Florida, 1991.
- "Conducting Disaster Education in the Community," Workshop at FEMA Family Protection Conference, Emmitsburg, Maryland, 1992.
- "Cuban Mass Migration and the Social Construction of Deviance," American Sociological Association, Pittsburgh, Pennsylvania, 1992.
- "Decision Making in Hazardous Materials Emergencies," Midwest Sociological Association, Des Moines, Iowa, 1991.
- "Design and Community Development in the Mountain Resort Town of Vail, Colorado: A Comparative Look at the Effects of the Town of Vail Master Plan Hazard Reduction Strategies 1974-1991," Recreation Trends and Mountain Resort Development, Vail, Colorado, 1991.
- "Design and Material Influence on a More Fire Resistive Building Structure for the National Park Service," National Park Service Design and Construction Workshop, Colorado Springs, Colorado, 1991.
- "Disaster Education in the Community," Sooner Disaster College, Norman, Oklahoma, 1991.
- "Disaster Education, Household Preparedness and Stress Responses to Hurricane Hugo," Mid-South Sociological Association, Jackson, Mississippi, 1991.
- "Disaster Reconstruction and Environmental, Social and Economic Sustainability in Developing Countries," Natural Hazards Workshop, Institute of Behavioral Science, University of Colorado, Boulder, Colorado, 1989.
- "Disaster Research: Past, Present and Future," Oregon Emergency Management Division, State of Oregon, Portland, Oregon, 1990.
- "Disasters and Disturbance: Hazards Development, and Environmental Change in the Rocky Mountain Region," Front Range Branch of the American Geophysical Union, Boulder, Colorado, 1990.
- "Earthquake Damage, Building Vulnerability, and Reconstruction in the

- Marina District of San Francisco, California, after the Loma Prieta Earthquake: Technical and Policy-Related Issues," UCLA International Conference on the Impact of Natural Disasters: Agenda for Future Action, University of California, Los Angeles, California, 1991.
- "Earthquake in New England?: Strategies for Setting Land Use Planning on Local Agendas," New England Regional Seminar on Seismic Engineering, Boston, Massachusetts, 1992.
 - "Earthquake Mitigation Planning," Earthquake Safety Commission, Department of Natural Resources, Seminar on Earthquake Preparedness, San Juan, Puerto Rico, 1989.
 - "Economies of Expertise: Emergency Preparedness, Community Planning and Comprehensive Hazards Management," presented at Annual meeting of the Mid-South Sociological Association Chattanooga, Tennessee, 1992.
 - "El Mariel: La Migración Masiva Cubana y La Construcción Social de La Desviación," XIV Reunión de Estudios Cubanos, Rollins College, Florida, 1992.
 - "Emergency Response, Planning, and Search and Rescue," Mexico/Chile Workshop, Earthquake Engineering Research Institute, San Diego, California, 1990.
 - "Emergency Roles for LEPCs in Hazard Management," National Governors Association, Annual Conference on State Implementation of SARA Title III, Kansas City, Missouri, 1991.
 - "Emergent and Volunteer Behavior During Disaster," Summit Conference on Earthquake and Natural Disaster Countermeasures 1991, Tokyo, Japan, 1991.
 - "Emergent and Volunteer Behavior During Disaster: Research Findings and Planning Implications," Annual Meeting of the State Emergency Management Agency and Missouri Emergency Preparedness Association, Lake of the Ozarks, Missouri, 1992.
 - "Environmental Ethics and Hazardous Waste Management," International Conference on Social Aspects of Facility Planning and Management, Toronto, Canada, 1990.
 - "Environmentalism and Civil Rights in Sumter County, Alabama," Symposium on Race and Environmental Quality, Ann Arbor, Michigan, 1990.
 - "Evacuation and Housing: Cancun under Gilbert," American Sociological Association, Washington, DC, 1990.
 - "Evaluating Protective Actions for Chemical Agent Emergencies, XXII World Congress of Sociology, International Sociological Association, Madrid, Spain, 1990.
 - "Evaluation and Use of Historic Seismograms and Historic Documentary Sources for Historical Earthquake Investigations," American Geophysical Union, Baltimore, Maryland, 1991.
 - "Evaluation of Interventions in Las Colonias to Improve Service Delivery," College of Architecture, Texas A&M University, College Station, Texas, 1992.
 - "Experimental Evaluation of a Damage Prediction Model Using Data Generated by Hurricane Gilbert," National Hazards Workshop, Boulder, Colorado, 1989.
 - "Extension Activities at the Hazard Reduction & Recovery Center," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
 - "Fire Safe Building Design," National Emergency Training Center, Television Broadcast on Emergency Education Network (EENET), Emmitsburg, Maryland, 1989.
 - "Fire Safety at the Construction Site," Brigham Young University, Provo, Utah, 1989.
 - "Fire Safety at the Construction Site," Brigham Young University, Provo, Utah, 1990.
 - "Fire Safety at the Construction Site," John Brown University, Siloam Springs, Arkansas, 1989.
 - "Fire Safety Building Design," National Emergency Training Center, Television Broadcast on Emergency Education Network (EENET), Emmitsburg, Maryland, 1990.
 - "First-World/ThirdWorld: Disasters in Context, A Study of the Saragosa and Wichita Falls, Texas, Tornadoes," UCLA International Conference on the Impact of Natural Disasters: Agenda for the Future, Los Angeles, California, 1991.
 - "From a State-of-the-Art Assessment of Earthquake Hazards for Vulnerable Communities to New Approaches," National Center for Earthquake Engineering Research, Washington, DC, 1990.

