

CURRICULUM VITAE

William Riebsame Travis
Department of Geography
and
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University of Colorado
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EDUCATION

Florida State University	BS	Geography	1971-75
University of Utah	MS	Geography	1975-78
Clark University	PhD	Geography	1978-81
International Council of Scientific Unions / Andrew W. Mellon Fellowship	Post-Doc	Climate Impacts Assessment	1981-82

RESEARCH AND TEACHING

My research examines the interaction of nature and society, including the human dimensions of natural hazards, climate change, and land use and land cover. My current projects focus on: human response to extreme climate change; land use and the landscape ecology of development patterns in the American West; and how humans mis-interpret natural processes. I teach classes in environmental geography, natural hazards, and land use.

POSITIONS

Associate Professor (1991-), Department of Geography, University of Colorado at Boulder.

Director (2008-), Center for Science and Technology Policy Research, Cooperative Institute for Research in Environmental Science (CIRES)

Fellow (2008-) Cooperative Institute for Research in Environmental Science

Core Faculty (2008-), Environmental Studies Program, UC-B

Director (1984-1992), Natural Hazards Research and Applications Information Center, Institute of Behavioral Science, UC-B.

Assistant Professor (1984-1991), Department of Geography, UC-B.

Faculty Research Associate (1984-97; 2004-), Institute of Behavioral Science, Program on Environment and Society, UC-B.

Director (1990-1993), Environmental Conservation Program, College of Arts & Sciences, UC-B.

Assistant Professor (1982-1984), Department of Geography, University of Wyoming, Laramie.

Andrew W. Mellon Post-Doctoral Fellow (1981-1982) with the International Council of Scientific Unions (ICSU)/ Scientific Committee on Problems of the Environment (SCOPE).

TEACHING

Classes taught since 1984 (while at CU):

Geography 4173: Research Seminar

Geography 2412: Environment and Culture
Geography 3402: Natural Hazards
Geography 3412: Conservation Practice
Geography 4430: Environmental Conservation Seminar
Geography 4742: Environments and Peoples: Public Lands
Geography 4742: Environments and Peoples: Human Ecology
Geography 4742: Environments and Peoples: Land Use
Geography 6181: Special Topics: Geographic Problems of the American West
Geography 4672/5672: Agro-Ecosystems
Geography 5152: History and Nature of Geography
CAMW 2001: Introduction to the American West
CAMW 4001: Capstone Seminar on the American West
ARSC 5010/7010: Natural Resources Policy (co-taught)
ARSC 5020/7020: Policy Response to Global Change (co-taught)
Ranching and Culture in the American West, Western Wyoming Community College, summers, 1997, 98, 99 (co-taught).
History and Geography of the American West, National Endowment for the Humanities Teachers' Summer Institute, 2000 (co-taught).

BOOKS AND MONOGRAPHS

2007: W.R. Travis: New Geographies of the American West: Land Use and Changing Patterns of Place. (Washington, DC: Island Press).

1997 W.E. Riebsame (General Editor) and J. Robb, (Director of Cartography), with essays by Patricia Nelson Limerick and Charles Wilkinson, and photographs by Peter Goin: Atlas of the New West. (New York: W.W. Norton).

1991 W.E. Riebsame, S.A. Changnon and T.R. Karl: Drought and Natural Resources Management in the United States. (Boulder, CO: Westview Press).

1988 W.E. Riebsame: Assessing the Social Implications of Climate Fluctuations: A Guide to Climate Impact Studies. (Nairobi, Kenya: United Nations Environment Program). With second printing and translation into Spanish and Chinese.

JOURNAL ARTICLES AND BOOK CHAPTERS

In press: W.R. Travis "Going to Extremes: Propositions on the Social Response to Severe Climate Change." Climatic Change.

2006: Hannah Gosnell, J.H. Haggerty and W.R. Travis: "Ranchland Ownership Change in the Greater Yellowstone Ecosystem: Implications for Conservation." Society and Natural Resources 19: 743-830.

2006: Julia H. Haggerty and W.R. Travis: "Out of Administrative Control: Absentee Owners, Resident Elk, and the Shifting Nature of Wildlife Management in Southwestern Montana." Geoforum 37: 816-830.

2005: H. Gosnell and W. R. Travis. "Ranchland Ownership Dynamics in the Rocky Mountain West." Rangeland Ecology and Management 58: 191-198.

