

**DIRECTORY OF**  
**U.S.-MEXICO BORDER RESEARCH AND OUTREACH**  
**AT**  
**THE UNIVERSITY OF ARIZONA**

by  
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**Udall Center for Studies in Public Policy**  
**The University of Arizona**

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*Directory of U.S.-Mexico Border Research and Outreach at The University of Arizona*  
Udall Center Publications 00-10

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## INTRODUCTION

This directory documents the depth and breadth of research and outreach activities related to the U.S.-Mexico border region underway at The University of Arizona. More than 70 faculty members, academic professionals, and other staff spread across some 30 departments, centers, and institutes engage in a diversity of scholarly efforts.

For each of the units, the *Directory* lists projects, publications, resources and materials, dissertations and theses, and contacts.

This *Directory* is the second edition of a document prepared in 1997 by the Udall Center for Studies in Public Policy, Latin American Area Center, Office of Arid Lands Studies, and the Working Group on Borderlands under the auspices of International Affairs at the UA. Information for this edition was gathered through questionnaires and oral interviews during 1999 and 2000.

An online version of the *Directory* is available at the Udall Center's Web site at: [udallcenter.arizona.edu](http://udallcenter.arizona.edu). We hope to update the information on the Web site regularly and to publish a revised hard copy periodically.

If you have comments or contributions, please contact me.

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**OFFICE OF ARID LANDS STUDIES**

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**CONTACTS**

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**Charles Hutchinson**, Associate Director and Professor  
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**Barbara Hutchinson**, Director, Arid Lands Information  
 Center <barbarah@ag.arizona.edu>

**PROJECTS**

**Land Use Change in Arizona and Sonora.** Since 1986, researchers at the Office of Arid Lands Studies have examined land use change and vegetation response in Arizona and Sonora.

**Ranching Patterns in Arizona.** Charles Hutchinson is collaborating with Thomas Sheridan of the Arizona State Museum to examine ranching patterns in Santa Cruz County, Arizona, with plans to extend the project into Sonora.

**Other Projects.** The Office of Arid Lands Studies is discussing future opportunities to conduct transborder research with the Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM).

The **Arid Lands Information Center** is primarily involved in two ongoing projects that focus on facilitating the transfer of information across the U.S.-Mexico border:

**Transborder Library Forum (El Foro).** The Arid Lands Information Center collaborates with the Arizona State Library Association to organize annual conferences to promote interlibrary cooperation and information exchange between information specialists in the U.S., Mexico, and Canada.

**International Sonoran Desert Alliance (ISDA).** The ISDA is comprised of local residents, business leaders, federal and state administrators of natural resources, civic organizations, and researchers from Mexico, the U.S., and the Tohono O’odham Nation. The ISDA works to identify and implement activities that are appropriate to an arid desert climate, promote sustainable economic development for rural communities, and protect the valuable biological and cultural resources of the

Sonoran Desert. The alliance’s activities include the development of the Regional Resource Center, which will house biological, historical, scientific, and popular information on the Sonoran region in both Spanish and English. For further information, consult the ISDA Web site: <[www.txinfinet.com/mader/ecotravel/sonoran/0895isda.html](http://www.txinfinet.com/mader/ecotravel/sonoran/0895isda.html)>

**PUBLICATIONS**

Marsh, S.E., G. Saxe, and R. Varady. 1994. *Challenges in the Development of a Binational Geographic Information System Database for the U.S.-Mexico Border Region*. Paper presented at 90th Annual Meeting of the Association of American Geographers, 29 March-2 April, San Francisco, CA.

**RESEARCH MATERIALS & RESOURCES**

**Arid Lands Newsletter.** A full-text, no-graphics edition of the Arid Lands Newsletter is available via an e-mail subscription list, aridlands-nl. To subscribe, send an e-mail to: <[majordomo@ag.arizona.edu](mailto:majordomo@ag.arizona.edu)> with the subject line blank. In the body of the message type: subscribe aridlands-nl

The **Arid Lands Information Center listserv** encourages discussion and information exchange regarding the Transborder Library Forum. To subscribe send an email to: <[listserv@listserv.arizona.edu](mailto:listserv@listserv.arizona.edu)>. In the body of the message type: subscribe foro-l “your name”.

**Satellite images and photographs** from the mid-1980s of cross-border vegetation differences

**Slides** of the border region using geographic information systems (GIS)

**DISSERTATIONS & THESES**

Lindquist, Cynthia. Ph.D. candidate. *Dimensions of Sustainability: The Use of Croton Fantzianus Seymour (“Vera Blanca”) as a Natural Resource in the Tropical Deciduous Forest of Sonora.*

Sprouse, Terry. Ph.D. candidate. *Border Groundwater Contamination in Ambos Nogales: Problems and Solutions.*

**ARIZONA PREVENTION CENTER (APC)**

1501 North Campbell Ave., Rm. 4332, Tucson, AZ 85724

Phone (520) 626-7083 - Fax (520) 6266093

ahsc.arizona.edu/apc/

**CONTACTS**

**Michael Lebowitz**, Associate Director and Professor of Public Health <mlebowitz@u.arizona.edu>

**Joel Meister**, Research Associate Professor of Family and Community Medicine <jmeister@azcc.arizona.edu>

**Mary Kay O'Rourke**, Research Assistant Professor of Public Health <maryk@ipomea.hrp.arizona.edu>

**Mark Veazie**, Research Assistant Professor of Public Health <mveazie@u.arizona.edu>

**PROJECTS**

**Southwest Center for Community Health Promotion (SWCCHP).** Sponsored by the Centers for Disease Control, the SWCCHP serves as a health resource to communities in the U.S.-Mexico border region. The Center assists border communities in the implementation and evaluation of prevention projects addressing various health issues. All projects are linked to a multidisciplinary core research program that focuses on how communities organize to promote health. The goals of the Center are: (1) to develop a multidisciplinary research and education program as a resource for southwest border communities; (2) to build capacity and improve partner communities' ability to implement, strengthen, sustain, and disseminate their strategies and interventions to improve health; and (3) to research and develop new models of community organization and participatory research appropriate for effective health promotion. The Center's projects were initiated in Douglas, Arizona, with a demonstration project to improve chronic-disease screening in Hispanic women through community health-worker outreach. Additional projects in areas such as childhood nutrition and school health are being developed.

**Children's Respiratory Diseases and Responses to Air Pollution.** The Arizona Prevention Center (APC) is collaborating on a study of children's respiratory diseases in the U.S.-Mexico border region. The study is being conducted in Ambos Nogales, Douglas/Agua Prieta, and southwest Yuma County, Arizona. Through the project, researchers are examining the extent of respiratory diseases, including asthma, among children in the border region and the relationship between diseases and air pollution.

**National Human Exposure Assessment Survey (NHEXAS AZ)/Border Extension.** Under the direction of Michael Lebowitz and Mary Kay O'Rourke, the environmental and epidemiology units of the APC are conducting two studies to assess the exposure of populations in Arizona and along the U.S.-Mexico border to potential harmful environmental contaminants. The studies include monitoring air, house dust, dermal wipes, soil, water, food, and biological fluids of selected populations in the border region for metals, pesticides, and volatile organic compounds (VOCs).

**Chemical Exposure of Children to Drinking Water (1999-2000).** This study, directed by Michael Lebowitz, investigates the exposure of children to chemicals in drinking water, using data collected in the NHEXAS study in Arizona and along the border. These data will be analyzed and used to construct estimates of exposure and the distribution of children's exposure to metals, VOCs, and pesticides.

**Border XXI/NAFTA Pesticide Initiative.** Researchers at the APC are involved in three studies examining pesticide exposure in the border region. Two studies are examining the effect of pesticide exposure on children in Yuma County, Arizona. A third study combines geographic information system (GIS) analysis of pesticide exposures in the border region with extensive pesticide exposure assessments.

**Exposure of Children to Pesticide in Yuma County, Arizona (1996-2001).** This project, funded by the Environmental Protection Agency (EPA) and directed by Mary Kay O'Rourke, examines the exposure of children in the agricultural areas of Yuma County to pesticides. The study will evaluate children with potentially high end exposure and determine how closely their exposure relates to children living in the rest of Arizona. An educational intervention will be employed and evaluated. This project is a collaboration between the Western Arizona Area Health Education Center (WAHEC) and The University of Arizona. The EPA also funded similar studies in Washington and Minnesota. Lead researchers will jointly analyze the data to determine the potential impact of results on federal policy related to pesticide exposure among children.



ARIZONA PREVENTION CENTER (APC)

**Vulnerability of Young Children to Organophosphate Pesticides and Selected Metals through Intermittent Exposures in Yuma County, Arizona (1999-2002).** Activities of children promote greater exposure to environmental pollutants. This study will evaluate and quantify exposure due to hand-to-mouth activity, pica consumption, dermal absorption, and other activities.

**Other Projects.** The APC has collaborated include a binational study on diabetes in Douglas/Agua Prieta; a binational cervical cancer project involving eight geographic sites in the U.S.-Mexico border region; a project on lupus in Nogales and Douglas, Arizona and Sonora; and several component projects of the Arizona-Sonora Task Forces focusing on pesticides, lead poisoning, and tuberculosis.

**PUBLICATIONS**

Gordon, S., P. Callahan, M. Nishioka, M. Brinkman, M.K. O'Rourke, and M.D. Lebowitz. 1998. "Residential Environmental Measurements in the NHEXAS Pilot Study in Arizona: Multimedia Results for Pesticides and VOCs." *Journal of Exposure Analysis and Environmental Epidemiology* 9(5):465-470.

Ibarra, J.M., G.A. Stephen, M.K. O'Rourke, C. Rosales, Y. Caruso, S. Rogan, and M.D. Lebowitz. 1999. "Douglas Asthma Study: Baseline and Follow-up of Fifth Graders." *American Journal of Respiratory and Critical Care Medicine* 159.

Lebowitz, M.D., M.K. O'Rourke, D.M. Moschandreas, S.P. Rogan, P.K. Van deWater, S.M. Gordon, L. Needham, and G.L. Robertson. Forthcoming. "Metals: Exposures and Biomarkers in the National Human Exposure Assessment Survey (AZ NHEXAS) in Arizona, USA." Proceedings, Indoor Air 1999. Edinburgh, Scotland.

Lebowitz, M.D. et al. 1999. "Distributions of Biomarkers and Concentrations of Metals, Pesticides and VOCs on the U.S.-Mexico Border." *Epidemiology* 10(4):S124.

O'Rourke, M.K., A. Aguirre, and M.D. Lebowitz. 1998. "Exposure of Children to Pesticides." *Epidemiology* 9:S27.

O'Rourke, M.K., S.P. Rogan, S. Jin, and G.L. Robertson. 1999. "Spatial Distribution of Arsenic Exposure and Mining Communities from NHEXAS Arizona." *Journal of Exposure Analysis and Environmental Epidemiology* 9(5):446-455.

O'Rourke, M.K., P. Sánchez Lizardi, S.P. Rogan, N.C. Freeman, A. Aguirre, and C.G. Saint. Forthcoming. "Pesticide Exposure and Creatinine Variation among Young Children." *Journal of Exposure Analysis and Environmental Epidemiology*.

O'Rourke, M.K., P.K. Van deWater, S. Jin, S.P. Rogan, A.D. Weiss, S.M. Gordon, S.M. Moschandreas, and M.D. Lebowitz. 1999. "Evaluations of Primary Metals from NHEXAS Arizona: Distributions and Preliminary Exposures." *Journal of Exposure Analysis and Environmental Epidemiology* 9(5):435-445.

Stephen, G.A., T. Flood, L. Ortega, S. Jin, C. McRill, M.K. O'Rourke, and M.D. Lebowitz. 1998. "Assessment of Respiratory Symptoms and Air Quality in a U.S.-Mexico Border Community." *Epidemiology* 9:S74.

**RESEARCH MATERIALS & RESOURCES**

**Clippings file**

**Data collection**

**Bilingual pamphlets** resulting from the Household Hazardous Waste Educational Outreach Program

**DISSERTATIONS & THESES**

Ibarra, Jorge. Ph.D. candidate. *Chronic Diseases and Their Risk Factors in Southwest Yuma County School Children and Their Families*. Ph.D. dissertation (Epidemiology).

Krinsley, Jeanne. 1998. *Exposure to Chlorpyrifos and Use of Pesticides*. Master's thesis (Nursing).

Rogan, Seamus. 1999. *Spatial Variability and Heavy Metals Concentration among Select Media Collected for the National Human Exposure Assessment Survey (NHEXAS-AZ)*. Master's thesis (Geography).

**BORDERLANDS ECONOMIC DEVELOPMENT PROGRAM**

Office of Economic Development, The University of Arizona Science and Technology Park

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**PROJECTS**

**The Arizona-Sonora Vision: Indicators of Progress.**

This binational project was commissioned by the Arizona-Mexico Commission and its sister organization, Comisión Arizona-Sonora, to design a set of indicators to measure progress in the Arizona-Sonora region in five major areas: (1) the region's share in world and NAFTA markets, (2) transborder regional economic integration, (3) dynamics of leading economic sectors relative to other border states, (4) quality of life of residents on both sides of the border relative to national standards, and (5) progress toward sustainable development.

The proposed set of indicators is the result of collaborative work between the Arizona University Consortium and the Consorcio Universitario de Sonora, with inputs from data collecting agencies and representatives of the public and private sectors in Arizona and Sonora. Phase I of the project was completed in December 1998 with a study report describing the design, methodology, data sources, and data needs. Phase II and III will focus on data collection and production of the *Annual Indicators Report* and the *Arizona-Sonora Report Card*.

**Border Indicators.** As a member of the Network of Border Economies (NOBE), members of the Borderlands Economic Development Program are developing a pre-proposal for the selection, design, and data collection of a set of indicators relevant to the whole U.S.-Mexico border region. The University of San Diego and Universidad Autónoma de Ciudad Juárez are collaborating on the project.

**The Arizona Maquiladora Connection.** This project was commissioned by the Arizona-Mexico Commission to explore the economic relationships between Arizona's economy and the maquiladora sector in Sonora. A survey of the maquiladora plants in Sonora

is being conducted in collaboration with Arizona State University. The study seeks to identify the current trends in Sonora's maquiladora industry, how NAFTA has impacted the industry's development, and the relationships between the industry and Arizona businesses.

**Strategic Economic Development Vision for the Arizona-Sonora Region.**

This binational project was commissioned in 1994 by the governments of Arizona and Sonora to examine the economies of the two states and to discuss the possibilities for economic cooperation within the framework of NAFTA. Included within the project are analyses of economic sectors, trade patterns across the international border, and the transportation and distribution industries.

The primary collaborators on the project include the Arizona University Consortium, the Consorcio Universitario de Sonora, the Colegio de la Frontera Norte-Nogales (COLEF), the Centro de Investigación en Alimentación y Desarrollo-Hermosillo (CIAD), and the Centro de Investigación y Desarrollo de los Recursos Naturales de Sonora (CIDESON). Arthur Silvers of the School of Public Administration and Policy at The University of Arizona is also collaborating on the project.