- "Full Scale Research and Testing of Fire Detection Systems in a Residential Structure," MasterGuard Corporation Annual Meeting, Vancouver, Canada, 1991.
- "Future Theoretical Issues of Disaster Research," Hazards Research and Applications Workshop, Denver, Colorado, 1989.
- "Global Climate Change and Drought Hazards: Approaches for Determining Environmental and Societal Factors for Sustainable Development Planning," American Geophysical Union, Annual Fall Meeting, San Francisco, California, 1989.
- "Global Environmental Change: Opportunities for Social Science Research," Western Social Science Association Annual Meeting, Albuquerque, New Mexico, 1989.
- "Global Nondestructive Damage Detection in Offshore Platforms," American Society for Nondestructive Testing, San Antonio, Texas, 1990.
- "Hazardous Wastes and the Legitimacy Crisis of Advanced Capitalism," Rural Sociological Society, Norfolk, Virginia, 1990.
- "Hazards and Economic Development: Multiple Considerations for Environmental and Economic Sustainability," International Workshop on Ecotourism and Resource Conservation in the Yucatan Peninsula and Mayan Region: Developing Cooperative International Relationships, Merida, Mexico, 1989.
- "Housing Recovery in Saragosa and Wichita Falls, Texas," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
- "How the Public Values Urban Forests: A Case Study in Charleston following Hurricane Hugo," International Society of Arboriculture National Summit, Washington, DC, 1991.
- "Human Tendencies and Characteristics Associated with Donating and Volunteering," National Workshop on Managing Donated Goods and Services, Louisville, Kentucky, 1991.
- "Hurricane Awareness and Preparation Procedures for the Texas Coast," Texas Agricultural Extension Service, Houston, Texas, 1990.
- "Hurricane Evacuation Plans and Planning," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
- "Hurricane Hugo - Lessons Learned and as yet Unlearned," Virginia Tech Structural Engineering Conference, Blacksburg, Virginia, 1991.
- "Hurricane Hugo's Impact on Puerto Rico and the U. S. Virgin Islands," Assessment from a NRC Quick Response Study Team," American Meteorological Society, Anaheim, California, 1990.
- "Hurricane Vertical Shelter Policy: An Application of Collective Decision Theory," Florida Shore and Beach Preservation Association, Miami, Florida, 1989.
- "Implementation Strategies for Disaster Mitigation," Disaster Management Center, Oxford Polytechnic, Oxford, England, 1991.
- "Individual and Household Response to Hurricane Hugo: Progress Report," Natural Hazards Research and Applications Workshop, Boulder, CO, 1990.
- "Information Transfer and Applications in the 1990's," Hazards Research and Applications Workshop, Boulder, Colorado, 1989.
- "Instructor Candidate Training for Disaster Education," 1992 Regional Disaster Institute, San Antonio, Texas, 1992.
- "Instructor Specialty for CDE," Workshop at FEMA Family Protection Conference, Emmitsburg, Maryland, 1992.
- "Instructor Specialty Workshop for Disaster Education, at the Sooner Disaster College, Norman, Oklahoma, 1992.
- "Is the Incident Command System a Plan for All Seasons?" Oregon Emergency Management Division, State of Oregon, Portland, Oregon, 1990.
- "Lessons for Integrating Population-Protection with Emergency Management: Myths and Models," Trends in Community Chemical Emergency Management: A One Day Technical Workshop, Austin, Texas, 1992.
- "Lessons Learned from Disaster Research," Health, Environment and Safety Conference, Marathon Oil, Houston, Texas, 1991.
- "Life Safety," National Council of Architectural Registration Boards Workshop (NCARB) on Uniform