- 2003: W.J. Parton, M.P. Gutman and W.R Travis: "Sustainability and Historical Land Use Change in the Great Plains: The Case of Eastern Colorado." Great Plains Research 13: 97-125.
- 2003: W.R. Travis: "A Changing Geography: Growth, Land Use, and Water in the Interior West." In William M. Lewis, Jr., ed. Water and Climate in the Western United States, pp. 171-181. (Niwot: University Press of Colorado).
- 2002: W.R. Travis, D.M. Theobald, and D. Fagre: "Transforming the Rockies: Human Forces, Settlement Patterns, and Ecosystem Effects." In Jill S. Baron, ed., Rocky Mountain Futures: An Ecological Perspective, pp. 1-24. (Washington, DC: Island Press).
- 2001 W.E. Riebsame: "Geographies of the New West." In P. Brick, S. Van de Wetering, and D. Snow, eds. Beyond the Great Divide: Collaborative Conservation and the New Environmental Debate. (Washington, DC: Island Press).
- 2001 Dale, V.H., S. Brown, R.A. Haeuber, N.T. Hobbs, N. Huntly, R.J. Naiman, W.E. Riebsame, M.G. Turner, and T.J. Valone: "Ecological Guidelines for Land Use and Management." In V.H. Dale and R.A. Haeuber (eds.) Applying Ecological Principles to Land Management, pp. 3-33. New York: Springer Verlag.
- 2000 V.H. Dale, S. Brown, R.A. Haeuber, N.T. Hobbs, N. Huntly, R.J. Naiman, W.E. Riebsame, M.G. Turner, and T.J. Valone (2000) "Ecological Principles and Guidelines for Managing the Use of Land." Ecological Applications 10: 639-670.
- 1999 Theobald, D.M., N.T. Hobbs, T. Bearly, J. Zack, T. Shenk, and W.E. Riebsame: "Incorporating Biological Information into Local Land-use Decision Making: Designing a System for Conservation Planning." Landscape Ecology 15: 35-45.
- 1999 W.E. Riebsame: "Subdividing the Rockies: Ranchland Conversion in the New West." In R.K. Olson and T.A. Lyson (eds.) Under the Blade: The Conversion of Agricultural Landscapes, pp. 398-409 Boulder: Westview Press.
- 1998 W.E. Riebsame: "Ranching a Changing Landscape: Development, Perception, and the Political Ecology of the Western Range." In K. Hess and J. Baden (eds.) Writers on the Range: Western Writers Exploring the Changing Face of the American West. Niwot, CO: University of Colorado.
- 1998 W.R. Travis: "Life in Paradox Valley: Values, Environment and Development in the American West," pp. 193-201 in K.L. Stewart, ed., Symposium on American Values: 1984-1997 (San Angelo State University Press, San Angelo, TX).
- 1997 R.S. Pulwarty and W.E. Riebsame: "The Political Ecology of Vulnerability to Hurricane-Related Hazards." In H.F. Diaz and R.S. Pulwarty (eds.) Hurricanes: Climate and Socioeconomic Impacts, pp. 185-214. Springer.
- 1996 W. E. Riebsame, H. Gosnell, and D. M. Theobald: "Land Use and Landscape Change in the U.S. Rocky Mountains I: Theory, Scale and Pattern." Mountain Research and Development 16: 395-405.