**Transnational Regional Economic Development in North America: Problems, Challenges, and Solutions in the 1990s.**

Co-organized with universities in Canada, the U.S., and Mexico, this 1996 conference brought together scholars, practitioners, and government officials to exchange views and experiences regarding the development of transnational regions in North America.

The conference participants identified four key areas of interest: (1) the need to develop a formal framework to facilitate collaboration among universities and research centers, (2) the need to enhance university partnerships with public and private sector decision-makers, (3) the need for university scholars and researchers to focus more sharply on real world issues, and (4) the need to develop better ways to make university research results available to decision-makers.

**BORDERLANDS ECONOMIC DEVELOPMENT PROGRAM**

**PUBLICATIONS**

*Arizona-Sonora Border Ports of Entry* (1993). Includes analyses of traffic flows, facility descriptions, and institutional profiles.

*Borderlands: Regional Economic Perspectives*. Research paper series.

*Directory of Borderlands Research Institutions and Resources* (1997). Lists institutions dealing with economic development in border regions.

*Strategic Economic Development Vision for the Arizona-Sonora Region*. Selected reports on trade

patterns, trade flows, leading sectors, and transboundary clusters.

*Transnational Regional Economic Development in North America* (1997). Conference proceedings.

**RESEARCH MATERIALS & RESOURCES**

**Statistical resources** (Sonora and Mexico population and economic censuses)

**Selected trade data**

**Directories of maquiladora plants**

**BUREAU OF APPLIED RESEARCH IN ANTHROPOLOGY (BARA)**

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**Norma González**, Associate Research Anthropologist

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**PROJECTS**

**Borderlands Study Team (BST).** The BST's past projects include research on the impact of the Border XXI program, technical assistance to the Border Environmental Cooperation Commission (BECC) in Ciudad Juárez, Mexico, and a community study of households and businesses in Nogales, Arizona, conducted as part of the Environmental Justice Through Pollution Prevention Program of the Environmental Protection Agency (EPA). The BST is also engaged in an ethnographic filming project on street children in Nogales, Sonora.

**Social and Community Studies.** James Greenberg is developing and has completed several projects relating to the U.S.-Mexico border region. These projects include:

**Globalization Observed: An Ethnographic Study of the National Law Center.**

**Community Oriented Policing Services (COPS) (1999-2000).** U.S. Department of Justice. Sub-contract with the City of Tucson, Tucson Police Department.

**Socio-Economic and Spatial-Temporal Mapping Studies: Rapid Assessment of the Contribution of Fishing in the Economies of the Upper Gulf of California (1993-1994).**

**PUBLICATIONS**

Greenberg, J.B. 1998. "The Tragedy of Commoditization: The Political Ecology of the Colorado River Delta's Destruction." *Research in Economic Anthropology* 19:133-149.

McGuire, T.R. and J.B. Greenberg, eds. 1993. *Maritime Community and Biosphere Reserve: Crisis and Response in the Upper Gulf of California*. Tucson: BARA Occasional Paper No. 2.

Vélez-Ibañez, C. and J.B. Greenberg. 1994. "Schooling Processes among U.S. Mexicans, Puerto Ricans, and Cubans: A Comparative, Distributive, and Case Study Approach." In *Handbook of Hispanic Cultures in the United States: Anthropology*, edited by T. Weaver. Houston: Prensa Arte Público, 270-280.

———. 1992. "Formation and Transformation of Funds of Knowledge among U.S. Mexican Households: Contexts for Educational Reformation in the Southwest Region." *Anthropology and Education Quarterly* 23(4):313-335.

**DISSERTATIONS & THESES**

Cabrera-Mereb, Claudine. 1992. *The Bicultural Profile of a Population at Risk in the U.S.-Mexico Border*. Ph.D. dissertation, Anthropology.

Cederstrom, Thoric. 1993. *The Potential Impacts of Migrant Remittances on Agricultural and Community Development in the Mixteca Baha Region of Mexico*. Ph.D. dissertation, Anthropology.

González, Norma. 1992. *Child Language Socialization in Tucson U.S.-Mexican Households*. Ph.D. dissertation.

Grimes, Kimberly. 1995. *Negotiating Borders: Social Relations, Migration Processes, and Social Context in Oaxaca, Mexico*. Ph.D. dissertation.

O'Leary, Anna. 1999. *Investment in Female Education as an Economic Strategy among Mexican-Origin Households in Nogales, AZ*. Ph.D. dissertation.

**CONSORTIUM FOR NORTH AMERICAN HIGHER EDUCATION COLLABORATION (CONAHEC)**  
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**conahec.org**

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**Francisco Marmolejo**, Director  
 <fmarmole@u.arizona.edu>

**PROJECTS**

CONAHEC is a trilateral consortium that promotes collaboration, cooperation and community-building among higher education institutions in North America. CONAHEC fosters trilateral and binational collaborative efforts, through several programs and projects.

**BORDER PACT (Border Partners in Action) (<http://borderpact.org>).** This network of higher education institutions, government agencies, and community-based organizations in the U.S.-Mexico border region was established in 1997 to effect social change in the borderlands. The Border PACT network was developed to foster more effective communication among border higher education institutions and to strengthen their collaborative efforts with governmental and nonprofit agencies in addressing regional challenges.

A total of 65 higher education institutions and organizations from both sides of the border work actively with Border PACT to address common challenges in the areas of education, health, community issues, economic development, environment, and urban infrastructure. Border PACT maintains an electronic searchable database of U.S.-Mexico borderlands initiatives and conducts an annual mini-grant competition for border projects, sponsored by the Ford Foundation.

**EL NET ([elnet.org](http://elnet.org)).** EL NET is the online networking tool for higher education collaboration in North America. The site includes a database and information clearinghouse on resources, current research, and key organization related to higher education collaboration; funding opportunities; discussion groups; job opportunities; meeting proceedings; and comparative reports.

**Annual North American Higher Education Conference.** Initiated in 1994, this annual meeting convenes leaders and practitioners from higher education institutions, government, and the business sector. The annual conference aims to identify important issues in the

creation of an agenda for collaboration in North American higher education. Proceedings from past seminars are available on the CONAHEC web site.

**The Institute for North American Higher Education.** This leadership training program for campus administrators and faculty members was initiated in 1997 and focuses on binational and trilateral higher education. It includes a series of regional workshops, intensive immersion language programs, and internships.

**North American Student Forum (<http://elnet.org/nasf>).** Inaugurated in 1999, the North American Student Forum serves as a framework for student-led cooperation across national boundaries. The forum was created to foster student awareness and personal involvement in North American regional collaboration. For more information about the program, contact <nasf@u.arizona.edu>.

**PUBLICATIONS**

CONAHEC's *Understanding the Differences* research series analyzes major policy issues and differences in the North American Free Trade Agreement (NAFTA) countries. The intent is to stimulate meaningful discussion among higher education leaders, practitioners and policymakers toward the goal of developing new binational and trilateral initiatives. Documents are available in English, Spanish, and French. More information on how to order can be obtained at the Consortium's web site, <<http://conahec.org>>.

Calvo Pontón, B., P. Ganster, F. León-García, and F. Marmolejo. 1997. *A Region in Transition: The U.S.-Mexico Borderlands and the Role of Higher Education*. Working Paper No. 6.

Canales, J., L. Calzada Gómez, and N. Villanueva. 1995. *The Education Systems of Mexico and the United States: Prospects for Reform and Collaboration*. Working Paper No. 3.

*continued on next page*

CONSORTIUM FOR NORTH AMERICAN HIGHER EDUCATION COLLABORATION (CONAHEC)

*continued from previous page*

Ewell, P.T. and R. Kent. 1995. *Policy Approaches to Evaluation and Incentive Funding in U.S. and Mexican Higher Education*. Working Paper No. 1.

Farrell, G., S. Johnstone, and P. López del Puerto. 1996. *The Role of Technology in Higher Education in North America: Policy Implications*. Working Paper No. 5.

Fernández de la Garza, G., B. Landrum, and B. Samuels. 1997. *Teaming Up: Higher Education-Business Partnerships and Alliances in North America*. Working Paper No. 7.

Gill, J.I. and L. Álvarez de Testa. 1995. *Understanding the Differences: An Essay on Higher Education in Mexico and the United States*. Main Report.

Jonsen, R. et al. 1999. *At a Crossroads: Access to Higher Education in North America*. Working Paper No. 10.

Leon, F., D. Mathews, and L. Smith. 1999. *Academic Mobility in North America: Towards New Models of Integration and Collaboration*. Working Paper No. 9.

Levin, J. 1998. *Higher Education Issues in Mexico, the U.S. and Canada*. Main Report.

Lovell, C. and M.D. Sánchez Soler. 1995. *Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues*. Working Paper No. 2.

Pendergrast, D., J. Mallea, and S. Malo. 1998. *The Vancouver Communiqué Revisited: An Assessment*. Working Paper No. 8.

Santillán, E.J. 1995. *Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA*. Working Paper No. 4.

**RESEARCH MATERIALS & RESOURCES**

**North American Electronic Database** (<http://elnet.org>)

**Border PACT Electronic Network** (<http://borderpact.org/Discussion/Default.asp>)

**ELNET Listserv**. ELNET-L is a closed, moderated listserv developed to promote discussion on North American higher education exchange. To subscribe to ELNET-L send an email to <[listproc@lists.colorado.edu](mailto:listproc@lists.colorado.edu)>. Leave the subject line blank and in the body of the message type: SUBSCRIBE EL-NET "your name".

**North American Higher Education Comparative Library**

**Statistical resources**

**DOCUMENTARY RELATIONS OF THE SOUTHWEST (DRSW)**

**Arizona State Museum 324, Tucson, AZ 85721**

**Phone (520) 621-6278 - Fax (520) 621-2976**

**www.statemuseum.arizona.edu/drsw**

**CONTACT**

**Thomas Sheridan**, Head of Ethnology Division,  
Arizona State Museum <tes@u.arizona.edu>

**PROJECTS**

**Master Bibliography and Index Project.** Since 1975, the Documentary Relations of the Southwest (DRSW) has been developing a database of Spanish colonial era documents from northern New Spain (Aguascalientes, Mexico, to San Rafael, California). One of the largest computer databases on Spanish documents in the world, the project was designed to catalog and increase the availability of primary historical documents about the greater Southwest. The database contains complete abstracts of the documents, which include reports and letters written by missionaries and civil and military officials. Financial support for the database project was primarily from the National Endowment for the Humanities.

**Additional Computerized Indexes.** Other computerized resources available at the DRSW are BIOFILE (short biographies of some 19,000 persons), BIODEX (an index of persons in 150 key publications), and GEOFILE (a geographical concordance for place names, which is in the process of being developed). These computerized indexes are available on CD-ROM and will soon be available online.

**Political Ecology of the Greater Southwest.** Thomas Sheridan is working on a series of ongoing ethnohistorical and ethnographic projects concerning the political ecology of the American Southwest and northern Mexico. Along with Diana Hadley, research specialist at the Arizona State Museum, Sheridan has completed two land-use histories on the San Rafael Valley and the San Bernardino, San Simon, and Animas valleys for the U.S. Forest Service. Together with Hadley and Charles Hutchinson of the Office of Arid Lands Studies, Sheridan is currently codirecting a study on the social, economic, and ecological impacts of the transition from ranching to real estate development in Sonoita and the San Rafael Valley. In addition, Sheridan is writing a history of the political ecology of the Upper Santa Cruz River Valley, focusing on Tumacacori-Guevavi-Calabasas, for the National Park Service.

Information from this project is being disseminated to various organizations through the Arizona Common Ground Roundtable. Hadley is also writing an ecological history of the San Pedro River valley. Finally, Sheridan and Hadley are directing a study on the vulnerability of ranchers to climatic variability in Arizona and New Mexico, as part of the Climate Assessment Project for the Southwest (CLIMAS). See the entry for the Institute for the Study of Planet Earth (ISPE) for details on the CLIMAS project.

**PUBLICATIONS**

Hadley, D., T.H. Naylor, and M.K. Schuetz-Miller, eds. 1997. *The Presidio and Militia on the Northern Frontier of New Spain, Vol. II, Part 2: The Central Corridor and the Texas Corridor*. Tucson: The University of Arizona Press.

Polzer, C.W. and T.E. Sheridan, eds. 1997. *The Presidio and Militia on the Northern Frontier of New Spain Vol II, Part 1*. Tucson, AZ: The University of Arizona Press.

Sheridan, T.E. 1999. *Empire of Sand: The Seri Indians and the Struggle for Spanish Sonora, 1645-1803*. Tucson: The University of Arizona Press.

———. 1995. *Arizona: A History*. Tucson, AZ: The University of Arizona Press.

Sheridan, T.E. and D. Guy, eds. 1998. *Contested Ground: Comparative Frontiers on the Northern and Southern Edges of the Spanish Empire*. Tucson, AZ: The University of Arizona Press.

Sheridan, T.E. and N. Parezo. 1996. *Paths of Life: American Indians of the Southwest and Northern Mexico*. Tucson, AZ: The University of Arizona Press.

**RESEARCH MATERIALS & RESOURCES**

**Microfilm and typescripts**

**Books, maps and photographs**

**Computer indexes:** Master Bibliography and Index, BIOFILE, BIODEX, GEOFILE

**Slides** (approximately 5,000 in a private collection)

**Southwestern Mission Research Center** (quarterly newsletter)

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**Therese Markow**, Regents Professor and Director,

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**PROJECTS**

**Bird Migration Ecology.** William Calder's research interests include bird migration ecology in the U.S.-Mexico border region, focusing on the migration of rufous hummingbirds and other small birds between the U.S. and western Sonora and southern Jalisco, Mexico. Calder is working with the Arizona-Sonora Desert Museum to foster collaboration with Mexican biologists in the establishment of a bird banding and monitoring project related to his migration studies. A further component of his research includes an examination of the impact of global climate change and other environmental impacts on the flora and fauna in the U.S.-Mexico border region.

**Ecology and Population Biology of *Drosophila*.**

Therese Markow's research focuses on insect species of the genus *Drosophila* in the Sonoran Desert. Several species of *Drosophila* use the nectrotic tissue of columnar cacti as feeding and breeding sites. Markow is conducting several related projects on these insects, including a study of the differences in speciation patterns in the Baja California and mainland portions of the Sonoran desert; a study of variability in mating systems of the different species of *Drosophila*; and a long-term study of microhabitat and *Drosophila* population patterns in columnar cactus hosts.

**PUBLICATIONS**

Calder, W.A. 1998. "Red-Hot Hummers: Rufous Hummingbirds Fly Rings around the Competition." *Nature Conservancy* 48:12-16.

Calder, W.A. and S. Contreras-Martínez. 1995. "Migrant Hummingbirds and Warblers on Mexican Wintering Grounds." In *Conservation of Neotropical Migratory Birds in Mexico*, edited by M.H. Wilson and S.A. Sader. Miscellaneous Publication 27. Orono, ME: Maine Agricultural and Forest Experiment Station, 123-138.