- Architect Registration Exam, section three, College Station, Texas, 1989, 1990.
- "Linking Hurricane Disaster Recovery to Sustainable Development Strategies: St. Kitts, Nevis, West Indies," Joint Conference of the American Planning Association and European Society of Planners, Oxford, England, 1991.
 - "Linking Sustainable Development to Disaster Reconstruction in Developing Countries," United Nations Disaster Relief Organization, Geneva, Switzerland, 1992.
 - "Local Planning and Earthquake Mitigation: Risk, Politics and Policy," Association of Collegiate Schools of Planning Annual Meeting, Portland, Oregon, 1989.
 - "Long-Term Disaster Housing Recovery in Developing Countries: An Assessment of the Jamaica Experience," National Hurricane Conference, Houston, Texas, 1990.
 - "Managing Reconstruction Along the South Carolina Coast Following Hurricane Hugo," 51st National Conference of the American Society for Public Administration, Los Angeles, California, 1990.
 - "Managing Reconstruction Along the South Carolina Coast: Preliminary Observations on the Implementation of the South Carolina Beachfront Management Act Following Hurricane Hugo," special conference, Hurricane Hugo: Six Months Later, Mayaguez, Puerto Rico, 1990.
 - "Managing Recovery From Hurricane Hugo," Natural Hazards Workshop, Boulder, Colorado, 1990.
 - "Managing the Global Commons," Oak Ridge National Laboratory, Knoxville, Tennessee, 1989.
 - "Mass Media Organizations in Unpredictable Environments: Problems in Covering Disasters by Local Mass Media," Mid-South Sociological Conference, Baton Rouge, Louisiana, 1989.
 - "Mismatches in Hazards Policy," Association of American Geographers Annual Meeting, Baltimore, Maryland, 1989.
 - "Modal Analysis," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
 - "Movers and Shakers and PCB Takers: Hazardous Waste and Community Power in a Rural Community," Mid-South Sociological Conference, Baton Rouge, Louisiana, 1989.
 - "Multidisciplinary Panel on Hazards Research," Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1991.
 - "Multidisciplinary Research within the College of Architecture at Texas A&M University: The Role and Impact of Research Centers," Architectural Research Centers Consortium, Phoenix, Arizona, 1990.
 - "Natural Hazards and Planning: Risk Assessments and Land Use Policy," Hazards Research and Applications Workshop, University of Colorado, Boulder, Colorado, 1992.
 - "Natural Hazards Reduction: Developed and Developing World Contexts," University of West Indies, Jamaica, 1990.
 - "Natural Hazards Risk Reduction: Use of the Public Goods Perspective as a Framework of Analysis," International Decade for Natural Disaster Reduction (IDNDR) Workshop and Conference, College Station, Texas, 1990.
 - "Nondestructive Damage Assessment of a Bridge Using Modal Testing and Structural Reliability," Third NSF Workshop on Bridge Engineering Research in Progress, La Jolla, California, 1992.
 - "Nondestructive Damage Localization Using Changes in Modal Parameters, Rice University, Houston, Texas, 1992.
 - "On the Question of Hurricane Induced Wind Speeds," American Meteorological Society Annual Conference, Washington, DC, 1991.
 - "Perceived and Acceptable Risks," Society for Risk Analysis, San Diego, California, 1992.
 - "Perception of Risk: Disposing the Chemical Weapons Stockpile on Johnston Atoll," Pacific Science Congress, Honolulu, Hawaii, 1991.
 - "Physical Mitigation Measures for Wind," Center for Development Policy, Alexandria, Virginia, 1992.
 - "Place Attachment, Recovery and Evacuation Following Hurricane Hugo," Annual Meeting of the Mid-South Sociological Society, Chattanooga, Tennessee, 1992.
 - "Planning and LEPC Effectiveness in Hazard Management," Annual Meeting of