- 1996 D.M. Theobald, H. Gosnell, and W.E. Riebsame: "Land Use and Landscape Change in the US Rocky Mountains II: A Case Study of the East River Valley, Colorado" Mountain Research and Development 16: 407-418.
- 1995 W.E. Riebsame: "Ending the Range Wars?" Environment 38 (May): 4-9, 26-29.
- 1995 W.E. Riebsame, K.M. Strzepek, J.L. Wescoat, Jr., R. Perritt, G.L. Gaile, J. Jacobs, R. Leichenko, C. Magadza, H. Phien, B.J. Urbiztondo, P. Restrepo, W.R. Rose, M. Saleh, L.H. Ti, C. Tucci, and D. Yates, "Complex River Basin Management in a Changing Climate." In K. Strzepek and J. Smith (eds.) As Climate Changes: International Impacts and Implications, pp. 57-91. Cambridge University Press.
- 1994 W.E. Riebsame: "The historical bias for growth and intensification in Great Plains agricultural development." Progress in Rural Policy and Planning 4: 45-53.
- 1994 W.E. Riebsame, W.B. Meyer, and B.L. Turner II: "Modeling land use and cover as part of global change." Climatic Change 28: 45-64.
- 1994 W.E. Riebsame, W. J. Parton, K. A. Galvin, I. C. Burke, L. Bohren, R. Young, and E. Knop: "Integrated Modeling of Land Use and Cover Change." BioScience 44: 350-356.
- 1994 W.E. Riebsame and R.G. Woodmansee: "Mapping Common Ground on Public Rangelands." In J. Echeverria and R. Eby (eds.) Let the People Judge: Wise Use and the Property Rights Movement, pp.69-81. Washington, DC: Island Press.
- 1994 R.L. Knight, G.N. Wallace and W.E. Riebsame: "Ranching the View: Subdivisions versus Agriculture." Conservation Biology 9: 459-461.
- 1991 W.E. Riebsame: "Sustainability of the Great Plains in an Uncertain Climate." Great Plains Research 1: 133-151.287-296.
- 1991 W.E. Riebsame and A. Magalhaes: "Assessing the Regional Implications of Climate Variability and Change." In J. Jager and H.L. Ferguson (eds.) Climate Change: Science, Impacts, and Policy, pp. 415-430. Cambridge University Press. [Plenary presentation by lead author, Second World Climate Conference, Geneva].
- 1991 W.E. Riebsame: "Anthropogenic Climate Change and a New Paradigm of Natural Resources Management." Professional Geographer 42: 1-12.
- 1990 W.E. Riebsame: "The United States Great Plains." In B. L. Turner et al. (eds.) The Earth as Transformed by Human Action, pp. 561-575. Cambridge University Press.
- 1989 T. R. Karl and W. Riebsame: "The Impact of Decadal Fluctuations in Mean Precipitation and Temperature on Runoff: A Sensitivity Study over the United States." Climatic Change 15: 423-447.
- 1988 W.E. Riebsame: "Adjusting Water Resources Management to Climate Change." Climatic Change 13: 69-97.

- 1987 W.E. Easterling and W.E. Riebsame: "Assessing Drought Impacts and Adjustments in Agriculture and Water Resource Systems." In D. A. Whilhite et al. (eds.) Planning for Drought: Toward a Reduction of Societal Vulnerability, pp. 189-213. Boulder, CO: Westview Press.
- 1986 W.E. Riebsame: "The Dust Bowl: Historical Image, Psychological Anchor, and Ecological Taboo." Great Plains Quarterly 6: 127-136.
- 1986 W.E. Riebsame, H. Diaz, T. Moses and M. Price: "The Social Burden of Weather and Climate Hazards." Bulletin of the American Meteorological Society 67: 1378-1388.
- 1985 W.E. Riebsame: "Climate Hazards: Lessons from Recent Events in the United States." Disasters 9: 295-300.
- 1985 W.E. Riebsame: "Research in Climate/Society Interaction." Chapter 3 in R. W. Kates (ed.) Climate Impact Assessment: Studies of the Interaction of Climate and Society. New York: John Wiley and Sons.
- 1984 T. R. Karl and W. Riebsame: "The Identification of 10- to 20-year Temperature and Precipitation Fluctuations in the Contiguous United States." Journal of Climatology and Applied Meteorology 23: 950-966.
- 1983 W.E. Riebsame: "News Media Handling of Seasonal Forecasts: The Case of Winter, 1982-83." Bulletin of the American Meteorological Society 64: 1351-1356.
- 1983 W.E. Riebsame: "Managing Agricultural Drought: The Great Plains Experience." In R. Platt and G. Macinko (eds.) Beyond the Urban Fringe: Land Use Issues in Non-Metropolitan America, pp. 257-270. Minneapolis: University of Minnesota Press.
- 1981 R. A. Warrick and W.E. Riebsame: "Societal Response to CO₂-Induced Climate Change." Climatic Change 3: 387-428.
- 1981 M. Bowden, R. Kates, P. Kay, W. Riebsame, H. Gould, D. Johnson, R. Warrick and D. Weiner: "The Effect of Climate Fluctuations on Human Populations: Two Hypotheses." In M. Farmer, M. Ingram and T. Wigley (eds.) Climate and History, pp. 479-513. Cambridge University Press.
- 1979 R. Travis and W.E. Riebsame: "Communicating Environmental Uncertainty: The Nature of Weather Forecasts." Journal of Geography 78: 168-172.
- 1978: W.E. Riebsame: "Ski Tourers and the Avalanche Hazard." Great Plains-Rocky Mountain Geographical Journal 6: 288-295.
- 1974: W.E. Riebsame, W.W. Woodley, and F.E. Davis: "Radar Inference of Lake Okeechobee Rainfall for Use in Environmental Studies." Weatherwise 27(5): 206-211.

SELECTED COMMITTEE AUTHORSHIPS

With 18-member team: "Toward a Typology and Regionalization of Land Cover and Land Use Change." Chapter 3 in: W.B. Meyer and B.L. Turner II, (eds.) Changes in Land Use and Land Cover: A Global Perspective. Cambridge University Press. 1994.