Markow, T.A. 2000. "Forced Matings of *Drosophila* Females in Natural Populations." *American Naturalist*. In press.

Markow, T.A., S. Anwar, and E.J. Pfeiler. 2000. "Stable Isotope Ratios of Nitrogen and Carbon in Natural Populations of *Drosophila* Species and Their Hosts." *Functional Ecology*. In press.

Markow, T.A. and S. Castrenza. 2000. "Dispersal in Desert *Drosophila*." *Oikos*. In press.

Martínez del Río, C., A. Silva, R. Medel, and M. Hourdequin. 1996. "Seed Dispersers as Disease Vectors: Bird Transmission of Mistletoe Seeds to Host Plants." *Ecology* 77:912-921.

Silva, A. and C. Martínez del Río. 1996. "Effects of Mistletoe Parasitism on the Reproduction of Cacti Hosts." *Oikos* 75:437-442.

Wolf, B. and C. Martínez del Río. 1999. "Isotopic Ecology of a Plant Resource-Consumer System: The Saguaro and the White-Winged Dove." *American Zoologist* 38:14A.

**DISSERTATIONS & THESES**

Aukema, Juliann. Ph.D. candidate. *Seed-Dispersers as Disease Vectors: The Interaction between Parasitic Desert Mistletoes, Fruit-Eating Birds, and Host Trees*.



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**Diana Liverman**, Professor and Director, Latin American Area Center <liverman@u.arizona.edu>  
**Barbara Morehouse**, Lecturer  
 <morehoub@u.arizona.edu>  
**Steven Yool**, Assistant Professor  
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**PROJECTS**

**Climatology.** Andrew Comrie's research interests include air-pollution climatology, global climate change, urban and regional ozone pollution, long-range atmospheric transport modeling, multivariate statistical climate analysis, and computerized map-pattern recognition and classification techniques. He is currently investigating climate variability in the southwest United States and climatological and human-induced factors controlling air pollution potential in the greater U.S.-Mexico border region. Recent projects include:

**Climate Variability, Social Vulnerability, and Public Policy in the Southwestern United States: A Proposal for Regional Assessment Activities (1998-2000)**

**Climatic Variability of the North American Monsoon (1988-1999)**

**Assessing Climate Variability in the U.S.-Mexico Border Region (1997-1998)**

**System for Management, Observation, and GIS Modeling of Air Pollution (SMOGMAP) (1997-1999)**

**Ozone Modeling Assessment Study (1997)**

**Development of Carbon Monoxide Forecasting Models for Phoenix, Arizona (1996)**

**Pyrogeography Research Laboratory (PRL).**

Directed by Steven Yool, the PRL conducts basic and applied research in fire mapping science. The PRL focuses on fuel-load mapping and modeling projects in the southwestern United States, using remote sensing and geographic information system (GIS) technologies. Projects relating to the U.S.-Mexico border region include:

**Using Remote Sensing and GIS to Map Fire Severity in the Chihuahuan Desert.**

This project examines post-fire severity and regeneration of Chihuahuan grassland in the southern extensions of the Peloncillo Mountains along the U.S.-Mexico border.

**GIS Techniques for Habitat Preference Modeling of Agave palmeri in the Peloncillo Mountains, Arizona and New Mexico.**

Through this project, researchers are using GIS techniques to characterize the habitat of *A. palmeri*, a desert succulent native to the Sonoran and Chihuahuan Deserts, in select portions of the Peloncillo Mountains. The project will also assess the potential vulnerability of the succulent to fire.

**Fuels Condition Characterization in the Pole Bridge Canyon Research Natural Area (PBCRNA), Chiricahua Mountains, Arizona.**

This project uses GIS techniques to assess current forest fuel loads for the PBCRNA. Methods developed from this demonstration project may be used to extend fuels mapping to the entire Chiricahua range.

**Human Dimensions of Climate and Land Use/Land Cover Change.**

Diana Liverman has several research projects related to the causes and consequences of climate and land cover changes in the U.S.-Mexico border region. See the entry for the **Latin American Area Center** for details.

**PUBLICATIONS**

Comrie, A. 1996. "An All-Season Synoptic Climatology of Air Pollution in the U.S.-Mexico Border Region." *Professional Geographer* 48:237-251.

Comrie, A.C. and E.C. Glenn. 1998. "Principal Components-Based Regionalization of Precipitation Regimes across the Southwest United States and Northern Mexico, with an Application to Monsoon Precipitation Variability." *Climate Research* 11.

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DEPARTMENT OF GEOGRAPHY AND REGIONAL DEVELOPMENT

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Liverman, D., R. Varady, O. Chávez, and R. Sánchez. 1999. "Environmental Issues along the U.S.-Mexico Border: Drivers of Change and Responses of Citizens and Institutions." *Annual Review of Energy and the Environment* 24:607-643.

Morehouse, B. 1997. *Health Services in Arizona and Sonora: Opportunities for Transboundary Integration*. Report prepared for the Arizona-Mexico Commission and the Comisión Sonora-Arizona. Tucson: The University of Arizona.

———. 1995. "A Functional Approach to Boundaries in the Context of Environmental Issues." *Journal of Borderlands Studies* 10:53-73.

Yool, S.R. Forthcoming. "Multi-Scale Analysis of Pattern and Process in the Northern Chihuahua Desert." *Journal of Arid Environments*.

Yool, S.R., C. Baisan, M. Medler, M. Patterson, and T. Swetnam. 1996. "Integrated Remote Sensing and Geographic Information System (GIS) Methods for Establishing Wildfire Prescription in Select Regions of the Southwestern U.S." In *Fire in Ecosystem Management: Shifting the Paradigm from Suppression to Prescription*, edited by T.L. Pruden and L.A. Brennan. Tall Timbers Fire Ecology Conference Proceedings, No. 20. Tallahassee, FL: Tall Timbers Research Station.

**RESEARCH MATERIALS & RESOURCES**

**Public data records from Mexico** (contact Andrew Comrie)

**Departmental library** includes magazines, journals, and departmental theses and dissertations

**Map collection**

**Remote sensing imagery** (contact Steven Yool)

**Clippings, magazines, and photographs about borderlands** in French, Spanish, and English (personal collection of Barbara Morehouse)

**DISSERTATIONS & THESES**

Chávez, Javier. 2000. *Socio-Economics and Urban Morphology in Ciudad Juárez*. Ph.D. dissertation.

Eisele, Kimi. 1999. *A Little Place in a Big World: Children's Perceptions of Place on the U.S.-Mexico Border*. Master's thesis.

Hansen, Ellen. 1998. *Gender and Mobility at the Arizona-Sonora Border: Women's Lives in an International Urban Context*. Ph.D. dissertation.

Llera, Francisco. 2000. *Urban Regime Theory and the U.S.-Mexico Border: Toward the Construction of a Binational Urban Regime*. Ph.D. dissertation.

Luna, Antonio. Ph.D. candidate. *Between Global and Local: Social Movements in "Ambos Nogales."*

Medler, Michael. 1997. *Integrating Remote Sensing and Terrain Data in Forest Fire Modeling*. Ph.D. dissertation.

Slosberg, Lynn. 1996. *Ecodevelopment: The Case of Wastewater Treatment in Ambos Nogales*. Master's thesis.

Wilder, Margaret. Ph.D. candidate. *Social and Environmental Aspects of Water Development in Northwest Mexico*.

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**PROJECTS**

Oscar Martínez's research interests focus on the social, economic, and cultural history of the U.S.-Mexico border region.

**PUBLICATIONS**

Martínez, O. Forthcoming. *More Thorns than Roses: Mexican-Origin People since 1900*. Tucson: University of Arizona Press.

———. Forthcoming. "Border Conflicts." In *The Latino Encyclopedia*. Pasadena, CA: Salem Press.

———. 1997. "Conflict and Accommodation on the U.S.-Mexican Border 1848-1911." In *Myths, Misdeeds, and Misunderstandings: The Roots of Conflict in United States-Mexico Relations*, edited by J.E. Rodríguez and K. Vincent. Wilmington, DE: Scholarly Resources Press.

———. 1996. "Borderlands Theory." In *Encyclopedia of the American West*, Vol. 1. New York: Macmillan.

———. 1996. "United States-Mexico Border." In *Encyclopedia of Latin American History and Culture Vol. 5*, edited by B.A. Tanenbaum. New York: Charles Scribner's Sons.

———, ed. 1996. *The U.S.-Mexico Borderlands: Historical and Contemporary Perspectives*. Wilmington, DE.: Scholarly Resources Inc.

———. 1994. "A History of Chicanos/Mexicanos along the U.S.-Mexico Border." In *Handbook of Hispanic Cultures in the United States: History*, edited by A. Jimenez. Houston: Arte Publico Press.

———. 1994. *Border People: Life and Society in the U.S.-Mexico Borderlands*. Tucson: The University of Arizona Press.

**DISSERTATIONS & THESES**

Britz, Kevin. 1999. *Virtual History in the American West: Commemorating the Past in Tombstone, Deadwood, and Dodge City, 1897-1992*. Ph.D. dissertation.

García, Ignacio. 1997. *Politics of Aztlán: The Forging of a Militant Ethos among Mexican Americans*. Ph.D. dissertation.

Logan, Mike. 1994. *Fighting Sprawl and City Hall: Resistance to Urban Growth in the Southwest, 1945-1965*. Ph.D. dissertation.

Leyva, Yolanda. 1999. *Mexican Children along the U.S.-Mexico Border: El Paso-Ciudad Juárez, 1880-1930*. Ph.D. dissertation.

Wiersma, Joy. 1996. *Patriotism, Pragmatism, and Prostitution in the U.S.-Mexico Borderlands*. Master's thesis.

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**PROJECTS**

**Sustainability of Semi-Arid Hydrology and Riparian Areas (SAHRA) Project.** A new, \$16 million, multi-university center, based in the Department of Hydrology and Water Resources and funded by the National Science Foundation, will integrate scientific data with social science and policy approaches to develop water management strategies in semi-arid regions, specifically in the Southwest and U.S.-Mexico border region. The center's five focus areas are: (1) spatial and temporal properties of hydrologic variable; (2) processes controlling water and chemical balances in catchments; (3) functioning of riparian systems; (4) integrated modeling of catchment-scale processes; and (5) sustainable water resources management. In the border region, research will be applied in the San Pedro, Río Conchos, Middle Río Grande, and other binational watersheds.

**Water Resource Planning.** Thomas Maddock specializes in the field of mathematical models for water resource planning. Past projects include a recharge analysis of the Upper Santa Cruz River in Arizona; a binational modeling study of the Middle San Pedro River Basin to examine the effects of pumping ground water on the surface water system; a modeling study of ground-water use in the Mesilla Basin, New Mexico to determine effects on the Rio Grande; and an assessment of the sustainable water supply in Big Bend National Park, a binational park in Texas and Coahuila, Mexico. Maddock is also developing a monitoring program for the San Bernardino Wildlife Refuge in Black Draw, CA. The project was developed in response to concerns

over the effects of water resource development in Mexico on the ground water system of the refuge, which is inhabited by several threatened and endangered species.

**River Restoration.** Thomas Maddock has worked on several restoration projects in collaboration with The Nature Conservancy, including the San Pedro Basin and the Kern River in California.

**PUBLICATIONS**

Chong-Díaz, D. and T. Maddock III. 1995. *Stream-Aquifer Interaction Modeling in Lower Cienega Creek Basin, Arizona, Using Finite Elements*. Technical Report HWR 95-070. Tucson: Department of Hydrology and Water Resources, The University of Arizona.

Davis, L.A., T. Maddock III, and R.D. MacNish. 1997. *Ground-Water Flow and Interaction with Surface Water in San Bernardino Valley, Cochise County, Arizona and Sonora, Mexico*. Technical Report HWR 97-030. Tucson: Department of Hydrology and Water Resources, The University of Arizona.

Ince, S., R. MacNish, M. Karpiscak, J. DeCook, M. Bradley, and T. Maddock III. 1995. *Water Resources Management Plan: Big Bend National Park, Texas. Final Report*. Tucson: Department of Hydrology and Water Resources, The University of Arizona.

Maddock, T., III and P.T. Lang. 1995. *Simulation of Groundwater Flow to Assess the Effects of Pumping and Canal Lining on the Hydrologic Regime of the Mesilla Basin*. Technical Report HWR 95-020. Tucson: Department of Hydrology and Water Resources, The University of Arizona.

Ronayne, M.J. and T. Maddock III. 1996. *Flow Model for the Bingham Cienega Area, San Pedro River Basin, Arizona: A Management and Restoration Tool*. Technical Report HWR 96-050. Tucson: Department of Hydrology and Water Resources, The Univ. of Arizona.

Scott, P.S., R.D. MacNish, and T. Maddock III. 1997. *Effluent Recharge to the Upper Santa Cruz River Floodplain Aquifer, Santa Cruz County, Arizona*. Technical Report HWR 97-070. Tucson: Department of Hydrology and Water Resources, The University of Arizona.

DEPARTMENT OF HYDROLOGY AND WATER RESOURCES

Weeden, A.C. and T. Maddock III. 1999. *Simulation of Groundwater Flow in the Rincon Valley Area and Mesilla Basin, New Mexico, and Texas*. Technical Report HWR 99-020. Tucson: Department of Hydrology and Water Resources, The University of Arizona.

**RESEARCH MATERIALS & RESOURCES**

**Aerial photos** of river basins

**Maps** of the Rio Grande, San Pedro and Colorado River

**Technical reports** on a variety of topics (see web site for complete listing)

**DISSERTATIONS & THESES**

Baird, Kate. 2000. *Restoration Projects and Evapotranspiration in the Wetlands*. Ph.D. dissertation.

Bota, Liciniu. 1997. *Modeling of Groundwater Flow and Surface/Groundwater Interaction for Upper Cienega Creek Basin*. Master's thesis.

Davis, Laura A. 1996. *Ground-Water Flow and Interaction with Surface Water in San Bernardino Valley, Cochise County, Arizona and Sonora, Mexico*. Master's thesis.

Huth, Hans J. 1997. *Hydrogeochemical Modeling of Western Mountain Front Recharge, Upper Cienega Creek Sub-Basin, Pima County, Arizona*. Master's thesis.

Janke, Philip. 1994. *Modeling of Groundwater Flow and Surface/Groundwater Interaction for the San Pedro River Basin from Fairbank to Redington, Arizona*. Master's thesis.

Knight, Erik L. 1996. *A Water Budget and Land Management Recommendations for the Upper Cienega Creek Basin*. Master's thesis.

Lacher, Laurel J. 1996. *Recharge Characteristics of an Effluent Dominated Stream near Tucson, Arizona*. Ph.D. dissertation.

Leenhouts, James M. 2000. *Behavior of Boron Isotopes during Uptake by *Atriplex canescens**. Ph.D. dissertation.