- the National Association of State Title III Program Officials, Seattle, Washington, 1991.
- "Planning for Earthquakes: Managing Development to Reduce Seismic Hazards in Three Case Study Communities," Mid-South Sociological Conference, Baton Rouge, Louisiana, 1989.
 - "Planning Implications for Disaster Recovery in the Eastern Caribbean," National Hurricane Conference, Miami, Florida, 1991.
 - "Post Disaster Safety Evaluation of Buildings: Implication for Emergency Rescue," United Nations World Health Day, International Health Program, School of Public Health, University of California at Los Angeles, Los Angeles, California, 1991.
 - "Potential Impacts of Global Climate Change on Tropical Forests," special meeting, Intergovernmental Panel on Climate Change, Sao Paulo, Brazil, 1990.
 - "Preserving People-Place Relationships: Attitudes Toward Historic Charleston Following Hurricane Hugo," presented at American Collegiate Schools of Architecture Annual Meeting, Charleston, South Carolina, 1992.
 - "Problems in Conceptualizing Crowd Behavior," XXII World Congress of Sociology, International Sociological Association, Madrid, Spain, 1990.
 - "Public Risk Acceptance," presented at the American Sociological Association International Conference on Disasters, Pittsburgh, Pennsylvania, 1992.
 - "Reconstruction after Urban Earthquakes: An International Agenda to Achieve Safer Settlements in the 1990's," National Center for Earthquake Engineering Research Conference, Buffalo, New York, 1989.
 - "Relationships Among Neighborhood Evacuations, Volunteering and Place Attachment: Charleston and Hugo, Chattanooga, Tennessee, 1992.
 - "Rising from Devastation: Development Strategies in Times of Disaster in the Eastern Caribbean," Natural Hazards Session of the American Collegiate Schools of Planning Conference, Austin, Texas, 1990.
 - "Risk Analysis of Hurricane Shelters," National Hurricane Conference, Norfolk, Virginia, 1992.
 - "Role Conflict and Disaster," Mid-South Sociological Conference, Jackson, Mississippi, 1991.
 - "Simulation of Fatalities in Structures Subjected to Hurricane Loading," Society for Computer Simulation, San Diego, California, 1989.
 - "Socioeconomic Status of Inmarried and Outmarried Asians," American Sociological Association, Pittsburgh, Pennsylvania, 1992.
 - "Sociology and Disaster Research," Auburn University, Auburn, Alabama, 1989.
 - "State Growth Management Systems and Natural Hazards Mitigation: A Test of Land Use Reform," University of Texas Growth Management Forum, Austin, Texas, 1992.
 - "Stress Response Following Hurricane Hugo as a Function of Preparedness Activity," Southeastern Psychological Association, New Orleans, Louisiana, 1991.
 - "Structural Requirements for Shelters in High-Wind Regions," Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1991.
 - "Structural Vulnerability in the Marina District of California," Carl Heilund Lecture, Colorado School of Mines, Golden, Colorado, 1991.
 - "Structural Vulnerability in the Marina District of San Francisco, California: Analysis of Building Damage, Structural Attributes, and Related Geotechnical Factors," American Geophysical Union, San Francisco, California, 1990.
 - "Structure Influence on Tactics and Strategy," Fire Protection Training Division, Texas Engineering Extension Service, China Springs, Texas, 1990.
 - "Structure Influence on Tactics and Strategy," Utah Valley Community College, Orem, Utah, two day seminar, 1989.
 - "Summary, Deliberations and Recommendations of Wind/Tornado Working Group for Design of New Production Reactors," Department of Energy, Washington, DC, 1990.
 - "Technical and Policy Related Issues of Relief, Reconstruction, and Recovery after the Loma Prieta, California Earthquake," AGU Science and Policy Lecture, University of Arizona, Tucson, Arizona, 1991.

- "Technological Emergencies Resulting from Natural Disasters: How Likely Are They, And Are We Prepared To Deal With Them?" Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1991.
- "Technology Transfer to Third World Nations," Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1992.
- "The Acceptance and Regulation of Technological Hazards in Texas," Hazards Research and Applications Workshop, University of Colorado, Boulder, 1992.
- "The Application of Statistical Quality Control Techniques to Human Errors in Concrete Structures," American Concrete Institute Annual Convention, Toronto, Canada, 1989.
- "The Damage Assessment Process after the June 6, 1990, Limon, Colorado Tornado: An Analysis of ATC and ICBO Building Safety Evaluation Methodologies," International Congress of Building Officials, Colorado Chapter, Colorado Springs, Colorado, 1990.
- "The Damage Assessment Process after the Loma Prieta Earthquake: Effects on Relief, Reconstruction, and Recovery," Hazards Research and Applications Workshop, Boulder, Colorado, 1990.
- "The Damage Assessment Process after the October 17, 1989, Loma Prieta Earthquake: An Analysis of the Application of ATC-20," Seismological Society of America, Santa Cruz, California, 1990.
- "The Damage Assessment Process in San Francisco after the October 17, 1989, Loma Prieta Earthquake: Lessons Learned from the Application of ATC-20," U. S. Geological Survey, Golden, Colorado; Reston, Virginia; and Menlo Park, California, 1990.
- "The Damage Assessment Process in San Francisco, California after the October 17, 1989, Loma Prieta Earthquake: A Case Study," Poster Session, American Geophysical Union, Annual Fall Meeting, San Francisco, California, 1989.
- "The Hazard Reduction and Recovery Center at Texas A&M," Research Committee on Disaster, American Sociological Association, San Francisco, California, 1989.
- "The Impact of Disaster Education on Citizen Preparedness For Hurricane Hugo," Mid-South Sociological Conference, Hot Springs, Arkansas, 1990.
- "The Influence of State Planning Mandates on Local Plan Quality," FAU/FIU Joint Center, Ft. Lauderdale, Florida, 1992.
- "The Loma Prieta Earthquake and the IDNDR: Information Needs for Post Disaster Damage Assessment and Recovery," Urban and Regional Information Systems Association, Edmonton, Canada, 1990.
- "The Loma Prieta Earthquake: Geoscientific, Engineering, and Societal Issues," Association of Women Geoscientists, Denver, Colorado, 1990.
- "The Management of Land in Fire-Prone Environments: A Summary of Strategies," US/Australia Workshop on Integrating Research on Fire-Prone Forest Environments, Geelong, Australia, 1989.
- "The National Earthquake Hazards Reduction Program: Researcher Objectives and Policy Maker Needs," Geological Sciences Seminar, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 1989.
- "The New Generation of the SLOSH Model," National Hurricane Conference, Houston, Texas, 1990.
- "The October 17, 1989, Loma Prieta Earthquake," Geological Hazards Forum, Department of Geological Sciences, San Diego State University, San Diego, California, 1989.
- "The Organizational and Public Response to the 1985 Mexico City Earthquake," Third National Science Foundation Mexico Workshop, Mexico, City, Mexico, 1989.
- "The Redemption of Citizen Advisory Committees: A Critical Perspective," Invited paper for the German Humboldt Foundation Conference on Innovative Models of Public Participation in Environmental Conflicts, Morschach, Switzerland, 1992.
- "The Role of the South Carolina Beachfront Management Act in Managing Reconstruction Following Hurricane Hugo," Coastal Society, San Antonio, Texas, 1990.
- "The Social and Political Context of Earthquake Preparedness Programs in Costa Rica," Tenth World Conference on Earthquake Engineering, Madrid, Spain, 1992.
- "The Study of Volunteer and Emergent Organizational Response: Approaches and