As member of the NRC Panel on Policy Implications of Greenhouse Warming: Policy Implications of Greenhouse Warming: Mitigation, Adaptation, and the Science Base. Washington, DC: National Academy Press, 918 pp. 1992.

With 19 U.S. and Soviet co-authors: Global Change: Geographical Approaches. Edited by J.R. Mather and G.F. White. Tucson: University of Arizona Press. (co-author of Chapter 4: Hazards, Risk, and Social Impact Assessment). 1990.

As committee member: National Floodplain Review Committee: "An Action Agenda for Managing the Nation's Floodplains." Special Publication #25. Boulder, CO: Natural Hazards Center. 1990.

OTHER PUBLICATIONS / TECHNICAL REPORTS

2009: W.R. Travis: "Exploring Links between Natural Hazards and Global Warming." Natural Hazards Observer 33: 1, 5-6.

2006: Gosnell, H., Henderson, J. Jones, R., Katzenberger, J., Lane, Diana, Lazard, B., Lowsky, J., Preston, G., Rice, J., Smith, J., Travis, W., Wigley, T.M.L., Wilby, R., and William, M.: Aspen and Climate Change: An Assessment of Impacts and Potential Responses. Aspen Global Change Institute, Aspen, CO. 178 pp.

2005: W.R. Travis, D. Theobald, G. Mixon, and T. Dickinson: Western Futures: A Look into the Patterns of Land Use and Future Development in the American West. Report from the Center #6. Center of the American West, University of Colorado-Boulder. 19pp.

2003 H.G. Schneider, J.H. Haggerty, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Summary Report." Center of the American West, University of Colorado, Boulder. 37 pp.

P.N. Limerick, W.R. Travis and T. Scoggin: Boom and Bust in the American West. Report from the Center No. 1, Center of the American West, University of Colorado, Boulder. 21 pp.

W.R. Travis: "The Geography of Development and Water in the American West." Report to the U.S. Forest Service, Pacific Northwest Research Station, Seattle, WA. 62 pp.

W.R. Travis: "The Topography of Geography: Some Trends in Human Geographic Thinking," in S.W. Bednarz and R.S. Bednarz, eds., Social Science on the Frontier: New Horizons in History and Geography, pp. 17-25. Social Science Education Consortium, Boulder, CO.

W. Riebsame (with James Wescoat and Peter Morrisette): "Western Land Use Trends and Policies: Implications for Water Resources." Report for the Western Water Policy Review Advisory Commission (U.S. Bureau of Reclamation, Denver).

P. Showalter, W.E. Riebsame, and M.F. Meyers: "Natural Hazard Trends in the United States: A Preliminary Review for the 1990s." Working Paper No. 83. Natural Hazards Research and Applications Information Center, University of Colorado, Boulder.

- 1992 R. Woodmansee, W. Riebsame, D. Freckman, D. Haynes, and J. Logan. "Achieving Agro-Ecosystem Sustainability: The Research Challenge." USDA White Paper, Western U.S. Task Force on Sustainable Agricultural Systems.
- 1991 W. Riebsame: "Drought: Opportunities for Impact Mitigation." Episodes (March): 62-65.
- 1991 W. Riebsame and J. Snajdarova: "Climate Intelligence Failures and their Avoidance." Preprints of the Seventh Conference on Applied Climatology, pp. J37-J41. Boston: American Meteorological Society.
- 1990 W. Riebsame: "Social Perspectives on Global Climate Change. In S. Rayner, W. Naegeli, and P. Lund (eds.) Managing the Global Commons: Decision Making and Conflict Resolution in Response to Climate Change, pp. 11-26. Global Environmental Studies Center, Oak Ridge National Laboratory.
- 1989 W. Riebsame: "Reducing Hazards During the 1990s." Natural Hazards 1: 387-389.
- 1989 J. W. Jacobs and W. Riebsame: "The Greenhouse Effect: Recent Research and Some Implications for Water Resource Management." Working Paper No. 65. Natural Hazards Research and Applications Information Center, University of Colorado, Boulder.
- 1989 W. Riebsame: "Climate Change as Natural Hazard: Three Perspectives from Natural Hazards Research Useful for Analyzing the Social Implications of Global Warming." In J. C. Topping (ed.) Proceedings of the Second North American Conference on Preparing for Climate Change, pp. 158-162. Washington, DC: Climate Institute.
- 1989 W. Riebsame and J. W. Jacobs: "Climate Change and Water Resources in the Sacramento-San Joaquin Region of California: Policy Adjustment Options. In J. B. Smith and D. A. Tirpak (eds.) The Potential Effects of Global Climate Change on the United States: A Report to Congress, Appendix J, pp. 2-1 to 2-18. Washington, DC: U.S. Environmental Protection Agency.
- 1989 W. Riebsame: "Assessing the Social Implications of Climate Fluctuation through Climate Impact Studies." In Climate and Food Security. Manila, Philippines: International Rice Research Institute.
- 1988 W. Riebsame and S. K. Sinha: "Report of the First Two UNEP 'Roving Seminars' on Climate Impact Assessment: India and Nepal." Project Report. Natural Hazards Research and Applications Information Center, University of Colorado, Boulder.
- 1988 W. Riebsame: "Social Adaptation to Climate Change: Research and Policy Issues." In D. Abrahamson and P. Criborowski (eds.) The Greenhouse Effect: Policy Implications of a Global Warming, pp. 189-224. Publication No. CURA 88-8. Minneapolis: Center for Urban and Regional Affairs, Hubert Humphrey Center, University of Minnesota.
- 1987 W. Riebsame: "Human Response to Climate Change: The Role of Decision-maker Perception." Proceedings of the Symposium on Climate Change in the Southern United States: Future Impacts and Present Policy Issues. New Orleans, LA, May 28-29, 1987.
- 1986 W. Riebsame, H. Diaz and T. Moses (editors): An Annotated Bibliography of Weather and Climate Hazards. Topical Bibliography No. 12. Boulder, CO: University of Colorado, Institute of Behavioral Science. 402 pp.