Morales, Manuel. 1995. *Salt water intrusion in Guaymas, Mexico*. Master's thesis.

Pasilis, Sofie. 1999. *Isotopic and Chemical Characterization of Groundwater in the Northern Tucson Basin, Arizona*. Master's thesis.

Ronayne, Michael J. 1996. *Hydrologic Analysis for Bingham Cienega*. Master's thesis.

Roudebush, Eric M. 1996. *The Influence of Bedrock on Perennial Streamflow in the Upper Cienega Creek Basin, Pima County, Arizona*. Master's thesis.

Schulte, Marc A. 1997. *Dilution Gauging as a Method to Quantify Groundwater Baseflow Fluctuations in Arizona's San Pedro River*. Master's thesis.

Scott, Paul S. 1997. *Effluent Recharge to the Upper Santa Cruz River Floodplain Aquifer*. Master's thesis.

Sharma, Vandana. 1997. *A Seasonal Groundwater Flow Model of the Upper San Pedro River Basin, Cochise County, Arizona*. Master's thesis.

Unland, Helene E.K. 1996. *Surface Flux Measurement and Modeling at a Semi-Arid Sonoran Desert Site*. Master's thesis.

Whitaker, Martha P.L. 2000. *Riparian Evapotranspiration and Bank Storage*. Ph.D. dissertation.

Williams, Mark D. 1996. *Evapotranspiration in South-east Arizona Semi-Arid Watersheds: Walnut Creek and Cienega Creek*. Master's thesis.

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**PROJECTS**

**Southwest Assessment Summary Report.** The Institute for the Study of Planet Earth (ISPE) leads a multidisciplinary group of experts to report on the potential consequences of climate variability and change in the southwestern United States. Part of the U.S. Global Change Research Program's (USGCRP) National Assessment, the Southwest Assessment Summary Report seeks to identify and address the varying concerns related to a changing climate in the region, including the U.S.-Mexico border. In the Southwest the issues include water, ranching, natural ecosystems, mining, human health, urban areas, and energy.

The report examines each of these sectors and assesses the social and economic consequences of climate change, while acknowledging the need for a continuing, integrated assessment of urban areas and border issues. Contributions to this report have come from a variety of sources including academics; private industry; tribal councils; and federal, state, and local governments. This broad crosscutting effort is expected to be an ongoing process, with additional information added to future reports. The report is available online at <<http://geo.ispe.arizona.edu/SW%20Assessment%20Homepage.html>>.

**Climate Assessment Project for the Southwest (CLIMAS).** Funded by the National Oceanic and Atmospheric Administration (NOAA), CLIMAS is an interdisciplinary pilot project that seeks to promote research on climate and the human impacts of climate variability and long term climate change in the Southwest. Public outreach and participation in research

activities are important components of the project, as is an integrated assessment framework that cuts across an array of natural and social science disciplines. Research currently focuses on the status of knowledge about climate in the region; climate and hydrologic forecasting; and the impact of climate variability on urban water resources, the ranching sector, and entire communities. A U.S.-Mexico borderlands research component will be initiated in the second year of the project. The CLIMAS researchers have recently completed a series of articles for publication in a special issue of *Climate Research*.

**PUBLICATIONS**

Carter, R.H., P. Tschakert, and B.J. Morehouse. 2000. *Assessing the Sensitivity of the Southwest's Water Sector to Climate Variability: Case Studies in Arizona*. CLIMAS Report Series CL1-00. Tucson: Institute for the Study of Planet Earth, The University of Arizona.

Conley, J., H. Eakin, T.E. Sheridan, and D. Hadley. 1999. *CLIMAS Ranching Case Study: Year 1*. CLIMAS Report Series CL3-99. Tucson: Institute for the Study of Planet Earth, The University of Arizona.

Morehouse, B., A. Comrie, K. Angersbach, H. Eakin, R. Carter, P. Tschakert, A. Gardner, and N. Benequista. 1998. *Climate Variability in the Southwest Region: A Contextualization of Climate Variability in Arizona and New Mexico*. CLIMAS Publication. Tucson: Institute for the Study of Planet Earth, The University of Arizona.

Sheppard, P.R., A.C. Comrie, G.D. Packin, K. Angersbach, and M.K. Hughes. 1999. *The Climate of the Southwest*. CLIMAS Report Series CL1-99. Tucson: Institute for the Study of Planet Earth, The University of Arizona.

**RESEARCH MATERIALS & RESOURCES**

**CLIMAS Update:** quarterly newsletter

**CLIMAS Report Series:** available in PDF format on the ISPE web site

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**PROJECTS**

**Language Ideology and Bilingual Development.**

This project involves a longitudinal analysis of learning through dual language school children in the borderlands region, as well as how these ideologies may mediate the teaching and learning that take place in or out of school. The project is funded by The Spencer Foundation of Chicago.

**Community Knowledge and Educational Practice: Combining Resources for Literacy Instruction (1988-1990).**

Developed by Luis Moll; Carlos Vélez-Ibañez, former director of the Bureau of Applied Research in Anthropology (BARA); and James Greenberg of BARA, this project focused on the ethnographic documentation of local knowledge in community households in the Tucson area. This knowledge was integrated into classroom curricula to enrich bilingual education and foster partnerships between local communities and school systems. The project was sponsored by the College of Education and the Office of Bilingual Education.

**Linking Home and School: A Bridge to the Many Faces of Mathematics.**

An extension of the initial bilingual education project, this project was developed by Marta Civil of the Department of Mathematics, Norma González of BARA, and Rosi Andrade of the Department of Mathematics and the Southwest Institute for Research on Women (SIROW) to explore the value of linking household knowledge with curriculum development in mathematics for ethnic and language minority students. The project is sponsored by the College of Education.

**PUBLICATIONS**

Andrade, R. 1998. "Life in the Elementary School: Children's Ethnographic Reflections." In *Students as Researchers of Language and Culture in Their Own Communities*, edited by D. Bloome and A. Egan-Robertson. Cresskill, NJ: Hampton Press Inc.

Andrade, R., M. Ayers, M. Civil, J.D. Fonseca, N. González, and L. Kahn. Forthcoming. "Creating Links between Home and School Mathematics Practices." In *Classroom Diversity: Connecting Students' Cultures to Instruction*, edited by E. McIntyre. Portsmouth, NH: Heinemann.

Andrade, R., H. González Le Denmat, and L. Moll. Forthcoming. "The Community Literacy Project: From Funds of Knowledge to Self-Discovery." In *Challenging a Single Standard: On Multiple Literacies*, edited by M. A. Gallego and S. Hollingsworth. Portsmouth, NH: Heinemann.

Andrade, R., Angiulo, H., & Moll, L. C. Forthcoming. "El Grupo de Las Señoras: Creating Consciousness through Literature." In *Challenging a Single Standard: Multiple Perspectives on Literacy*, edited by M. Gallego & S. Hollingsworth. New York, NY: Teachers College Press.

González, N., & Moll, L. C., & Amanti, C., eds. Forthcoming. *Theorizing Practices: Funds of Knowledge in Households and Classrooms*. Cresskill, NJ: Hampton.

Moll, L. C. Forthcoming. "Through the Mediation of Others: Vygotskian Research on Teaching." In *Handbook of Research on Teaching*, edited by V. Richardson. Washington, DC: American Educational Research Association.

**DISSERTATIONS & THESES**

Angiulo, Hilda. 1998. *Las Señoras: From Funds of Knowledge to Self Discovery*. Ph.D. dissertation.

Dworin, Joel. 1996. *Bilingual Development: The Appropriation of Literacy in English and Spanish by Second and Third Grade Students*. Ph.D. dissertation.

Smith, P. 2000. *Community as a Resource for Minority Language Learning: A Case Study of Spanish-English Dual Language Schooling*. Ph.D. dissertation, College of Education.

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**Raúl Saba**, Associate Director and Associate Research  
 Social Scientist <rps@u.arizona.edu>  
**Maria Carmen de Mello Lemos**, Assistant Research  
 Social Scientist <lemos@u.arizona.edu>  
**Joel Stillerman**, Assistant Research Social Scientist  
 <stillerrj@u.arizona.edu>

**PROJECTS**

The Latin American Area Center and Latin American Studies Program involve more than 100 faculty members from some 35 departments. The Center is designated as a **Title VI National Resource Center** by the U.S. Department of Education.

**Annual Meeting on the U.S.-Mexico Border Environment.** The LAAC has a grant from the Ford and Mott Foundations to organize an Annual Meeting on the Border Environment in collaboration with the Texas Center for Policy Studies (TCPS) and the Proyecto Fronterizo de Educación Ambiental (PFEA) in Tijuana. The goal of the conference is to provide a major forum for nongovernmental organizations, community groups, academics, and representatives of government and private sectors to discuss issues, exchange information, and provide training relating to the border environment.

The first conference was held in March 1998 in Ciudad Juárez and included some 300 participants representing nearly 80 nongovernmental or community-based organizations. The second meeting was held in April 1999 in Tijuana, and the third conference is planned for early 2001 in Tijuana. More information on the conference, including summaries of the 1998 and 1999 meetings, can be found at <<http://las.arizona.edu/border/borderconf.htm>>.

**Climatic Variability and Water Resources on the U.S.-Mexico Border.** The LAAC is involved in several projects relating to climate impacts and water resources along the U.S.-Mexico border. Recent projects include:

**Regional Integrated Assessment of Climate Variability and Change in the Border Region.**

Through the Center for Integrated Regional Assessment (CIRA) at Pennsylvania State University, Diana Liverman is conducting research on climate impacts in the U.S.-Mexico border region. The four year subcontract (1996-2000) is part of a larger study coordinated by CIRA to develop methods for regional integrated assessment of climate change involving climatic downscaling methods and analyses of the vulnerability of various economic sectors to drought and climate change. In the U.S.-Mexico border region, preliminary studies have been completed on the impacts of drought in Arizona and Sonora. A further goal of the project is to develop an integrated climate-change model for the binational San Pedro River basin, located in northern Sonora and southern Arizona.

**Water Resources and Climate Change in the U.S.-Mexico Border Region (1997-1998).**

Diana Liverman also collaborated on a case study of the San Pedro and Santa Cruz Rivers as part of a study by the trinational Commission on Environmental Cooperation (CEC) on transboundary water resources. The study examines scientific uncertainties about the hydrology of the rivers and shows how growing demand and institutional constraints are increasing local and binational water conflicts in the basins. Project collaborators include Robert Merideth of the Udall Center for Studies in Public Policy, Mary Kelly of the Texas Center for Policy Studies, Francisco Lara of the Colegio de la Frontera Norte (COLEF), and Stephen Mumme of Colorado State University. The second phase of the CEC study is a larger examination of climate variability and water resources on the border conducted in collaboration with Mexican scientists at the Centro de Ciencias de la Atmósfera at the Universidad Nacional Autónoma de México (UNAM). The project is an overview of information on climate variability, climate change, and vulnerability in the border region, and also examines ways in which climate change may affect binational water resources.



LATIN AMERICAN AREA CENTER & LATIN AMERICAN STUDIES PROGRAM

**Economic and Demographic Causes of Land Use Change in Mexico (1996-1998).** This two-year pilot project funded by NASA examines the social causes of land-use and land-cover change in Mexico from 1970-1990 using remote sensing, census data, and personal interviews. Project collaborators include Diana Liverman, the Colegio de Sonora, the Centro de Ecología at UNAM, and The Nature Conservancy, as well as the Office of Arid Lands Studies and the Southwest Center at The University of Arizona.

**Land Use and Land Tenure in the Greater Chihuahuan Desert (1998-1999).** This project analyzes both the history and current patterns of land use and land tenure in the Chihuahuan desert ecoregion within their legal, economic, and political contexts. The study examines the effects of recent policy, such as the North American Free Trade Agreement (NAFTA), Mexican agrarian reforms, and new land use policies in the U.S., on land use and land tenure in the ecoregion. An important objective of the project is to geographically disaggregate the patterns and processes of land use and land tenure to identify the range of socioeconomic pressures on Chihuahuan desert biodiversity.

**Labor Issues in the U.S.-Mexico Border Region.** Joel Stillerman's research on border issues examines international labor activism in the NAFTA member countries. He has recently focused on the NAFTA labor side accord and the historical background to contemporary labor internationalism.

Joel Stillerman and Maria Carmen Lemos plan to develop a multi-city comparative study examining the degree of collaboration among labor and environmental activists in the border region.

**Public Participation in Policy Development along the U.S.-Mexico Border.** Maria Carmen Lemos and Antonio Luna (a doctoral student in geography) recently completed a study on public participation in policy development in Ambos Nogales. The project focused on public participation in the certification process for the Acuaférico project, a proposal developed by Nogales, Sonora, to upgrade and improve the city's clean water-supply system. The researchers are

currently beginning a follow-up study on wastewater treatment in Nogales, Sonora.

**PUBLICATIONS**

Lemos, M.C. and A. Luna. 1999. "Public Participation in the BECC: Lessons from the Acuaférico Project, Nogales, Sonora." *Journal of Borderlands Studies* 14(1):43-64.

Liverman, D., R. Merideth, and A. Holdsworth. 1997. "Climate Variability and Social Vulnerability in the U.S.-Mexico Border Region: An Integrated Assessment of the Water Resources of the San Pedro River and Santa Cruz River Basins." In *The Impact of Climate Change and Land Use in the Southwestern United States*. United States Geological Survey (USGS).

Liverman, D., R. Varady, O. Chávez, and R. Sánchez. 1999. "Environmental Issues along the U.S.-Mexico Border: Drivers of Change and Responses of Citizens and Institutions." *Annual Review of Energy and the Environment* 24:607-643.

Stillerman, J. and E.J. Williams. Forthcoming. "The Unionization of the Maquiladora Industry and the North American Agreement on Labor Cooperation: Strategies Conceived and Frustrated." In *Cooperation, Environment, and Sustainability in Border Regions*. San Diego: San Diego State University Press.

Stillerman, J. and B. Blew. 2000. *Labor Internationalism and NAFTA: Theoretical, Historical and Practical Dilemmas*. Paper presented at the Latin American Studies Association conference, Miami, FL, March 11-13.

**RESEARCH MATERIALS & RESOURCES**

**Curriculum Resource Center:** books and other materials on Latin America including many on Mexico

**Databases:** a large collection of statistics on Mexico including the 1990 Mexican Agricultural Census on CD-ROM, climatic data, and complete Mexico coverage for 1973, 1986, and 1992 satellite (Landsat) imagery

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LATIN AMERICAN AREA CENTER & LATIN AMERICAN STUDIES PROGRAM

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**Maps:** Diana Liverman has a personal collection of Mexican maps; Digitized maps of Mexico (municipalities and terrain) are also available in Arcview and Atlas GIS.

**News Clippings:** a large collection of clippings on Latin America including articles on environmental issues in Mexico

**Videos:** approximately 300 videos located at the Latin American Area Center (see the LAAC/LAS web site for a complete listing)

**THESES**

Brose, Lara. 1997. *Cultural Barriers to Seeking Preventative Care for Cervical Cancer: Perspectives from a Case Study in Ambos Nogales*. Master's thesis.

