

TEXAS STATE VITA

I. ACADEMIC/PROFESSIONAL BACKGROUND

A. Name: Vicente L. Lopes

Title: Professor of Aquatic Resources

B. Educational Background

Degree	Year	University	Major	Thesis/Dissertation
Ph.D.	1987	University of Arizona, Tucson, AZ	Watershed Hydrology & Management	A Numerical Model of Watershed Erosion and Sediment Yield
M.S.	1980	Federal University of Paraiba, Brazil	Water Resources Engineering	Soil Erosion by Raindrop Splash and Overland Flow
B.S.	1975	Federal University of Ceara, Brazil	Agricultural Engineering	

C. University Experience

Position	University	Date
Professor of Aquatic Resources, Department of Biology	Texas State University	Sep 2006 - present
Associate Professor of Aquatic Resources, Department of Biology	Texas State University	Jan 2005 – Aug 2006
Academic Associate, School of Natural Resources	University of Arizona	Jan 2005 - present
Associate Professor of Watershed Management, School of Natural Resources	University of Arizona	1995 - 2004
Associate Professor of Agricultural and Biosystems Engineering, Department of Agricultural and Biosystems Engineering	University of Arizona	2002 - 2004
Visiting Research Fellow Department of Geography Exeter, United Kingdom	University of Exeter, UK	Sep 1995 - Aug 1996

Assistant Professor of Watershed Management, School of Renewable Natural Resources	University of Arizona	Oct 1989 - Sep 1995
Associate Professor of Agricultural Engineering, Department of Agricultural Engineering	Escola Superior de Agricultura de Mossoro, Brazil	Sep 1980 - Dec 1987
Assistant Professor of Agricultural Engineering, Department of Agricultural Engineering	Escola Superior de Agricultura de Mossoro, Brazil	Sep 1976 - Aug 1980

D. Relevant Professional Experience

Position	Entity	Date
Hydrologist/Systems Analyst Southwest Watershed Research Center, Tucson, AZ	USDA – Agricultural Research Service (ARS)	Jan 1988 - Sep 1989

II. TEACHING

A. Teaching Honors and Awards

University of Arizona	Outstanding dissertation advisor, School of Renewable Natural Resources.	1999
University of Arizona	Outstanding dissertation advisor, School of Renewable Natural Resources	1998
University of Arizona	Outstanding dissertation advisor, School of Renewable Natural Resources,	1994

B. Courses Taught

University	Course Title	Date
Texas State University	BIO 7360U – Sustainability Science	Spring 2009
	HON 3395B – Integral Ecology	Fall 2008
	BIO 7103 – Sustainability Science	Fall 2008
	BIO 7421 – Landscape Dynamics	Spring 2008
	BIO 7103 – Watershed Issues	Spring 2008
	BIO 7412 – Environmental Hydrology	Fall 2007
	BIO 7102 – Integration Science Seminar	Fall 2007
	BIO 7302 - Applied Watershed Modeling	Spring 2007
	BIO 7102 - Participatory Watershed Management	Spring 2007
	BIO 7412 - Environmental Hydrology	Fall 2006
BIO 7366 - Integrated Water Resources Mgmt	Spring 2006	

	BIO 7102 - Nonequilibrium Landscape Dynamics	Spring 2006
	BIO 7421 - Landscape Ecology	Fall 2005
	BIO 7352 - Aquatic Resources Hydrology	Spring 2005
University of Arizona	WSM 560 - Watershed Hydrology School of Renewable Natural Resources	1999 - 2004
	WSM 605 - Watershed Modeling School of Renewable Natural Resources	1990 - 2004
	WSM 565 - Erosion and Environment School of Renewable Natural Resources	1998 - 2004
	WSM 535 - Watershed Management in Dryland Ecosystems, School of Renewable Natural Resources/Arid Land Sciences	1993 - 1998
Federal University of Paraiba, Brazil	Fundamentals of Fluid Mechanics Department of Civil Engineering	1979
Escola Superior de Agricultura de Mossoro, Brazil	Hydraulic Engineering	1976 - 1982
	Agricultural Hydrology	1976 - 1982