1986 W. Riebsame: "Research Needs in Western Flood Hazards." In Improving the Effectiveness of Floodplain Management in Arid and Semi-Arid Regions, pp. 191-193. Madison, WI: Association of State Floodplain Managers.

1985 W. Riebsame: "Social Perspectives on Climate Hazards: The Case of Great Salt Lake Rise." In P. A. Kay and H. F. Diaz (eds.) Problems and Prospects for Predicting Great Salt Lake Levels, pp. 247-260. Salt Lake City: Center for Public Affairs and Administration, University of Utah.

1984 R. W. Kates, S. A. Changnon, Jr., W. Riebsame, and T. R. Karl: The Climate Impact, Perception, and Adjustment Experiment (CLIMPAX): A Proposal for Collaborative Research. Publications of the Center for Technology, Environment, and Development, Clark University, Worcester, Massachusetts.

1982 W. Riebsame: "Assessing the Impact of Climate on Society: A Research Review." In Proceedings of the Technical Conference on Climate for Africa, Arusha, Tanzania, January 25-30, 1982, pp. 491-520. Publication No. 596. Geneva: World Meteorological Organization.

1971: William L. Woodley, Joanne Simpson, Alan H. Miller, J. Jose Fernandes-Partagas, and W. Riebsame: Florida Cumulus Seeding Experiment for Drought Mitigation, April-May 1971. NOAA Technical Memorandum ERL OD-9, U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Boulder, CO.

RESEARCH GRANTS:

Co-Principal Investigator with Alan Townsend, Russell Monson, Tim Seastedt, and Mark Williams (2008-09) "Human and Ecosystem Responses to Mountain Pine Beetle Outbreaks in the Colorado Front Range." \$94,426 from the National Science Foundation, Division of Environmental Biology.

Principal Investigator (2003-2006) "Ranchland Dynamics in the American West." \$150,000 from the William and Flora Hewlett Foundation.

Co-Principal Investigator with David McGinnis, David Bennett, Duncan Patten, Jason Shogren. (2002-2005) "Complexity Across Boundaries: Coupled Human and Natural Systems in the Yellowstone Northern Elk Winter Range." \$638,000 (\$83,700 to University of Colorado for first two years, shared with Prof. Mark Williams). National Science Foundation, Bio-Complexity Program.

Principal Investigator (2001-2002) "Use of Geo-spatial data in Land and Water Conservation in the American West." \$8,500 from the Wyss Foundation.

Principal Investigator (2001-2002) Ranchland Dynamics in the Greater Yellowstone Ecosystem. \$70,000 from Yellowstone Heritage Trust, Inc. (extended through May, 2003, \$20,000)

Co-Principal Investigator (2000-2002) with Patricia N. Limerick (History). Institutional support, and the Western Futures Program. \$230,000 from the William and Flora Hewlett Foundation.

Principal Investigator (2000-2001) Ranchland Ownership Dynamics in the Rocky Mountains. \$47,000 from The Nature Conservancy.