Issues for Future Research," International Workshop on Earthquake Injury Epidemiology, Johns Hopkins University, Baltimore, Maryland, 1989.

- "The Toxic Release Inventory and the Public: Access, Use and Impact," Society for Risk Analysis, Baltimore, Maryland, 1991.
- "The Tradition of Social Science Research and Current Trends and Problems in Disaster Preparedness in the United States," World Congress on Natural Hazard Reduction, New Delhi, India, 1992.
- "The U.S. Decade for Natural Disaster Reduction," Department of Geology and Geological Engineering, Colorado School of Mines, Golden, Colorado, 1990.
- "The Use of Land-Use Planning and State Planning Mandates in Hazard Mitigation: A Comparative Evaluation of State and Local Experiences," Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1991.
- "Toxics and Race: The Case of Sumter County," Alabama-Mississippi Sociological Association, Starkville, Mississippi, 1990.
- "Update of Wind Loads Code/Standard Provisions," Ho'olaulea 5-Western Roundup of the Western States Conference, Structural Engineering Association, South Kohala, Hawaii, 1991.
- "Volunteers and Recovery in Disasters: Ignored Elements of Disaster Planning and Research," Assessment of Research and Applications for Natural Hazards Workshop, Estes Park, Colorado, 1992.
- "Vulnerability in the Marina District of San Francisco, California: Environmental and Societal Issues," Department of Geography, University of California at Los Angeles, Los Angeles, California, 1991.
- "When is Research Applied?" Natural Hazards Research and Applications Workshop, Boulder, Colorado, 1991.
- "Wind Speed Data-Inclusion in Codes and Standards," National Hurricane Conference, Miami, Florida, 1991.
- "Workshop on Intergovernmental Cooperation and Negotiations," Planning Association of Washington, Kennewick, Washington, 1990.

Consulting Activities

- American Building Company, 1991.
- Board of Directors, Brazos Valley Chapter of the American Red Cross, 1992.
- Business Roundtable, 1991.
- City of Galveston, Texas, 1989.
- City of Hilton Head, South Carolina, 1990.
- City of Los Angeles, 1992.
- City of Oakland, California, 1990.
- Committee on Natural Disasters, National Academy of Science, 1990.
- County of Sacramento, Sacramento, California, 1992.
- Dames and Moore, 1989.
- Dynamic Software, Inc., Lockheed Engineering and Sciences Corporation, 1990.
- Environmental Studies Institute, School of Public Health, University of North Carolina, 1990.
- Federal Emergency Management Agency, 1990.
- Griggs and Harrison, Houston, Texas, 1990.
- Historical Seismicity Investigation of the November 11, 1905 Earthquake, Idaho Falls, Idaho, 1991.
- Howard University, Washington, DC, 1990.
- John Wylie & Sons, 1990.
- Lawrence Livermore National Laboratory, 1991.
- Mitchell Southwest Development, 1990.
- NASA, Vibrations and Acoustic Test Facility, 1991.
- National Academy of Science, Wind Engineering Panel, 1991.
- National Aeronautics and Space Administration, 1990.
- National Institute of Building Sciences, Centers for Building Technology and Fire Research at the National Institute of Standards and Technology, 1990.
- National Research Council, Study of Organizational Response to the Huntsville, Alabama, tornado, 1989.
- National Science Foundation, 1990, 1991.
- One Allen Center, Houston, Texas, 1990.
- Prentice Hall, 1990.
- Rinehart and Winston, 1990.
- Risk Management Software, Mountain View, California, 1992.
- Robert Young Consulting Engineers, Sacramento, California, 1992.

- Southern Building Code Congress International, Inc., 1991.
- State of Alabama, 1990.
- State of Texas, 1991.
- Texas Agricultural Safety and Health Initiative Team, 1992
- U.S. Agency for International Development, Office of Housing and Urban Programs, 1992.
- United Nations, UNDRO, 1992
- Wire Reinforcement Institute, McLean, Virginia, 1990.