Heineman, Danton. 1995. *Social Service Use among Illegal Immigrants*. Master's thesis.

Kirtley, Scott. 1995. *Walls or Bridges: The Impact of Illegal Migration on Three Southern Arizona Communities*. Master's thesis.

Kleiberg, Marianne. 1999. *Cattle, Cowboys, and Conservation: The Political Ecology of a Forest Reserve in Sonora, Mexico*. Master's thesis.

Mauseth, Tom A. 1996. *The Port of Guaymas in the Historical Geography of Sonora*. Master's thesis.

Olenberger, Emma. 1999. *Gendered Local Knowledge and Resource Mapping of Magdalena Bay, Baja California Sur*. Master's thesis.

Pope, Cynthia. 1997. *Babies and Borderlands: Factors that Influence Sonorans' Choice to Seek Prenatal and Perinatal Care in Southern Arizona*. Master's thesis.

Rosenberg, Janice. 1997. *Documenting and Revitalizing Traditional Ecological Knowledge: The Curriculum Development Component of the Seri Ethnozoology Education Project*. Master's thesis.

Sarten, Kristen. 1994. *Women's Health and Poverty in Mexico's Northern Borderlands*. Master's thesis.

Stephan, Jennifer. 1995. *Binational Disease: The Susceptibility of the Border Region to the Transmission of Infectious Disease*. Master's thesis.

**LAW LIBRARY**

**John E. Rogers College of Law, 1201 East Speedway Blvd., Tucson, AZ 85721**  
**Phone (520) 621-1547 - Fax (520) 621-3138**  
**www.law.arizona.edu**

**CONTACT**

**Francisco Avalos**, Foreign and International Law  
 Librarian <favalos@law.arizona.edu>

**PROJECTS**

The collections of the Law Library include materials related to the North American Free Trade Agreement (NAFTA), primarily on transboundary environmental issues, transportation, and industry-related medical problems. The collections also include materials on other environmental, medical, political, and business-trade issues. The College of Law collaborates in the acquisition of materials with the National Law Center for Inter-American Free Trade, which obtains materials from government agencies throughout Latin America.

**Transborder Library Forum (El Foro).** Members of the Law Library are also involved with El Foro, a series of annual conferences promoting interlibrary cooperation and information exchange between information specialists in the U.S., Mexico, and Canada.

**PUBLICATIONS**

Avalos, F. 1998. "Legal Translations: Some Tips." Lecture delivered at National Language Resource Center, 24 July at San Diego State University. (Transcription available on Web site)

———. 1998. *NAFTA Primary and Secondary Sources: A Selected Bibliography*. Tucson: The University of Arizona College of Law. (Computer file available on web site at <www.law.arizona.edu/library/NAFTABIB.htm>)

———. 1992. *The Mexican Legal System: A Reference Guide*. New York: Greenwood Press.

Torres, A.L. and F. Avalos. 1989. *Latin American Legal Abbreviations: A Comprehensive Spanish/Portuguese Dictionary with English Translations*. New York: Greenwood Press.

**RESEARCH MATERIALS & RESOURCES**

**Clippings files** on the North American Free Trade Agreement (NAFTA) (personal collection; contact Francisco Avalos)

**Databases:** Mexico CD-ROMs

**Multimedia materials**

**Statistical information:** population, birth rates

**SCHOOL OF INFORMATION RESOURCES AND LIBRARY SCIENCE**

1515 East 1st St., Tucson, AZ 85721

Phone (520) 621-3565 - Fax (520) 621-3279

timon.sir.arizona.edu

**CONTACT**

**Charles Hurt**, Professor <cdh@u.arizona.edu>

**PROJECTS**

**Collaboration and Exchange.** The School of Information Resources and Library Science is involved in ongoing projects to link faculty and students at The University of Arizona and Mexican universities via the Internet and faculty and student collaboration and exchange:

Faculty in the School of Information Resources and Library Science are collaborating on a large-scale extension program through which students in Mexico and Latin America may access coursework at The University of Arizona via the Internet.

The School's faculty are working on a collaboration to share coursework with researchers from the Universidad de las Américas-Puebla (UDLAP) in

Mexico. The two institutions are also discussing the possibility of faculty and student exchanges in the future.

**Transborder Library Forum (El Foro).** Charles Hurt was actively involved in the development of El Foro, a series of annual conferences that promote inter-library cooperation and information exchange between information specialists in the U.S., Mexico, and Canada.

**DISSERTATIONS & THESES**

Adkins, Denice. 2000. *Arizona Public Library Service to Spanish-Speaking Children: The Impact of School-Library Interaction on Service*. Ph.D. dissertation.

Rivera, Martin Juan. Ph.D. candidate. Martin's dissertation will compare the use of storytelling across borders, socioeconomic groups, generations, and education levels in the U.S.-Mexico border region.

**MEXICAN AMERICAN STUDIES AND RESEARCH CENTER (MASRC)**

Economics Bldg. 23, Tucson, AZ 85721  
 Phone (520) 621-7551 - Fax (520) 621-7966  
[w3.arizona.edu/masrc/](http://w3.arizona.edu/masrc/)

**CONTACTS**

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 Hispanic Center of Excellence, College of Medicine  
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**Arturo González**, Assistant Professor  
 <agon@u.arizona.edu>

**Gilbert Quintero**, Assistant Professor  
 <quintero@u.arizona.edu>

**Gregory Rodríguez**, Assistant Professor  
 <grodrigu@u.arizona.edu>

**Raquel Rubio-Goldsmith**, Adjunct Lecturer

**PROJECTS**

**Border Academy.** Initiated in the summer of 1998 by the Mexican American Studies and Research Center (MASRC) and the Southwest Center at The University of Arizona, the Border Academy is an annual, two-week seminar developed to promote discussion on and understanding of the social, political, and economic issues shaping the U.S.-Mexico border region. The Border Academy's faculty consists of scholars and professionals from both Mexico and the United States. The first Border Academy, entitled "The U.S.-Mexican Borderlands under Pressure: Conflict, Cooperation, and Compromise," was organized in conjunction with Columbia University's Biosphere 2 Center. The 1999 Border Academy focused on border health, urban and regional landscapes, and economic development in the U.S.-Mexico border region.

**Community Research Office (CRO).** The CRO was developed in 1992 as the applied public health research unit of the MASRC. Directed by Antonio Estrada, the CRO focuses on HIV/AIDS prevention and include:

**Community Outreach Project on AIDS in Southern Arizona (COPASA).** This project examines the effectiveness of intervention methods in changing HIV-risk behaviors, focusing on intravenous drug abusers, their sexual partners, and crack cocaine users.

**The One-to-One Program.** Funded by the National Institute on Drug Abuse (NIDA), this five-year study is designed to develop, implement, and evaluate a culturally innovative HIV-risk reduction model for Hispanic injection drug users and their sexual partners in nine Mexican-American barrios in Tucson.

**El Proyecto por Nosotros.** The NIDA also funded this study to develop, implement, and assess a culturally competent HIV-prevention model for Mexican-American and Mexican-origin injection drug users in the Arizona-Sonora border region, focusing on the border towns Douglas-Agua Prieta and Nogales-Nogales.

**Cultural History.** Gregory Rodríguez is researching the cultural history of Arizona, with an emphasis on popular culture, immigration, labor, and space. His recently-completed dissertation from the University of California at San Diego is entitled "*Palaces of Pain*" - *Arenas of Mexican American Dreams: Boxing and the Formation of Ethnic Mexican Identities in Twentieth-Century Los Angeles*.

**PUBLICATIONS**

Estrada, A. and G. Quintero. 1999. "Redefining Categories of Risk and Identity: The Appropriation of AIDS Prevention Information and Constructions of Risk." In *Power in the Blood: A Handbook on AIDS, Politics, and Communication*, edited by W. Elwood. Mahwah, NJ: Erlbaum Press.

González, A. 1998. "Mexican Enclaves and the Price of Culture." *Journal of Urban Economics*. 43:273-291.

McCarty, K. 1997. *A Frontier Documentary: Sonora and Tucson, 1821-1848*. Tucson: The University of Arizona.

Quintero, G. and A. Estrada. 1998. "Drugs and Street Survival in a U.S.-Mexico Border Community." *Free Inquiry in Creative Sociology* 26:3-10.

—. 1998. "'Machismo' on the U.S.-Mexico border." *Contemporary Drug Problems* 25:147-168.

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MEXICAN AMERICAN STUDIES AND RESEARCH CENTER (MASRC)

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Rubio-Goldsmith, R. 1998. "Civilization, Barbarism, and Norteña Gardens." In *Making Worlds: Gender, Metaphor, Materiality*, edited by S.H. Aiken, A.E. Brigham, S.A. Marston, and P.M. Waterstone. Tucson: The University of Arizona Press.

Torre, A. de la and R. Rochin. 1996. "Chicanas/os in the Economy: Issues and Challenges Since 1970." In *Chicanas/Chicanos at the Crossroads: Social, Economic, and Political Change*, edited by D. Maciel and I.D. Ortiz. Tucson: The University of Arizona Press.

**RESEARCH MATERIALS & RESOURCES**

**MASRC Working Paper Series** (see web site for complete listing)

***Perspectives in Mexican American Studies:*** journal published by the MASRC (see web site for listing)

**Videos**

**MINORITY CANCER PREVENTION AND CONTROL PROGRAM**  
**Arizona Cancer Center, 1515 North Campbell Ave., Rm. 4977C, Tucson, AZ 85724**  
**Phone (520) 626-3341 - Fax (520) 626-3343**

**CONTACT**

**Anna Giuliano**, Program Director  
 <agiuliano@azcc.arizona.edu>

**PROJECTS**

**Binational Cervical Infection Study.** Members of the Minority Cancer Prevention and Control Program are participating in a binational working group with researchers from the Colegio de Sonora, the Arizona Department of Health Services (ADHS), and The University of Arizona to study the prevalence of cervical human papillomavirus (HPV) infection, cervical dysplasia, and chlamydia infection in Tucson, Hermosillo, Douglas/Agua Prieta, Yuma/San Luis, and Ambos Nogales.

Researchers are examining the risk factors for these infections, as well as whether there are significant variations in both risk factors and the prevalence of the infections by state. The project goals include collecting preliminary data to develop cancer intervention programs for the region and to create a database for use by the World Health Organization and Pan American Health Organization. The study is being conducted with Jill Guernsey de Zapien of the Southwest Border Rural Health Center and is supported by the Arizona Disease Control Research Commission (ADCRC).

Researchers at the program are also examining the relationship between HPV and smoking. In 1995 researchers completed a study examining HPV and dysplasia in young Hispanic women living in Tucson to discover if the virus is related to nutrition.

**Cancer Education Program in Nogales, AZ.** Researchers at the Minority Cancer Prevention and Control Program are participating in a community education program for cancer prevention in Nogales, Arizona. The project is directed by Joel Meister of Family and Community Medicine at The University of Arizona. Anna Giuliano is leading the educational component of the project, which involves developing

materials and a survey to evaluate knowledge about cancer prevention in the border community. The primary goal of the project is to increase knowledge about screening and how to lower the risk for preventable cancers. The project is funded by the National Cancer Institute.

**Lupus Myeloma Survey in Ambos Nogales.** The Arizona Cancer Center and the ADHS also completed a lupus myeloma survey in Ambos Nogales. The team from The University of Arizona was involved in developing a questionnaire, collecting data, and completing the primary analysis of the data. The data is available from border epidemiologist Luis Ortega at the ADHS.

**PUBLICATIONS**

Giuliano, A.R. and S. Gapstur. 1998. "Can Cervical Dysplasia and Cancer Be Prevented with Nutrients?" *Nutritional Reviews* 56:9-16.

**RESEARCH MATERIALS & RESOURCES**

**Informational brochures** on community cancer education and prevention. The brochures are developed in response to the specific needs of communities involved in cancer prevention programs.

**Databases and data** on female health risk factors related to cervical cancer (contact Anna Giuliano)

**Household maps** from Nogales by census tract

**Statistical resources**

**Videos** of health educator lectures

**THESES**

Abrahamson, Martha. Master's candidate (Public Health). *Prevalance and Risk Factors for Type Specific HPV Infection among Women at the U.S.-Mexico Border.*

**NATIONAL LAW CENTER FOR INTER-AMERICAN FREE TRADE**

2 East Congress, Suite 500, Tucson, AZ 85701  
 Phone (520) 622-1200 - Fax (520) 622-0957  
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**CONTACT**

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 <gantzd@nt.law.arizona.edu>  
**Tim Baker**, Research Director <tbaker@natlaw.com>

**PROJECTS**

The National Law Center for Inter-American Free Trade's research and education programs include a major focus on trade and business issues in Mexico and the U.S. relating to the North American Free Trade Agreement (NAFTA). The Center has several projects with components on the U.S.-Mexico border.

**Banking.** Since 1992, the Center, in partnership with the U.S. Council on International Banking and the American, Mexican, and Canadian Bankers' Associations, has been involved in the development of guidelines and standard practices for NAFTA banking-law issues.

**Environment.** In response to concerns over the storage and transport of industrial hazardous waste along the U.S.-Mexico border, the Center established the international Committee for Responsible Hazardous Waste Management in North America (HAZNA) to research, develop, and promote hazardous waste minimization and management policies in the U.S. and Mexico. The committee is comprised of representatives from government agencies, private industry, nongovernmental organizations, citizen groups, and universities.

**Intellectual Property.** In order to protect patents, copyrights, trademarks, and trade secrets in the U.S., Canada, and Mexico from unauthorized copying and counterfeiting, the Center developed the Intellectual Property Project and the Tri-National Property Committee.

**Labor.** The Center has developed several labor and employment law projects to address the issues of workers' rights, wages, and working conditions in both the U.S. and Mexico, and to promote increased understanding of labor laws, procedures, and regulations in the NAFTA region.

**Transportation.** The Center works on analyzing the legal standards and industry practices necessary to create a standardized legal infrastructure for cross-border transportation of goods and related services, including the development of a uniform inter-American bill of lading. In February 2000, the Center was named by the Organization of American States (OAS) to chair the drafting group for transportation topics.

**Secured Financing.** The Center currently forms part of the U.S. delegation to the OAS' Sixth Inter-American Specialized Conference on Private International Law (CIDIP-VI). As part of the CIDIP-VI process, the OAS has approved the Center's Model Inter-American Law on Secured Transactions (Proyecto de Ley Modelo Inter-Americana sobre Garantías Mobiliarias) for use as a working document throughout the Americas. The Center's model law forms a substantial basis of the draft secured financing law currently before the Mexican Congress. In addition, in February 2000, the Center was designated chair of the OAS drafting group for secured financing issues.