Co-Principal Investigator with Patricia N. Limerick, History. (1999-2000). Western Citizenship Project, and a Handbook for the New West. \$60,000 from the William and Flora Hewlett Foundation.

Principal Investigator (1995-97), "Land Use and Cover Change in Developing Mountain Valleys: Mapping and Modeling for S.C.O.P." State of Colorado Division of Wildlife, cooperative agreement with the University of Colorado. \$9,000; renewed in 1995 for \$15,000. Mapping and projecting land use change in mountain areas to assess the transformation of land cover by human action as part of DOW's prototype System for Conservation Planning (SCoP).

Principal Investigator (1993-94), "Development on the Forest Fringe: A Pilot Study of Mountain Land Use Change in Colorado." U.S. Forest Service cooperative agreement with the University of Colorado. \$13,800. An examination of the geographical pattern, and social and ecological effects, of commercial and residential development in mountain valleys.

Principal Investigator (1984-1992), A Clearinghouse on Natural Hazards Research and Applications. NSF Grant to the University of Colorado; \$300,000 in 1984. Resubmitted and renewed 1985, 1986, 1987, 1988, 1989, 1990 and 1991; approximately \$500,000 in 1991. Annual proposal to support the information dissemination, policy analysis, and research activities of the Natural Hazards Research and Applications Information Center. Funded through NSF by a consortium of seven federal agencies.

Principal Investigator (1989-1992), International River Basin Management in a Changing Climate: A Sensitivity Analysis of Selected Rivers. Three-year project funded by the U.S. Environmental Protection Agency. Year I: \$250,000; Year II: \$250,000; Year III: \$275,000. To design and implement a study of the potential impacts of climate change on selected international river basins, including the Mekong, Indus, Zambezi, Uruguay, and Nile.

Principal Investigator (1991), Climate Impacts and Southern Africa. UNEP. \$55,000. Project to develop information and convene workshop on potential climate change effects in Southern Africa.

Principal Investigator (1991) Travel support for the U.S. Delegation to the World Congress on Natural Hazards Reduction, New Delhi, India, February, 1992. Approximately \$20,000 in equivalent U.S. funds (partly in Indian rupees).

Principal Investigator (1991-1992), An Integrated Schema and System for Assessing Human Interactions with Environmental Change and Sustainability in the Great Plains/Rocky Mountains. University of Colorado Global Change Program. \$18,000. Grant to establish a GIS and simulation capacity to assess land use change.

Principal Investigator (1987-1989), The Policy and Economic Implications of Climate Change: A National Assessment and Regional Case Study. EPA Cooperative Agreement CR-814630 with the University of Colorado. \$55,537; supplemented and extended in 1988 and 1989. Analyzed the interaction of climate fluctuation and management of natural resources in the U.S. applying range of choice, perception, and other behavioral concepts. Conducted in-depth case study of potential responses to climate change in Sacramento Basin, California.

Principal Investigator (1988-1989), A Workshop on Natural Hazards Mitigation in the 1990s. NSF Grant to University of Colorado. \$15,000. Designed and conducted a workshop to plan the U.S. activities under the United Nations International Decade for Natural Disaster Reduction.

Principal Investigator (1987-1988), Roving Seminars on Climate Impact Assessment. United Nations Environment Program contract with the University of Colorado. \$37,000. Created and implemented a plan for evaluating and disseminating research methods to inform Third World governments about the social implications of climate change. Conducted seminars in India and Nepal to disseminate this information.

Co-Principal Investigator (1985-1987), The Climate Impacts, Perception and Adjustment Experiment (CLIMPAX), Phase 1. NSF Grant to Clark University, The Illinois State Water Survey, and the University of Colorado. Year I, \$150,000; Year II, \$152,000. Developed an approach to identifying particular climate anomalies in the instrumental record and applied case study methods to assess their impacts on water and other natural resources.

Principal Investigator (1985-1986), Natural and Technological Hazards: Toward an Integrated Assessment. NSF Grant to University of Colorado. \$44,000. Convened a group of hazard scholars to explore the interactions of natural and technological hazards.

Principal Investigator (1982-84), The Usefulness of Long Range Forecasts, National Oceanic and Atmospheric Administration, grant NA82AA-H-00062 to the University of Wyoming. Year 1: \$37,000; Year 2: \$9,500.

THESES AND DISSERTATIONS DIRECTED

Doctoral Dissertations Chaired:

Peter Morrisette, 1987: "Perception, Public Policy, and Societal Adjustment to Fluctuations in Climate: A Case Study of the Rising Level of the Great Salt Lake."