Advisory Panels, Committees

- American Geophysical Union, Science Policy Lecturer, 1989.
- American Institute of Architects, National AIA Crisis Management Advisory Group, 1989.
- Capitol Hill briefings on the Loma Prieta earthquake, 1990.
- City of Oakland and East Bay AIA Standards Committee, City of Oakland and East Bay, California, 1990.
- Cooperative Yucatan/U.S. Project - Ecotourism and Resource Conservation in the Yucatan Peninsula and Mayan Region, Project Advisory Committee, 1989.
- Earthquake Engineering Research Institute, Policy Committee, 1989.
- Environmental Health and Safety Committee, Texas A&M University, 1990.
- G. K. Gilbert Award Committee, Geomorphology Specialty Group of the Association of American Geographers, 1990.
- Laboratory for the Analyses of Polar Processes (LAPP), CIRES, University of Colorado, Boulder, Colorado, Executive Board Member, 1989.
- National Academy of Sciences Committee on Practical Lessons from the Loma Prieta Earthquake, 1992.
- National Academy of Sciences, National Research Council Committee on Earthquake Engineering, Subpanel on Emergency Management, 1989.
- National Academy of Sciences, National Research Council Panel on Seismic Safety Policy, Chair of subcommittee on Emergency Preparedness, 1989, 1990.
- National Academy of Sciences, Panel on the Assessment of Wind Engineering Issues in the United States, Committee on

- Natural Disasters, Commission on Engineering and Technical Systems, 1989, 1990, 1991, and 1992.
- National Academy of Sciences, Research team studying the tornado in Huntsville, Alabama, 1989.
- National Earthquake Hazards Reduction Program, U. S. Geological Survey, 1990.
- National Fire Academy, Fire Safe Building Design Committee, 1990.
- National Institute of Building Sciences, ad hoc Panel on Lifeline, 1989, 1990.
- National Science Foundation, 1992.
- National Science Foundation, Advisory Board Member, NSF grant "Earthquake Insurance in California: The Impacts of a Mandated Offer of Insurance on Residential Earthquake Insurance Purchase", 1989.
- National Science Foundation, Biological and Critical Systems, Advisory Member, 1989.
- National Science Foundation, Natural and Man-Made Hazards Program, Program Auditor, 1989.
- Natural Hazards Advisory Group, South Carolina Sea Grant Consortium, 1989.
- North Carolina Interagency Task Force on Family Protection, 1992.
- Public Affairs Committee of the American Geophysical Union, Member, 1989.
- Publications Committee, Engineering Geology Section, Geological Society of America, 1990.

Journal, Publisher or Funding Agency Reviews

- Allyn and Bacon, Inc., 1990, 1991
- American Planning Association, 1991.
- American Society of Civil Engineers, 1990.
- American Sociological Review, 1990, 1991.
- American Sociological Review, Associate Editor, 1991.
- Annals, Association of American Geographers, 1990.
- Arctic and Alpine Research, 1990.
- Canadian National Research Council, 1990.
- Coastal Zone Management Journal, 1990.
- Community Disaster Education Guide, 1992.
- Critical Mass Bulletin, 1991.
- Deviant Behavior, 1992.

- Dorsey Press, 1990, 1991.
- Earthquake Spectra, 1990.
- Editor, Agricultural Communications Texas A&M University, 1992.
- Editorial Board, Journal of the American Planning Association, 1991.
- Elsevier Science Publications B.V., 1989.
- Environmental Professional, 1990, 1991.
- Federal Emergency Management Agency, 1991.
- FEMA's Flood Recovery Program, 1992.
- Florida Sea Grant Publications, 1990.
- Geological Society of America Bulletin, 1990.
- International Journal of Mass Emergencies and Disasters, 1989, 1990, 1991, 1992.
- Journal of Geography, 1991.
- Journal of Geology, 1990.
- Journal of Planning Literature, 1991.
- Journal of the American Planning Association, 1989, 1990.
- Journal of the Engineering Mechanics Division (ASCE), 1990.
- Journal of the Structural Division (ASCE), 1990.
- Landscape and Urban Planning, 1991.
- Latin American Research Review, 1990, 1991.
- McGraw-Hill Book Company, 1990, 1991.
- National Academy of Science, 1989, 1991.
- National Academy of Sciences Panel on Wind Engineering, 1992.
- National Coastal Resources Research and Development Institute, 1989.
- National Endowment for the Humanities, 1991.
- National Institute of Building Sciences, 1989.
- National Research Council, 1991.
- National Science Foundation, 1989, 1990, 1991, 1992.
- Natural Hazards, 1989, 1991.
- Nelson Hall Publishers, 1990, 1991
- New Mexico Geology, 1990.
- Nuclear Safety, 1990, 1991
- Oak Ridge National Laboratory, 1991.
- Professional Geographer, 1990.
- Random House Publishing Company, 1989, 1990, 1991.
- Rural Sociology, 1990, 1991
- Social Science Quarterly, 1990, 1991
- Sociological Focus, 1990.
- Sociological Inquiry, 1992.