**Customs and Related NAFTA Issues.** The Center is currently conducting an analysis for the U.S. Treasury Department and the U.S. Customs Service of the possible impact of major changes in the Mexican maquiladora system on customs operations. The changes will limit duty drawback and duty deferral of Mexican duties on parts and components originating in non-NAFTA countries for incorporation in goods produced for export to the NAFTA partners. These changes are mandated by NAFTA and will take effect through new Mexican customs-related laws and regulations as of January 1, 2001. Part of the Center's study will explore how the changes will affect bilateral trade between the U.S. and Mexico, as well as U.S. companies operating under the maquila system.

**E-Commerce.** One goal of the Center is to assist governments and companies in navigating the many legal difficulties of the increasingly important aspects of e-commerce. In September 1999 the Center co-sponsored a conference, "Responding to Legal Obstacles to Electronic Commerce in Latin America," which identified and addressed the major problems to the effective expansion of electronic commerce. Panelists



NATIONAL LAW CENTER FOR INTER-AMERICAN FREE TRADE

and participants included public and private-sector representatives from Latin American countries, the U.S., and the European Union. Four working groups have been formed to develop general principles that can be used as a guidelines for new legislation and/or can be adopted by private parties to govern specific contracts. The Center expects the working groups to have first drafts of such guiding principles by January 2001.

**The Sovereign Debt Markets of Mexico, Chile, Venezuela, Argentina, and Brazil.** Completed in 1999, this study analyzes the daily operations of the sovereign debt markets of these countries, in the hope that their success can be transferred to other developing countries.

**Securitization of Mortgage Backed Assets.** The Center has developed the legal structures necessary to facilitate the securitization of Mexican real estate for financing in the U.S. capital markets. A special purpose vehicle is being established to promote and enable the increased availability of real estate financing in Mexico. The Center expects to have the land registry records of Puerto Peñasco, Sonora, Mexico available on its web site by the end of 2000.

**PUBLICATIONS**

All publications are published by the Center and are available in English and Spanish.

Doyle, G.T., ed. 1998. *North American Standard Transportation Practices: A Guide to Truck Transportation.*

Eaton, D. 1997. *Transformation of the Mexican Maquiladora Industry: The Driving Force Behind the Creation of a NAFTA Regional Economy.*

—. 1996. *Disparities between Law and Practice in the Management of Hazardous Waste in the United States and Mexico.*

Kozolchik, B., G.T. Doyle, and G. Olea. 1996. *Transportation Law and Practice in North America.*

Mignella, A.T. 1997. *Chemical Emergency Service Capabilities and Constraints along the U.S.-Mexico Border.*

Mignella, A.T. and M. Silveira. 1997. *U.S. and Mexican Hazardous Waste Site Regulations: A Comparison.*

Nelson, T.C. *Harmonization of the Secured Financing Laws of the NAFTA Partners: Focus on Mexico.*

Torriente, A.L., M.T. Guerra, R. Ballesteros, and G. Morales. 1997. *Mexican and U.S. Labor Law and Practice: A Practical Guide for Maquilas and other Businesses.*

**RESEARCH MATERIALS**

**InterAm Database:** This searchable database is accessible via the Center’s web site at <<http://natlaw.com/database.htm>>. Materials in the database include English translations of Mexican legislation, an English/Spanish list of legal terms and phrases, a treaty database, the *Inter-American Trade and Investment Law Bulletin Archives*, and the *Inter-American Trade Report*. Basic information in the database may be accessed for free; however a subscription is needed to access the entire database.

**Inter-American Trade and Investment Law:** This bi-weekly bulletin highlights legal developments and trends in Latin America that impact trade and investment. Individuals or organizations may subscribe to the bulletin for an annual subscription fee, which also includes access to the InterAm Database.

**Novedades:** This monthly newsletter provides information on the Center’s current activities and research.

**Research service and document delivery.** The Center provides research assistance and delivery of requested legal documents from Latin America to individuals and organizations for a fee.

**Translated materials.** A large number of Latin American laws and technical standards translated from Spanish into English are also available for purchase. For a listing of materials currently available, refer to the Center web site. The Center also provides a legal document translation service for materials in both Spanish and English. To inquire about the translation service, contact Dan Martin, Director of Sales and Marketing, at <[dmartin@natlaw.com](mailto:dmartin@natlaw.com)>.

**NATIVE AMERICAN RESEARCH AND TRAINING CENTER (NARTC)**

Arizona Department of Family and Community Medicine, 1642 E. Helen St., Tucson, AZ 85719

Phone (520) 621-5075 - Fax (520) 621-9802

[www.ahsc.arizona.edu/fcm/](http://www.ahsc.arizona.edu/fcm/)

**CONTACT**

**Jennie Joe**, Director <[jrjoe@u.arizona.edu](mailto:jrjoe@u.arizona.edu)>

**Doug St. Clair**, Research Specialist

**PROJECTS**

**U.S.-Mexico Consortium.** The consortium is designed to assist Mexico in establishing a nationwide rehabilitation program similar to the vocational rehabilitation programs in the United States. A component of the consortium is a student exchange program between The University of Arizona and universities in Mexico. The program was developed to offer students from Mexico training in special education and/or vocational rehabilitation. Conversely, the U.S. students have the opportu-

nity to gain experience through internships or practicum in rural areas of Mexico.

**International Diabetes Conference.** Initiated in 1988, this biannual conference focuses on diabetes in indigenous populations throughout the world, including those in the U.S.-Mexico borderlands.

**U.S.-Mexico Symposium on Disability, April 21-23, 1996.** This symposium provided an opportunity for consumers and professionals to discuss problems and issues in special education and rehabilitation in Mexico and the United States.

**DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY**

Pharmacy Bldg. 236, Tucson, AZ 85721  
 Phone (520) 626-2823 - Fax (520) 626-2466  
[www.pharmacy.arizona.edu](http://www.pharmacy.arizona.edu)

**CONTACTS**

**Dean Carter**, Program Director and Professor  
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**Carlos Peña**, Outreach Coordinator  
 <pena@pharmacy.arizona.edu>

**PROJECTS**

**Risk Assessment and Remediation of Hazardous Waste Program.** As part of the National Institute of Environmental Health Sciences (NIEHS)/Environmental Protection Agency (EPA) Superfund Hazardous Substances Basic Research Program (SBRP), department researchers are developing environmental toxicology programs focusing on hazardous waste disposal issues in Arizona and Mexico. The primary objectives are to provide the science base needed to make accurate assessments of human health risks, determine clean-up priorities and requirements, and clean up contaminated sites in the most cost effective manner.

As a component of the program, researchers at The University of Arizona are collaborating with the Universidad Nacional Autónoma de México (UNAM) and its program for the environment (Programa Universitario del Medio Ambiente). Begun in 1990, the collaboration has resulted in a symposium on environmental toxicology at UNAM, an environmental conference on metals in Tucson, and a workshop in Tucson on border environmental health and environmental quality problems. The University of Arizona's Superfund Basic Research Program (SBRP) further organized a binational meeting on nutritional modulation of chemical toxicity, as well as two binational meetings on environmental remediation, held in Mexico City and Tucson in 1998.

Researchers from The University of Arizona and Mexican institutions are currently cooperating on several research projects related to the SBRP. These include (1) projects with UNAM scientists on the production of bio-surfactants and their use in soil remediation, genotoxicity, and arsenic toxicity; (2) a study with the Centro de Investigaciones y Estudios Avanzados (CINVESTAV) of arsenic levels in exposed persons in copper-smelter towns; (3) a professional development and educational program with the Universidad Autónoma de Sinaloa (UAS) leading to Ph.D.s in

toxicology and environmental engineering; and (4) a collaboration with the Instituto Tecnológico de Sonora (ITSON) in Ciudad Obregón and the Instituto Mexicano del Seguro Social (IMSS) in Monterrey to bring Mexican scientists to the U.S. to pursue postdoctoral studies and sabbaticals.

**Outreach to Mexico Program (OMP).** The Outreach to Mexico Program, coordinated by Carlos Peña, was established to help and encourage border universities to focus on environmental programs. The goal of the program is to establish environmental science centers in Mexico, through which Mexican and U.S. institutions can coordinate programs in engineering, toxicology, earth sciences, ecology, and medicine. In 1998, a consortium of eight universities in northwestern Mexico formed to further the goals of the program. In 2000, several meetings have been held to discuss issues and propose specific recommendations related to the formation of a Binational Center for Hazardous Chemicals. Currently Dean Carter is the coordinator for the U.S., and Rodolfo Quintero of the Instituto Mexicano del Petróleo is the coordinator for Mexico.

**PUBLICATIONS**

Ayala-Fierro, F., D.S. Barber, L.T. Rael, and D.E. Carter. 1999. "In Vitro Tissue Specificity for Arsine and Arsenite Toxicity in the Rat." *Toxicological Sciences* 52:122-129.

Carter, D.E., C. Peña, R.G. Varady, and W.A. Suk. 1996. "Environmental Health and Hazardous Waste Issues Related to the U.S.-Mexico Border." *Environmental Health Perspectives* 104:590-594.

Mitchell, R.D., F. Ayala-Fierro, and D.E. Carter. 2000. "Systemic Indicators of Inorganic Arsenic Toxicity in Four Animal Species." *Journal of Toxicology and Environmental Health* 59:119-134.

Peña, C.E., F. Ayala-Fierro, D.E. Carter. 1998. *Toxicología ambiental: Evaluación de riesgos y restauración ambiental*. Tucson: The University of Arizona Superfund Basic Research Program.

Peraza, M.A., F. Ayala-Fierro, D.S. Barber, E. Casarez, and L.T. Rael. 1998. "Effects of Micronutrients on Metal Toxicity." *Environmental Health Perspectives* 106 (Suppl 1):203-216.

## INTERDISCIPLINARY PROGRAM IN PLANNING

Architecture Bldg. 214, Tucson, AZ 85721  
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### CONTACT

**Barbara Becker**, Interim Director and Associate  
 Director of the Drachman Institute for Land and  
 Regional Development Studies  
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### PROJECTS

**Urban Planning Exchange Program.** Initiated in the summer of 1996, this five-week, intensive, urban-analysis summer workshop in Guanajuato, Mexico, involves students and professors from the planning, landscape architecture, and architecture departments at The University of Arizona and the Universidad de Guanajuato. The program entails the comparison of U.S. cities to Mexican cities in terms of planning and use of urban open space.

**Dual Master's Degree Program.** A dual master's degree program in architecture and planning between The University of Arizona's College of Architecture, Planning, and Landscape Architecture and the Universidad Nacional Autónoma de México (UNAM) in Mexico City began in January 1997. The program is coordinated by The University of Arizona and focuses on U.S.-Mexico border issues. Students are matriculated in both institutions during the duration of the program and receive degrees in both programs. The universities hope to develop an interdisciplinary international Ph.D. program in the future.

**Sonoran Coastal Study.** The State of Sonora Tourism Office commissioned faculty and graduate students in the planning program and the departments of landscape architecture and architecture at The University of Arizona to examine the coastline of Sonora and develop recommendations for future development of the area.

**Symposium on the Globalization of Architecture, Planning, and Landscape Architecture.** Held in January 1999, this symposium was the first in a series that examines the trends and implications of the

increasing globalization of architecture, planning, and landscape architecture. The seminar was co-sponsored by the planning program and the College of Architecture, Planning, and Landscape Architecture at The University of Arizona.

**Urban Growth Projections.** Students in the planning program have completed urban growth plans for communities in southern Arizona and along the U.S.-Mexico border as semester class projects. These projects have been completed for numerous border communities, including Naco/Naco; Nogales/Nogales; Sonoita; San Luis/San Luis Río Colorado; Yuma; Safford and Peoria; Douglas/Agua Prieta; and Bisbee. After review by the town councils, the plans are often adopted as the official town growth plan and are referred to in subsequent development and zoning.

### RESEARCH MATERIALS & RESOURCES

**Aerial photos** (contact Linda Eramus, program coordinator, Planning)

#### **Database**

**Maps** (contact Charles Poster, College of Architecture, 621-6751)

#### **Slides**

**Statistical resources** from the urban planning studies done for the U.S.-Mexico border towns (contact Linda Eramus)

**Videos** (located at the Drachman Institute, contact Charles Poster)

### THESES

Anderson, John. 1997. *Sustainable Development and the Sonoran Desert Biospheres*. Master's thesis, Landscape Architecture.

Andres, Erin. 1996. *A Good Artificial Stream Bed Recharge Site for Tucson, Arizona: Development of Criteria and Evaluation of Alternatives*. Master's thesis, Planning.

**DEPARTMENT OF POLITICAL SCIENCE**

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**CONTACTS**

**John Garcia**, Professor <jag@u.arizona.edu>  
**Edward Williams**, Professor  
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**PROJECTS**

**U.S. Immigrant Integration and Identity Formation.** John Garcia's research interests include U.S. immigrant integration, focusing on how immigrants develop attachments and integrate themselves into the economic, social, and political aspects of society. He also conducts research on the development of Hispanic identity in national origin, racial, and "panethnic" contexts. His research compares the concept of identity of native versus foreign-born Hispanics and examines social networks and interaction, as well as isolation versus integration within the larger society. In addition, Garcia explores whether individuals assume an identity as social groups beyond their national identity. A further component of Garcia's research interests is the examination of immigration policy and its effect on political mobilization within the Latino community.

**Mexican Politics and Culture.** Edward Williams has conducted various studies concerning aspects of the maquila industry, such as employee turnover, union organization in the factories, and hazardous waste issues; labor issues; Mexican and border politics; and Mexican regionalism.

**PUBLICATIONS**

Garcia, J.A. 1998. "Immigration and Urban Communities: A New Look into the Next Millennium." In *American Cities and Suburbs: An Encyclopedia*, edited by N. Shumsky. New York: Garland Publishing Co.

———. 1994. "Mexican Immigrants, Mexican Americans, and the American Political Culture." In *Immigration and Ethnicity: The Integration of America's Newest Arrivals*, edited by B. Edmondson and J. Passel. Washington, D.C.: Urban Institute Press.

Schultz, D.E. and E.J. Williams, eds. 1995. *Mexico Faces the 21st Century*. Westport, CT: Greenwood Press.

Stillerman, J. and E.J. Williams. Forthcoming. "The Unionization of the Maquiladora Industry and the North American Agreement on Labor Cooperation: Strategies Conceived and Frustrated." In *Cooperation, Environment, and Sustainability in Border Regions*. San Diego: San Diego State University Press.

Williams, E.J. 1996. "The Maquiladora Industry and Environmental Degradation in the United States-Mexican Borderlands." *St. Mary's Law Journal* 27(4).

———. 1995. "Introduction." In *Las políticas antidrogas y comerciales de Estados Unidos en la frontera con México*, edited by J.M. Ramos. Nogales, Mexico: El Colegio de la Frontera Norte.

Williams, E.J. and J.T. Passe-Smith. 1994. "The Maquiladora Industry and Mexican Unions: The New National Political Strategy." In *Managing Cultural Differences*, edited by R.T. Moran and D.O. Braaten. Houston: Gulf Publishers.