Neil Heywood, 1989: "Backcountry Water: Recreation Resource and Disease hazard in the Colorado Front Range."

David Diggs, 1990: "Drought Adjustment and the Perception of Long Term Environmental Change in the Northern Great Plains."

Sara Michaels, 1990: "The Processes and Structures of Earthquake Information Exchange in British Columbia and Washington State: A Comparative Study of Policy Communities, issue networks and Information Webs."

Paul Carter, 1991: "Climate and Society Interaction: The Perception of Climate and Climate Fluctuation as Revealed in Printed Sources."

Pamela Showalter, 1993: "Prognostications of Doom: Exploring the Response to Predictions of Impending Earthquakes."

Leslie Duram, 1995: "Great Plains Agroecologies: The Transition to Alternative Agriculture in Colorado."

David Theobald, 1995: "Morphology and Effects of Mountain land use Change in Colorado: A Multiscale Landscape Analysis."

Gary Wockner, 1997: "Policy Conundrums in the National Park: Nature, Culture, and the Wolves of Isle Royale."

Elizabeth Pike, 2001: "Community, Cows, and Conservation: The Nature Conservancy in Colorado's Yampa Valley."

Andrea Ray, 2004: "Multi-Purpose Reservoir management in the Gunnison Basin, Colorado: Climate, Sustainability, and Adaptive Capacity."

Masters Theses Chaired:

David Smith, 1988: "Methods for Assessing the Social Impacts of Climate Change."

Jolana Machalek, 1992: "The Effect of User Conflict on Water Resources Management Options Under Extreme Climate Conditions."

Matthew Wilson, 1994: "Competing Social Visions of the Forest Environment and USDA Forest Service Ecosystems Management: Towards a new Ecological Management Paradigm?"

Hannah Gosnell, 1995: "Rangeland Reform '94 and the Politics of the Old West: An Analysis of Institutional and Ideological Barriers to Reforming Federal Range Policy."

Phil Lidov, 1995: "Monitoring Western Rangelands: Scientific, Institutional and Individual Perspectives on Assessment and Management."

Gabe Preston, 1998: "Housekeeping in Aspen: Second Homes and Workforce Dynamics."

Mark Haggerty, 2000: "Local Government and the ESA: Scale Processes in Endangered Species Conservation Planning."

Jessica Lage, 2005: "Coming into the Country: New Owners of Ranches in the Sierra Valley, California."

Elizabeth Russell, 2006: "Watershed Organizations and Abandoned Hardrock Mines: Perceptions of Liability as Barriers to Cleanups in Colorado."

Geneva Mixon, 2006: "The Morphology of Protected Area Boundaries in Rocky Mountain National Park."

PROFESSIONAL and UNIVERSITY SERVICE:

2008- Member, Energy Initiative Steering Committee, UC-B

2005- Honors Representative, Department of Geography

2007-08 Member, Director Search Committee, Center for Science and Technology Policy Research
CIRES, UC-B

2005-08 Member, Program Review Panel (PRP), UC-B

2005-2008 Chair, Undergraduate Studies Committee and Associate Chair; Department of Geography.

2005-06 Member, Appeals Committee on Academic Rules and Policies (ACARP), College of Arts and Sciences, UC-B

2005 Chair, Search committee, Environment and Society, Department of Geography.
 2003 Chair, Search committee, Environment and Society, Department of Geography.
 1995-05 Member, Advisory Board of the Natural Resources Law Center, UCB School of Law.
 1995-00 Chair, 2000-2005 Member, Faculty Council, Center of the American West, UCB.
 1989-00 Member, Global Change Steering Committee, UC-Boulder (now Environmental Program)
 1999-01 Project Leader, for Social Science and User Needs Assessment, CIRES/NOAA Western Water Assessment.
 1996-97 Member, Board of Directors, Colorado Center for Environmental Management (Governor's appointee).
 1995-99 Member, Environmental Studies advisory committee.
 1989-99 Member, University Executive Committee on Global Change (multi-campus program)
 1989-91 Member, National Academy of Sciences Panel: The Policy Implications of Greenhouse Warming.
 1990-93 Member, National Academy of Sciences Panel: U.S. Committee for the Scientific Committee on Problems of the Environment (SCOPE).
 1990-91 Member, Planning Committee for the 1991 Snowmass Global Change Institute, University Corporation for Atmospheric Research: "Global land Use and Cover Change."
 1991-92 Member, USDA Western Task Force on Sustainable Agriculture.
 1992 Co-Chair, Aspen Global Change Institute, summer session II: Water, Land, and People Interactions.
 1993 Member, Science Advisory Committee, Consortium for International Earth Science Information Network (CIESIN), Saginaw, MI.
 1984-85, 03-05 member, Graduate Studies and Graduate Admissions Committees, Department of Geography, UC-B
 1985-90 Department Honors Representative
 1986-90 Member, Faculty Board of the Space and Geosciences Policy Center, UC-B
 1987-91 Editorial Board of *The Professional Geographer*
 1987-91 Editorial Board of *Natural Hazards Journal*
 1987-92 Member, Board of Trustees for the Association of State Floodplain Managers Fellowship Fund
 1982-83 Faculty Senate, University of Wyoming