- Sociological Spectrum, 1990, 1991, 1992.
- Transactions, Nebraska Academy of Science, 1990.
- U. S. Geological Survey Professional Papers, 1989.
- United States Geological Survey, 1991.
- United States-Israel Binational Science Foundation, 1991, 1992.
- Wadsworth Publishing Company, 1990, 1991.
- Zambia Geographical Journal, 1990.

Domestic/Foreign Research Trips

Research has been undertaken at approximately 50 different research sites by HRRC faculty and graduate students.

- Antigua, 1990.
- Austin, Texas, 1991.
- Bay City, Texas, 1991, 1992.
- Brenham, Texas, 1992.
- Brownsville, Texas, 1991.
- Camden, South Carolina, 1991.
- Chambers County, Texas, 1991.
- Charleston, South Carolina, 1989, 1991.
- Clute, Texas, 1991
- Corpus Christi, Texas, 1992.
- Dickinson, Texas, 1991.
- Edna, Texas, 1991.
- Engleside, Texas, 1991.
- Freeport, Texas, 1991.
- Gregory, Texas, 1991.
- Guadalajara, Mexico, 1992.
- Hardin County, Texas, 1991.
- Henderson, Texas, 1992.
- Homestead, Florida, 1992.
- Houston, Texas, 1991.
- Huntsville, Alabama, 1989.
- Indianapolis, Indiana, 1992.
- Jamaica, 1990
- Jasper County, Texas, 1991.
- Jefferson County, Texas, 1991.
- Kerrville, Texas, 1991.
- Killeen, Texas, 1991.
- Kingston, Jamaica, 1989.
- Kingsville, Texas, 1991.
- La Porte, Texas, 1992.
- Lake Jackson, Texas, 1991.
- Los Fresnos, Texas, 1991.
- Montego Bay, Jamaica, 1989.
- Montserrat, West Indies, 1990, 1991.
- National Hurricane Center, Miami, Florida, 1989.
- Nevis, West Indies, 1990, 1991.
- New York, New York, 1992.

- Newton County, Texas, 1991.
- Odessa, Texas, 1992.
- Orange County, Texas, 1991.
- Palacios, Texas, 1991.
- Pearland, Texas, 1991.
- Port Arthur, Texas, 1991.
- Port Neches, Texas, 1991.
- Puerto Rico, 1989.
- Richwood, Texas, 1991.
- San Benito, Texas, 1991.
- San Francisco and Oakland, California, 1989.
- San Francisco, California, 1991.
- Santo Domingo, Chile, 1992.
- Saragosa, Texas, 1989.
- Sinton, Texas, 1991.
- Sourlake, Texas, 1991.
- South Carolina, 1990.
- St. Kitts, West Indies, 1990, 1991.
- Taft, Texas, 1991.
- Victoria, Texas, 1991.
- Webster, Texas, 1991.
- Wichita Falls, Texas, 1989.
- Yucatan Peninsula, Mexico, 1989.

HRRC Library Development

The HRRC's library has expanded with regard both to space and holdings since 1989. In that year there were approximately 3000 items in the Center's holdings. The library lacked adequate shelf and work space. During 1991 the HRRC library was renovated and enlarged. The new facilities doubled the space within the Center. New shelving, furniture, work space and computer facilities were added. There are now approximately 13,000 items in the Center's holdings. Of these, about 3500 are catalogued electronically using the Sci-Mate software package. Also, the Center has access to a data bank of over 13,000 additional bibliographic sources. A complete set of United Nations publications is available.

HRRC Publication List

The HRRC established a Publication List in 1989. The original list included approximately 100 books, monographs, reports, articles and preliminary papers. The list currently includes 8 books and research monographs, 33 research reports, 104 published articles, and 28 preliminary papers. The material is available at minimal cost to interested members of the public, officials and other researchers. The Publication List has been widely distributed

throughout the world. Also, complete sets of HRRC publications are exchanged with the Disaster Research Center at the University of Delaware, the Natural Hazards Research and Applications Information Center at the University of Colorado, and the Department of Humanitarian Affairs of the United Nations in Geneva, Switzerland.

HRRC Extension Activities

In collaboration with the Texas Agricultural Extension Service (TAEX), the HRRC has developed an extension or information transfer program. This outreach program is unique among all disaster and hazard research centers in the United States. The program is under the direction of Dr. David Bilbo. The purpose of the program is to disseminate disaster and hazard research findings to individuals and organizations who can utilize the information.

During the past few years a number of workshops have been presented by the HRRC, including a workshop for Marine Extension Agents of TAEX in Houston, three workshops at the 1991 and 1992 Sooner Disaster College, a workshop at the National Emergency Training Center in Emmitsburg, Maryland, and presentations at the 1992 Regional Disaster Institute in San Antonio, Texas, the North Carolina Interagency Task Force on Family Protection, and the Natural Hazards Workshop in Boulder, Colorado. Dr. Bilbo has been appointed as an Adjunct Faculty member of the National Emergency Training Center in Maryland.