**RESEARCH MATERIALS**

**Clippings files**

**Database:** survey data

**Maps**

**Statistical resources** (copies of statistics from other publications)

**DISSERTATIONS & THESES**

Colnic, David. Ph.D. candidate. *Designing Sustainability: Environmental Policy and Politics in the U.S.-Mexico Borderlands*.

———. 1995. *Toward an Ethic of Place: Environmental Policy Design in the U.S.-Mexico Borderlands*. Master's thesis.

Coronado, Irasema. 1998. *Who Governs in a Binational Context?: The Role of Transnational Political Elites*. Ph.D. dissertation.

**SCHOOL OF PUBLIC ADMINISTRATION AND POLICY**

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**PROJECTS**

**Strategic Economic Development Vision for the Arizona-Sonora Region.** Arthur Silvers, along with Vera Pavlakovich, director of the Borderlands Economic Development Program at The University of Arizona, and several organizations in Sonora, collaborated on a multi-year binational project that began in 1994. Commissioned by the governments of Arizona and Sonora the project examined the economies of the two states and their economic inter-dependencies, and considered possibilities for economic cooperation within the framework of NAFTA. The primary collaborators on the project include the Consorcio Universitario de Sonora, the University Consortium of Arizona, the Colegio de la Frontera Norte (COLEF) in Nogales, the Centro de Investigación en Alimentación y Desarrollo (CIAD) in Hermosillo, and the Centro de Investigación y Desarrollo de los Recursos Naturales de Sonora (CIDESON).

As a component of the larger project, Arthur Silvers conducted a number of sectoral and investment analyses, including studies of the transportation, education, tourism, and maquiladora industries. He developed a two-region multiplier model to estimate the nature and effects of the interdependence of the economies of Arizona and Sonora.

**PUBLICATIONS**

- Silvers, A.L. 2000. "Limited Linkage and the Transboundary Transmission of Regional Growth." *Regional Studies* (May).
- . 2000. "Cultural Barriers and Policy Response in the Transboundary Transmission of Development: a Comparative Study." In R. Miller and M. Lahr, eds. *Perspectives in Regional Analysis*, edited by R. Miller and M. Lahr. Burlington, VT: Ashgate Publishing.
- A.L. Silvers, F. Lara Valencia, P. Wong González and R. Rubio. 1998. *Impacts of Transportation and Education Policy on Trade and Development in the Arizona-Sonora Region*. Tucson: Office of Economic Development, The University of Arizona.
- A.L. Silvers and M.A. Vázquez Ruiz. 1998. *Economic Development in Arizona and Sonora: An Analysis of Sectoral Change*. Tucson: Office of Economic Development, The University of Arizona.
- Silvers, A.L. and H. Kim. 1996. "Price and Distance Effects on Mexican Cross-Border Shopping: Implications for a Borderlands Economy." *Korean Journal of Regional Science* 9:47-64.
- . 1995. "Analyzing the Economic Development Impacts of Public Investment in the Arizona-Sonora Region." *Estudios Sociales* 5:121-138.
- . 1995. "Labor Supply Policy and U.S.-Mexican Trade: Sectoral and Regional Perspectives." *Arizona Journal of International and Comparative Law* 12(2).
- Silvers, A.L. and V. Pavlakovich. 1994. "Maquila Industry Impacts on the Spatial Redistribution of Employment." *Journal of Borderlands Studies* 9:47-64.

**SCHOOL OF RENEWABLE NATURAL RESOURCES**

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**PROJECTS**

**Cross Border Waters: Fragile Treasures for the 21st Century.** In 1998, the School of Renewable Natural Resources co-sponsored the ninth U.S.-Mexico border states conference on recreation, parks, and wildlife. The conference brought together scientists and resource managers from government agencies, universities, and private organizations in the U.S. and Mexico to discuss cooperative projects, agency functions and programs, and issues concerning natural and cultural resource management in the border states.

**Landscape Management and Restoration Ecology.**

William Halvorson has conducted several research projects in Sonora, Mexico. These projects include:

**Global Change in Sonora Associated with Thorn Scrub Conversion to Bufflegrass:** examines the ecosystem and landscape effects of landcover change resulting from the conversion of thornforest to grasslands.

**Restoration and Landscape Management in Farmlands of Sonora, Mexico:** focuses on the restoration of crop lands near the Gulf of California, which have been abandoned due to salt intrusion in wells used for irrigation.

**PUBLICATIONS**

Gottfried, G.J., *et al.* 1998. *Cross Border Waters: Fragile Treasures for the 21st Century.* Proc. of the 9th U.S.-Mexico Border States Conf. on Recreation, Parks, and Wildlife, June 3-6, 1998, Tucson, AZ. Fort Collins: Rocky Mountain Research Station.

**RESEARCH MATERIALS & RESOURCES**

**Mapping images**

**Video on ecosystem management** (contact George Ruyle or Donna Chickering)

**DISSERTATIONS & THESES**

Averill, AnnaLaura. 1996. *Brown-Headed Cowbird Parasitism of Neotropical Migratory Songbirds in Riparian Areas along the Lower Colorado River.* Master's thesis.

Christoferson, Laurel L. 1996. *Defining Breeding Habitat for Painted Redstarts, Solitary Vireos, and Western Wood-Pewee in Riparian Areas of Southeastern Arizona.* Master's thesis.

Cutler, Patricia L. 1996. *Wildlife Use of Two Artificial Water Developments on the Cabeza Prieta National Wildlife Refuge, Southwestern Arizona.* Master's thesis.

Danzer, Steven J. 1996. *Vegetative and Environmental Characteristics of High Elevation Riparian Communities in the Mountains of Southeastern Arizona.* Ph.D. dissertation.

Fox, Lisa M. 1997. *Nutritional Content of Forage in Sonoran Pronghorn Habitat, Arizona.* Master's thesis.

Frederick, Teresa M. 1996. *Patterns of Habitat Use by Birds and Lizards in Urban River Corridors of Tucson.* Master's thesis.

Kaib, John. 1998. *Fire History in Riparian Canyons, Pine-Oak Forests, and the Intervening Desert Grasslands of the Southwest Borderlands: A Dendrochronological, Historical, and Cultural Inquiry.* Master's thesis.

Morino, Kiyomi A. 1996. *Reconstruction and Interpretation of Historical Patterns of Fire Occurrence in the Organ Mountains, New Mexico.* Master's thesis.

Schmidt, Sarah L. 1999. *Activity Patterns of Bats at Wildlife Water Development in the Sonoran Desert.* Master's thesis.

Torre, Jorge. Ph.D. candidate. *Ecology of the Seagrass Beds in the Canal de Intierrillo, Gulf of California.*

Villanueva Díaz, José. 1996. *Influence of Land-Use and Climate on Soils and Forest Structure in Mountains of the Southwestern United States and Northern Mexico.* Ph.D. dissertation.

**SOUTHWEST BORDER RURAL HEALTH RESEARCH CENTER**

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**Deborah Jean McClelland**, Senior Research Specialist

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**PROJECTS**

**Rural Hospital Flexibility.** In its role as the Arizona State Office for Rural Health, the Rural Health Office (RHO) is currently involved in developing a demonstration model for critical access hospitals in collaboration with the Arizona Department of Health Services (ADHS) and a number of partner agencies. The work is being carried out in coordination with the Health Care Financing Administration.

**U.S.-Mexico Border Health Collaborative Outreach Demonstration Project, Border Vision Fronteriza (BVF).** Now in its fifth year, this project evaluated four health outreach models developed and implemented along the U.S.-Mexico border to increase and improve access to health care services among underserved populations. The community-based models utilized *promotoras* (lay health educators) and identified major health concerns in the targeted regions. As a result of the project, a multi-agency, cross-border network was established to facilitate communication and disseminate information. This network is now actively engaged in improving access to services and promoting participation in CHIP/Medicaid in the U.S.-Mexico border region. Data collection and evaluation of this expanded project continue.

**Rural Managed Care.** This project focuses on the development of cross-border health care provider

networks along the Arizona-Sonora border. It has explored a number of models for community involvement in improved access to care and is currently exploring models of cross-border health care delivery.

**Arizona Telemedicine Program (ATP).** The Rural Health Office and the ATP are working in collaboration with Southeast Arizona Medical Center, Carondelet Holy Cross Hospital, Mariposa Community Health Center, Border Vision Fronteriza, Southern Arizona Mental Health Center, and the Southeast Arizona Behavioral Health System to promote the use of telemedicine applications in rural Arizona. This has involved working with the three Arizona enterprise communities (Douglas, Nogales, and San Luis) to connect them to telemedicine applications and to Internet networking. Current efforts include exploration of Internet-based voice and video communications.

**AHEC Border Health Breast Cancer Education Project.** The Rural Health Office is working in collaboration with the Southeast Arizona Area Health Education Program, the Well Women's Health Check of Cochise County, and the Arizona Cancer Center to develop and implement an educational outreach program for border residents in Cochise County. The project provides support for a local promotora to provide one-on-one outreach to 300 women in terms of education and referral for services for breast and cervical cancer screening. The project also includes a workshop for community volunteers on breast and cervical cancer outreach and early detection, continuing education for the provider community, review and adaptation of existing bilingual materials for the local border communities, and dissemination of materials and the program model for replication in other communities.

**Critical Elements for Successful Binational Collaboration on Reproductive Health and Environmental Health at the U.S.-Mexico Border.** In the spring of 1999, the Rural Health Office began a research project with the Colegio de Sonora to identify the critical elements for successful collaboration on reproductive and environmental health in the U.S.-Mexico border region. The project includes a review of existing research, identification of binational projects, in-depth



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research on existing projects in the border region, and the development of a manual to be utilized by community-based groups.

**Diabetes Prevalence and Risk Factor Study in Douglas, Arizona, and Agua Prieta, Sonora.** The Rural Health Office, the Arizona Department of Health Services, the Arizona Prevention Center, the Secretaría de Salud de Sonora, and local health providers in Agua Prieta and Douglas are conducting this binational study on the prevalence of diabetes in the border region. Researchers are studying approximately 2,000 randomly selected community residents in the two cities. Reports of prevalence and risk factor findings for the communities are now available.

**HPV, Chlamydia, and Cervical Cancer Dysplasia Prevalence Along the U.S.-Mexico Border.** This binational research project was a collaboration between the Rural Health Office, the Arizona Cancer Center, OB/GYN, and Pathology at The University of Arizona; the Arizona Department of Health Services; the Secretaría de Salud Pública de Sonora; the Colegio de Sonora (COLSON); and local health providers. The study involved 2,400 women in Arizona and Sonora who received routine gynecological care. A report of prevalence and risk factor findings is now available.

**Substance Abuse Prevention Evaluation Contract.** The Rural Health Office is the contract evaluator for Vecinos, the Arizona-Sonora Substance Abuse Prevention Coalition of the Arizona-Mexico Border Health Foundation. The RHO's responsibilities include the evaluation of the activities and impact of three local partnerships along the Arizona-Sonora border in community-based substance abuse prevention. The evaluation contract has provided technical assistance for a border-wide survey focusing on youth perceptions of community issues; a needs assessment and assets inventory of a public housing community in Nogales, Arizona; and a comparative analysis of youth's knowledge, attitudes, beliefs, and behaviors related to substance abuse in Yuma, Arizona and San Luis Río Colorado.

**Working Group on Portable Prenatal Care.** The Rural Health Office is facilitating a working group for

the Health Services Committee of the Arizona-Mexico Commission. The group has reviewed existing research and intervention strategies that have been implemented along the border in relation to prenatal care. Providers at the University Medical Center and Holy Cross Hospital, as well as individual providers in Nogales, Arizona, and Sonora, are also participating in the discussion of programs. The group plans to develop a pilot project in Ambos Nogales.

**PUBLICATIONS**

Buller, D., M. Modiano, J.G. de Zapien, J. Meister, S. Salzman, and F. Hunsaker. 1998. "Predictors of Cervical Cancer Screening in Mexican-American Women of Reproductive Age." *Journal of Health Care for the Poor and Underserved* 9:76-95.

Denman, C., F.L. Valencia, and J.G. de Zapien. 1998. "Salud pública, medio ambiente, y participación social en un contexto fronterizo." *Participación comunitaria en salud: Evaluación de experiencias y tareas para el futuro*. Hermosillo, Mexico: El Colegio de Sonora.

García, H., S. Kunz, F. Lara, J.G. de Zapien, M. Ingram, M. Lebowitz, D.J. McClelland, J.J. Elenes, R. Perez, and A. Estrada. 1997. "Patterns of Illegal Drug Use at the Arizona-Sonora Border." *Journal of Border Health* 2.

Hughes, Alison. 1998. *Connecting Arizona's Enterprise Communities: Strategic Plan and Resource Guide for Telemedicine and Internet Connections*. Tucson, AZ: Rural Health Office, Arizona Telemedicine Program, and Arizona Health Sciences Center, The University of Arizona. (manuscript available online at <<http://zeki.radiology.arizona.edu/ruralhealth/AROp1.htm>>)

Moya, Eva, J.G. de Zapien, A. Nichols, and X. Leus. 1999. "El acceso a la salud en la frontera mexicano-estadounidense." *Médico Interamericano* 18:24-28.

**RESEARCH MATERIALS & RESOURCES**

**Rural Health Office Library:** includes a specialized collection of journals in the fields of health policy, public health, border issues, rural health, and managed care; see <<http://www.rho.arizona.edu/mc/library.htm>>

**Videos, databases, monographs**

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**Jeffrey Banister**, Assistant Editor  
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**PROJECTS**

**Ethnobotanical Use of Plants by the Mayo and Guarijío Indians.** David Yetman, along with Thomas Van Devender of the Arizona-Sonora Desert Museum, is completing a long-term study of ethnobotanical uses of plants by the Mayo Indians of western Sonora. With funding from the National Geographic Society, Yetman is conducting a similar study on the Guarijío Indians, entitled "Makurawe: Plants and People, a Study of the Guarijío Indians of Sonora/Chihuahua." Yetman has also completed a study of the Guarijío way of life and how it is adapting to social change in Mexico.

**Political Economy in Rural Sonora.** David Yetman has conducted several political economy studies in rural communities in northwest Mexico. The projects examine changes in local economies under Mexico's changing economic system. The first project is a five-year study of a Mayo Indian village in western Sonora. The study, which is ecological in nature, examines the inflow and outflow of resources from the village and includes a study of the village history and the Mayo people. Yetman, along with Alberto Búrquez of the Universidad Nacional Autónoma de México (UNAM), also conducted a second study examining changes in land tenure in Tecoripa, Sonora, under the reform of Article 27 of the Mexican constitution, which privatized ejido lands in Mexico. In addition, Yetman collaborated with Kathy M'Closkey of the University of Windsor, Ontario in a study of the political economy of weaving among Mayo women.

**Drought in the 1950s.** David Yetman collaborated with Diana Liverman, director of the Latin American Area Center of The University of Arizona and Alberto Búrquez of UNAM in a study of the effects of the 1950s drought in the state of Sonora.