SELECTED CONSULTANTSHIPS, other PROFESSIONAL ACTIVITIES, and COMMUNITY SERVICE:

Member (2005-), Board of Trustees, The Nature Conservancy, Colorado Chapter
Consultant (2005 and other dates), Stratus Consulting, Boulder, CO: prepare material on impacts of natural hazards and climate change.
Consultant (2005-6), provide advice on creation of exhibits on geography of the Front Range, Longmont Museum and Cultural center.
Consultant (2005), Prepare a report on water development and land use associated with Forest Service lands in the West, University of Montana and USDA/USFS Forest Experiment Station, Missoula, MT.
Consultant (2001,) Prepare an assessment of trends in the Greater Yellowstone Ecosystem. Greater Yellowstone Coalition, Bozeman, MT.
Member (1997-98), Committee writing a white paper on Land Use and Ecology, Ecological Society of America.
Consultant (1998-99) Technical Review Team for an assessment of elk and rangeland ecology relationship, Gunnison, Colo. (Colorado Div. of Wildlife and Habitat Partnership Program).
Consultant (1997), Western Water Policy Review Advisory Commission: prepare a report and deliver a briefing on land use trends in the western US for this presidential commission.

Consultant (1994-95), Grand Canyon Visibility Transport Commission and Science Policy Associates, Secondary Effects Assessment: to evaluate the land use implications of air pollution abatement alternatives in the Colorado Plateau region.

Member (1993) Advisory Committee: Range Management and Monitoring Project, Colorado State University, Colorado Cattlemen's Association, and Colorado Wool Growers Association, and **Secretary** (1992-96), Colorado Resource Round-Table (rancher and environmentalist discussion group), **Member** (1993-94), Colorado Rangeland Reform Working Group (governor and secretary of Interior's panel on grazing regulations); **Member** (1994-95), Rangeland Ecosystems Awareness Program Committee, to create a curriculum on rangeland policy and ecosystems for the Bureau of Land Management.

Presenter: Round-Table on Ecosystems Management, organized by Secretary of Interior Bruce Babbitt with the Smithsonian Institution, the Ecological Society of America, and the Sustainable Biosphere Program. Washington, DC. July, 1993.

Delegate: Congress on Renewable Natural Resources: Critical Issues and Concepts for the 21st Century. Vail, CO, August, 1992. Renewable Natural Resources Foundation, Washington, DC.

Consultant (1986-1991), United Nations Environment Program, Nairobi, Kenya. (Review and development of methods for climate impact assessment and mitigation and their dissemination in the Third World.)

Congressional Testimony (1989), "Global Change and Third World Development." Joint Senate hearings of the Agricultural Committee and Foreign Operations Subcommittee of the Committee on Appropriations, Washington, DC, May 10.

Consultant (1981), American Association for the Advancement of Science and U.S. Department of Energy project on the Social and Institutional Consequences of a CO₂-induced Climate Change.

AWARDS AND FELLOWSHIPS:

Orton Family Foundation Fellow (2005-06): One year fellowship to study and write a book about changing land use patterns in the American West.

Outstanding Public Service Award (1992): Federal Emergency Management Agency, Washington, DC: "For exemplary leadership, enthusiasm, and intellect in improving hazards reduction in the U.S." Washington, DC.

A. W. Mellon Post-Doctoral Fellowship (1981-82), ICSU/Scientific Committee on Problems of the Environment (SCOPE), developing methods for assessing the impacts of climate change on society.

Graduate Research Fellowship (1978-1981), Graduate School of Geography, Clark University, Worcester, MA. Research on drought impacts on the U.S. Great Plains.

Special Achievement Award (1974) National Oceanic and Atmospheric Administration, Department of Commerce: "In recognition of excellence in designing, installing and maintaining a raingage network with minimum data loss, in an area south of Lake Okeechobee, Florida." [In support of the Florida Area Cumulus Experiment, FACE, a cloud seeding experiment, and despite driving a GSA vehicle off a bridge, up-side-down into a canal]