In addition, the USDA-HRRC-TAEX Joint Project entitled "Emergency Preparedness and Response Workbook for Extension Agents" was funded by the United State Department of Agriculture.

United Nations Department of Humanitarian Affairs Activities

In June of 1990 the HRRC became a United Nations (UNDRO) Collaborating Centre. As such, the HRRC became only the second UNDRO Collaborating Centre in the world, and the first in the western hemisphere. As part of this collaboration, the HRRC undertook extensive research in the Caribbean for UNDRO as it examined hurricane preparedness and response in the Leeward Islands. In addition, the HRRC held an international workshop on the

International Decade for Natural Disaster Reduction (IDNDR) at Texas A&M University. Furthermore, the HRRC has provided general consultation to the New York and Geneva offices of UNDRO and participated in UNIENET. With the reorganization of UNDRO into the Department of Humanitarian Affairs, discussions were held in Geneva on extending collaborative arrangements.

HRRC Visitors Since 1989

- Auburn University
- Harvard University
- Japanese Research Team
- Massachusetts Institute of Technology
- Natural Hazards Resource and Applications Information Center, Boulder Colorado
- Oak Ridge National Laboratory
- Olgilvy, Adams & Rhinehart, Los Angeles, California
- Oregon Emergency Management
- Philippine Islands
- Rutgers University
- St. Johns, Antigua, West Indies
- St. Lawrence University
- Texas Tech University
- The Ohio State University
- United Nations, New York, NY and Geneva, Switzerland
- University of California-Berkeley
- University of Colorado,
- University of Delaware
- University of Denver
- University of Kansas
- University of North Carolina at Chapel Hill
- University of Pennsylvania
- University of Texas.
- University of the West Indies
- University of Virginia
- University of Washington
- Washington University
- Yale University

- New York Times, 1989.
- Newsweek, 1989, 1992.
- Texas A&M Battalion, 1990.
- Texas State Network News, 1990.
- The Eagle, Bryan-College Station, Texas, 1989, 1990, 1991, 1992.
- U.S. News & World Report, 1992.
- United Nations Disaster Relief Organization/Agreement Coverage, 1990.
- United Press International, 1989.
- USA Radio Network, 1991, 1992.
- Wall Street Journal, 1989.
- Washington Post, 1989, 1991, 1992.
- WOAI Radio, San Antonio, 1989.

Mass Media Contacts

- Austin American Statesman, 1990.
- Honolulu Times, 1991, 1992.
- KBTX-TV, Bryan-College Station, Texas, 1989.
- KFIT Radio, Austin, 1990.
- KORA-Bryan/College Station, 1990.
- KRLD Radio, Dallas, 1992.
- KTRH Radio, Houston, 1989.
- Los Angeles Times, 1989.

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Associated Personnel
Hazard Reduction & Recovery Center
1989 - 1992

Director
Dennis E. Wenger

Associate Director
Philip R. Berke

Administrative Secretaries
Ruth Bostic
Jacqueline Henderson

Senior Research Fellow
Carlton E. Ruch

Senior Faculty Fellows

Benigno E. Aguirre
Julius Becton
Jack Kartez
Dale Perry
George Rogers
Norris Stubbs

Extension Division
David Bilbo, Coordinator
David Ruesink

Faculty Fellows

Gilbert B. Browning
John R. Giardino
Larry W. Grosse
R. Bruce Hull IV
Susanna Hornig

Michael M. McCarthy
M. Jana Pereau
Jon Rodiek
Paul Woods

Associate Faculty Fellows

Timothy Beatley, University of Virginia
Charles Faupel, Auburn University
Thomas Glass, Yale University
Randolph Langenbach, University of California-Berkeley
Sherry Oaks, University of California-Los Angeles and Colorado State University
Rocky Lopes, American Red Cross National Headquarters

Graduate and Research Assistants

J. Ethan Beeson
Travis Black
Stephen Chambers
Ellen Dressen
David Ellis
Clarence Feagin
Margaret Hall
Jim Molinelli

Steve Hardi
Paul Johnston
Ashok Kamath
Nabil Kamel
Young Kim
Mark Lam
Sean Michael
Stephanie Dougan

Carla Prater
Swaroop Reddy
Jay Todd
Jan Townes
Gabriela Vigo
Patricia Vollmer
Suzanne Wilhite
Trent Perkins

National Advisory Panel

Raymond Burby, University of New Orleans
Thomas E. Drabek, University of Denver
David Gillespie, Washington University
Myra Lee, Oregon Emergency Management
Franklin MacDonald, Office of Disaster Preparedness, Kingston, Jamaica
Peter May, University of Washington
Kishor Mehta, Texas Tech University
Joanne Nigg, University of Delaware
William E. Riebsame, University of Colorado
Patrick L. Lavalla, The Emergency Response Institute, Inc.
Mary Fran Myers, University of Colorado