**Mayo Traditional Knowledge Program.** David Yetman is conducting a long-term program to assist older traditional Mayos in teaching their knowledge of Mayo lands and the Mayo language to younger members of their community. He is collaborating in this program with Vicente Tajia of Teachive de Masiaca, Sonora.

**Journal of the Southwest.** Published quarterly by the Southwest Center, the *Journal of the Southwest* invites scholarly articles, essays, and reviews informing any aspect of the greater Southwest, including northern Mexico. Dedicated to an integrated regional study, the journal publishes broadly across disciplines, including intellectual and social history, anthropology, literary studies, folklore, historiography, politics, borderlands studies, and regional natural history.

**PUBLICATIONS**

Robichaux, R. and D. Yetman, eds. 2000. *The Tropical Deciduous Forest of Alamos: Biodiversity of a Threatened Ecosystem in Mexico*. Tucson: The University of Arizona Press. In press.

Yetman, D. Forthcoming. *The Mayos of Northwest Mexico: History and Ethnobotany of los Yoremes*. Berkeley: University of California Press.

———. Forthcoming. *The Hidden People: Guarijíos of Northwest Mexico and the Ethnobotany*. Albuquerque: University of New Mexico Press.

———. 1998. *Scattered Round Stones: A Mayo Village in Sonora, Mexico*. Albuquerque: University of New Mexico Press.

———. 1995. *Sonora: An Intimate Geography*. Tucson: The University of Arizona Press.

Yetman, D. and A. Búrquez. 1998. "Twenty-Seven: A Case Study in Ejido Privatization in Mexico." *Journal of Anthropological Research* (Spring).

Yetman, D., P.S. Martin, M. Fishbein, P. Jenkins, T. Van Devender, and R. Wilson. 1998. *Gentry's Río Mayo Plants, the Tropical Deciduous Forest and Environs of Northwest Mexico*. Tucson: The University of Arizona Press.

**SOUTHWEST INSTITUTE FOR RESEARCH ON WOMEN (SIROW)**

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**PROJECTS**

**The Transborder Consortium for Research and Action on Gender and Reproductive Health on the U.S.-Mexico Border.** Researchers from the Colegio de la Frontera Norte (COLEF), the Colegio de Sonora (COLSON), and the Southwest Institute for Research on Women (SIROW) comprise this binational consortium for interdisciplinary transborder research and action. The program objectives are (1) to increase and disseminate knowledge of women's reproductive health in the border region, and (2) to strengthen cooperation between and among researchers and community-based organizations. In May 1999, SIROW hosted a faculty development workshop around integrating gender analysis and collaborative transborder research into respective institutional curricula.

In November 1999, COLSON hosted the Consortium's second workshop for Arizona-Sonora and Baja California-San Diego community health agencies personnel, in Guaymas, Sonora. In addition, COLEF hosted a conference in Tijuana in March 2000 as an exchange of ongoing research findings by Consortium grantees.

The Consortium also offers both mini-grants and major research-action grants to graduate students, community activists, and members of community-based and nongovernmental organizations working on reproductive health in the U.S.-Mexico border region. October 1999 and April 2000 marked rounds four and five of the mini-grant selection and awards process. In addition, work continues on updating and expanding both the Consortium's extensive bilingual bibliography and database of transborder researchers and community agencies relevant to gender and border health issues.

**PUBLICATIONS**

González Le Denmat, H. and R. Andrade. 1999. "First Wave? Second Wave?: Immigrant Women in the United States." *Cinquantenaire du Deuxième Sexe*. Paris, France, January.

———. 1999. "The Formation of a Code of Ethics for Latina/Chicana Scholars: The Experience of Melding Personal Lessons into Professional Ethics." *Frontiers: A Journal of Women Studies* 20.

Norwood, V. and J. Monk, eds. 1997. *The Desert Is No Lady: Southwestern Landscapes in Women's Writing and Art*. Tucson: The University of Arizona Press.

**RESEARCH MATERIALS & RESOURCES**

**Bibliographic database** of articles relating to gender, women's reproductive health in the U.S.-Mexico border region, cervical-uterine cancer, and participatory research

**Clearinghouse database** of scholars in both the U.S. and Mexico involved in research on women in the Southwest and women's health along the U.S.-Mexico border (located in the department of women's studies; contact Janice Monk)

**Leadership for Literacy Newsletter:** Newsletter written in collaboration with Mexican and Mexican American immigrant women in southern Tucson (contact Rosi Andrade <andrade@math.arizona.edu>)

**SIROW Working Papers Series** (a complete listing is available at the SIROW office)

***The Desert Is No Lady*** (1996): documentary film

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**Ann Moote**, Assistant Research Social Scientist  
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**Maria Carmen Lemos**, Assistant Research Social  
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**PROJECTS**

The Udall Center for Studies in Public Policy maintains an active research and outreach program on environmental issues concerning the U.S.-Mexico border region. Since 1989, the Center has established a presence as a neutral, respected observer and commentator on border environmental policy.

The Center's research agenda has included transboundary urban water management; the role of public participation and specifically, of nongovernmental organizations (NGOs), in environmental decisionmaking; the evolution and functioning of the post-NAFTA environmental institutions (BECC, NADB, and CEC); and other issues of significance throughout the border region. In addition to its research activities, the Udall Center seeks to promote democratization of policymaking in the border region through the use of electronic discussion groups (BECCnet and CECnet), the organization of public forums and workshops, and numerous publications.

The Center's efforts on border environmental policy have been made possible by project support from the Ford Foundation, the Charles Stewart Mott Foundation, the Pew Charitable Trusts, the Morris K. Udall Foundation, the U.S. Environmental Protection Agency (EPA), and The University of Arizona.

**Evaluation of WaterWorks Program.** In the fall of 1998, the Udall Center began an evaluation of The Pew Charitable Trusts WaterWorks program in Texas and New Mexico. The \$3.5-million WaterWorks program seeks to remedy water-related threats to the environment and public health in colonias (unplanned communities) in the U.S.-Mexico border region. WaterWorks' goal is to promote the well-being of low-income

colonia residents through the development of low-cost, self-help water supply and wastewater treatment facilities.

**Ford Foundation-Sponsored Border Environmental Policy Symposia.** Together with the Transboundary Resources Center at the University of New Mexico College of Law and the University of California at Irvine, the Udall Center coordinates a series of workshops to facilitate information exchanges and present potential solutions to border environmental problems. Begun in 1991, the workshops bring together scholars, academics, NGO members, governmental officials, foundation representatives, and members of the press.

**BECCnet and CECnet.** The Udall Center manages listservs which provide information on activities and news related to the Border Environment Cooperation Commission (BECC) and the Commission for Environmental Cooperation (CEC). BECC was established in November 1993 through a binational agreement to assist communities on both sides of the U.S.-Mexico border with environmental infrastructure projects and to help identify projects for North American Development Bank (NADB) financing. The CEC, a tri-national organization including Canada, Mexico and the United States, was created under the North American Agreement on Environmental Cooperation (NAAEC) to address regional environmental concerns, help prevent potential trade and environmental conflicts, and promote the effective enforcement of environmental law.

**Ford Foundation/Udall Center Fellowship in Environmental Conflict Resolution on the U.S.-Mexico Border.** In 1998, with funding from the Ford Foundation, the Udall Center added to its existing fellows program a fellow-in-residence program related specifically to environmental conflict resolution (ECR) in the U.S.-Mexico border region. The ECR fellow works at the Center for one semester and receives a stipend of \$23,000, a private office, and a half-time graduate assistant. The fellow participates in the Center's ECR program, teaches a graduate-level seminar, presents informal community lectures, and prepares manuscripts for publication.

UDALL CENTER FOR STUDIES IN PUBLIC POLICY

**Community Outreach and Capacity-Building in the Upper San Pedro River Basin, Arizona and Sonora.**

In 1998, the Udall Center was contracted by the CEC to construct and facilitate a public-input process for the Commission's expert report, *Sustaining and Enhancing Riparian Migratory Bird Habitat on the Upper San Pedro River*. The report reviewed existing knowledge and presented recommendations for water management in the San Pedro watershed in southeastern Arizona and northeastern Sonora. Within the course of the public-input process, the Udall Center facilitated numerous workshops and focus-group meetings and received comments from over 700 interested parties.

Since the adoption of comprehensive water-management plans in the U.S. has been frustrated in the past by negative public opinion and polarization among different interest groups, the Udall Center recognized that the community was extremely sensitive to outside interference and any process that was not perceived as completely open. Therefore, with support from the Ford Foundation, the Udall Center initiated a community-driven, all-inclusive public-dialogue process to enhance the exchange of accurate information about the river among decision-makers and the general public.

In early 1999, the Dialogue San Pedro emerged as a collaborative effort to improve access to water-related information and public participation in water management and policy decisionmaking. While there is no set membership, Dialogue San Pedro participants include elected officials and staff from Cochise County and the City of Sierra Vista, staff from the Bureau of Land Management and the U.S. Forest Service, representatives of Huachuca Audubon, Friends of the San Pedro, People for the USA, and local residents of the basin from Bisbee, Tombstone, Palominas, Hereford, and Benson. The working goal of Dialogue San Pedro participants is "to inspire and enable every community member to contribute to water-wise planning and management activities in the Upper San Pedro River basin."

**Environmental Sustainability Program.** In January of 1996, with funding from the Mott Foundation, the Udall Center organized a program on environmental sustainability for the directors, managers, and staff of

the Border Environment Cooperation Commission (BECC).

**U.S.-Mexico Environmental Border Health Conference.** In 1996, with support from the Morris K. Udall Foundation, the Center sponsored a conference on U.S.-Mexico Environmental Border Health that drew approximately 200 people from diverse organizations on both sides of the border.

**Binational Water Management Project (1989-1993).** This project examined binational water management in Ambos Nogales. Supported by the Ford Foundation, the project resulted in a book, *Divided Waters* (1995), and numerous other publications related to water issues along the border.

**Transboundary Resource Inventory Program (TRIP).** The Udall Center has collaborated with other organizations in the formation of the Transboundary Resource Inventory Program, a consortium aimed at bringing together organizations and individuals that collect and use transboundary information. Robert Varady, Deputy Director of the Udall Center, is a member of the Board of Directors of TRIP.

**PUBLICATIONS**

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Milich, L. and R.G. Varady. 1999. *Openness, Sustainability, and Public Participation: New Designs for Transboundary River-Basin Institutions*. Tucson: Udall Center Working Paper 99-8. (Published in *Journal of Environment and Development*, September 1999)

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Varady, R.G., R. Arnold, D.E. Carter, R. Guzmán, C. Peña, and W. Suk. 2000. *Hazardous Waste and the U.S.-Mexico Border Region: Toward a Binational, University-Based Institution*. Tucson: Udall Center Working Paper 00-1. (Published in *Environmental Practice*, March 2000)

Varady, R.G., D. Colnic, R. Merideth, and T. Sprouse. 1996. "The U.S.-Mexico Border Environment Cooperation Commission: Collected Perspectives on the First Two Years." *Journal of Borderlands Studies* 11:89-119.

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Verduzco, B. 2000. *Beyond Transboundary Cooperation: Civil Society and Public Policy Outcomes on the U.S.-Mexico Border*. Tucson: Udall Center Working Paper 00-6.

**RESEARCH MATERIALS & RESOURCES**

**San Pedro News and Comment:** a weekly compilation of news articles relating to the Upper San Pedro River basin. For e-mail or paper copies, contact Rachel Yaseen at <rachely@u.arizona.edu>

**Map collection**

**UDALL CENTER FOR STUDIES IN PUBLIC POLICY**

**Posters and charts** on the U.S.-Mexico border region developed for congressional and other professional presentations.

**Listsers.** The Udall Center maintains two listsers to facilitate discussion and information exchange regarding U.S.-Mexico border environmental issues: *BECCnet*, the listserv of the Border Environment Cooperation Commission and *CECnet*, the listserv of the Commission for Environmental Cooperation. To subscribe to the listsers send an email to: <listserv@listserv.arizona.edu>. Leave the subject line blank and in the body of the message type: subscribe beccnet/ceccnet (depending on which listserv you are subscribing to) “your name.”

**Udall Center Library.** The library’s collections include books, reports, and periodicals on U.S.-Mexico border issues and environmental policy in the Southwest. The collections are catalogued in a searchable database, which is accessible via the Udall Center Web site. The resource center also publishes *Recent Acquisitions*, a quarterly newsletter highlighting new acquisitions and specific collections within the center. For more information regarding the resource center contact Rachel Yaseen, information specialist, at <rachely@u.arizona.edu>.

**Slides** (contact Robert Varady)

**UNIVERSITY LIBRARIES**

1510 E. University Blvd., Tucson, AZ 85721  
 Phone (520) 621-6441 - Fax: (520) 621-9733  
 dizzy.library.arizona.edu

**CONTACTS**

**Tom Marshall**, Associate Librarian, Social Sciences Team  
 <thmarsha@bird.library.arizona.edu>  
**Roger Myers**, Special Collections Librarian  
 <rmyers@bird.library.arizona.edu>

**PROJECTS**

**Collections on the U.S.-Mexico Border.** There is an ongoing program at the university libraries to acquire all materials published along the U.S.- Mexico border, with a special focus on materials from Sonora, Chihuahua, and Baja California, Mexico. The Special Collections division of the library also has an extensive collection of research materials on Arizona, the Southwest, and the U.S.-Mexico borderlands. In addition, the collections of the Southwest Folklore Center include original materials pertaining to the folklore, folk arts, and folk life of southern Arizona and northern Sonora, including recordings, manuscripts, and photos.

**Library Web Exhibits.** The university libraries maintain a series of virtual exhibits, including “Mission Churches of the Sonoran Desert,” “The Leona G. and David A. Bloom Southwest Jewish Archives,” “La Cadena que no se Corta/The Unbroken Chain: The Traditional Arts of Tucson’s Mexican-American Community,” “Southern Arizona Folk Arts,” and “Cuentos de Nuestros Padres: Tucson’s Hispanic Community.” The exhibits may be accessed via the library web site.

**Transborder Library Forum (El Foro).** University librarians are involved with El Foro, a series of annual conferences that promote interlibrary cooperation and information exchange between information specialists in the U.S., Mexico, and Canada.

**RESEARCH MATERIALS**

**Databases**

**Folklore Archive:** materials on the Southwest’s folklore, folk arts, and folklife maintained by the Southwest Folklore Center, housed in Special Collections

**Manuscripts and Archives:** materials on the social, political, and economic history of Arizona and surrounding regions, including a collection on Spanish missionaries and explorers (located in Special Collections; contact Roger Myers)

**Maps**

**Multi-Media Materials**

**Photographs:** approximately 55,000 documents related to Arizona and the Southwest, including an extensive collection on Native Americans in the Southwest (located in Special Collections)

**Southwestern Americana and Borderlands**

**Book Collection.** Materials include printed texts and manuscripts on Arizona, the Southwest, and the borderlands (located in Special Collections).

**Statistical Resources**

**Videos**