C. Graduate Theses/Dissertations Directed

a. Current graduate student advising

Texas State University	Adrian Vogl, PhD student, Aquatic Resources, Department of Biology (advisor)
	Thomas Herrod, PhD student, Aquatic Resources, Department of Biology (advisor)
	Ken Mix, PhD student, Aquatic Resources, Department of Biology (co-advisor)
	Kathy Alexander, PhD. student, Aquatic Resources, Department of Biology (co-advisor)
	Heidi Lee Nikole Moltz, PhD student, Aquatic Resources, Department of Biology (co-advisor)
	Elizabeth Fawcett, MS student, Aquatic Resources, Department of Biology (advisor)
	Susan Roberts, PhD student, Aquatic Resources, Department of Biology (committee member)

Samuel Benjamin Harnden, MS student, Department of Biology
(committee member)

Benjamin Thomas Warden, MS student, Department of Geography
(committee member)

University of Arizona Susan Moodie, PhD student, Arid Land Studies (co-advisor)

b. Doctoral Dissertations Directed

- 2009 Moltz, Heidi L. N. A Framework for Integrated Assessment of Non-Point Source Pollution in Large Basins. Doctoral Dissertation. Department of Biology, Texas State University, San Marcos, Texas
- 2008 Fernandez-Reynoso, Demetrio S. Evaluation of Sustainable Agricultural Systems in Central Mexico. Doctoral Dissertation. School of Natural Resources, University of Arizona, Tucson, Arizona
- 2001 Lopez-Sabater, Carlos Joaquín. An Empirical Model of Hydraulic Roughness for Overland Flow. Doctoral Dissertation, Department of Agricultural and Biosystems Engineering, University of Arizona, Tucson, Arizona
- 2000 Gonzalez, Angel Bustamante. Hydrologic Effects of Vegetative Practices on Ponderosa Pine Watersheds in Arizona. Doctoral Dissertation. School of Renewable Natural resources, University of Arizona, Tucson, Arizona
- 1999 Espinosa, Miguel. Prediction of Bedload Discharge for Alluvial Channels. Doctoral Dissertation. School of Renewable Natural resources, University of Arizona, Tucson, Arizona
- 1998 Canfield, Evan Howard. Use of Geomorphic Indicators in Parameterizing an Even-based Sediment-Yield Model. Doctoral Dissertation, Agricultural and Biosystems Engineering, University of Arizona, Tucson, Arizona
- 1994 Tiscareno-Lopez, Mario. A Bayesian Monte-Carlo Approach to Assess Uncertainties in Process-Based, Continuous Simulation Models. Doctoral Dissertation, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona

c. MS Theses Directed

- 2008 Oliver, Leonard L. Hydrologic Assessment of the Pedernales River Watershed. MS Thesis, Department of Biology, Texas State University, San Marcos, Texas
- 2005 Porovskyy, Serhiy. Analysis of the Integrated Watershed Management in the Danube River Basin. MS Thesis, School of Natural Resources, University of Arizona, Tucson, Arizona

- 2004 Yamaguchi, Yuko. Simulating Hydrologic Response from Arizona Ponderosa Pine Watersheds Using the BASINS-SWAT Modeling System. MS Thesis, School of Renewable Natural resources, University of Arizona, Tucson, Arizona
- 1998 Long, Larry Dean. Transport of Cryptosporidium Through the Perched Zone of a Wastewater Recharge Basin. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- 1996 Freedman, Vicky. Erosion Parameter Identification in Overland Flow Areas: Application of Global and Local Algorithms. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- Dong, Chunying. Effects of Vegetative Manipulation on Sediment Concentrations in North-Central Arizona. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- 1994 Ulman, Peggy. Determining Soil Erodibility of Forest Roads. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- Rapp, John Francis. Error Assessment of the Revised Universal Soil Loss Equation Using Natural Runoff Plot Data. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- Wigdor, Yakov. Applicability of Selected Sediment Transport Equations to Pinion Juniper Woodlands. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- 1992 Andreassian Vazken. Comparative Hydrology of Mediterranean Shrubland Watersheds. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- Freimund, Jeremy. Potential Error in Hydrologic Field Data Collected from Small Semiarid Watersheds. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- 1991 Tiscareno-Lopez, Mario. Sensitivity Analysis of the WEPP Watershed Model. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona
- Moreira-Beita, Carlos. Input Data Development for the SWRRB Model Using Geographic Information Systems. MS Thesis, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona

D. Courses Prepared and Curriculum Development

Developed three upper-level doctoral courses in aquatic resources at Texas State University and an undergraduate course for the Honors Program:

Fall 2008: HON 3395B - Integral Ecology

Fall 2006: BIO 7412 – Environmental Hydrology

Spring 2006: BIO 7366 - Integrated Water Resources Management
Fall 2005: BIO 7421 – Landscape Ecology
Spring 2005: BIO 7352 – Aquatic Resources Hydrology

E. Funded External Teaching Grants and Contracts

Training in Erosion Modeling for Moroccan Scientists. Duration of award: July 1997. Total award amount: \$24,000. Other PI's: Dr. Donald Slack (University of Arizona) and Dr. Kenneth Renard (USDA) Source of support: FAO of the United Nations, Grant No. UA421430

F. Submitted, but not Funded, External Teaching Grants and Contracts: N/A

G. Funded Internal Teaching Grants and Contracts

Establishment of an Experimental Perimeter for Natural Resources Studies in Sonora, Mexico. Duration of award: 4/1994 - 3/1996. Total award amount: \$10,000. Other PI's: N/A Source of support: University of Arizona/University of Sonora (Hermosillo, Mexico) Cooperative Studies, Project No. 433924

H. Submitted, but not Funded, Internal Teaching Grants and Contracts: N/A

I. Other

a. Research and Educational Software Development

Designed, coded and tested the following software systems (computer models). These software systems have been used as research (doctoral dissertations and master theses) and educational (graduate courses and workshops) tools in graduate programs at the University of Arizona and Federal University of Paraiba (Brazil).

- 2002 Developed a computer program called SEDLOAD for computing bed load and total load discharge in alluvial streams using selected sediment transport formulas.
- 2001 Developed a computer simulation model called CHDM (Catchment Hydrology Distributed Model) - a catchment-scale, distributed hydrologic transport model based on modern infiltration theory and principles of soil physics, overland and channel-flow hydraulics, and erosion mechanics.
- 1992 Develop a computer program called NORMDPTH for computing the geometric elements of complex channel cross-sections.
- 1989 Developed a computer simulation model called WESP (Watershed Erosion Simulation Program) - a process-based, distributed model for analysis and simulation of catchment runoff and sediment yield in dryland environments.

III. SCHOLARLY/CREATIVE

A. Works in Print

1. Books: N/A

a. Scholarly Monographs: NA

b. Textbooks: N/A

c. Edited Books: N/A

d. Book Chapters

Lopes, V. L. and Luizzi, V. L. (2008). Participatory Sustainability: Building Sustainability for Complexity and Change. In: Osborne, R. and Kriese, P. (eds). *Global Community, Global Security*. Value Inquiry Book Series 198, Rodopi, pp. 217-227

Lopes, V. L. and Ffolliott, P. F. (1996). A Framework for Modeling Sediment Processes in Upland Watersheds. In: Singh, V. P. and Kumar, B. (eds.). *Water-Quality Hydrology*, Kluwer Academic Publishers, pp. 93-111

Nearing, M. A., Lane, L. J. and Lopes, V. L. (1994). Modeling Soil Erosion. In: R. Lal (ed). *Soil Erosion Research Methods*. 2nd Ed., Soil and Water Conservation Society, pp. 127-156

e. Creative Books: N/A

2. Articles

a. Submitted

Vogl, A. L. and Lopes, V. L. Evaluating Watershed Experiments through Recursive Residual Analysis. *ASCE Journal of Irrigation and Drainage Engineering*

Moltz, H. L. N., Smith, C. L., Lopes, V. L. and Rast, W. Coupling Hydrologic and Social Assessments for Effective Non-Point Source Pollution Prevention: Santa Fe Watershed. *Society and Natural Resources*

Moltz, H.L.N., V.L. Lopes, W. Rast, and S.J. Ventura. A Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Rio Grande Basin. *ASCE Journal of Hydrologic Engineering*

Moltz, H. L. N., Rast, W., Lopes, V. L. and Ventura, S. J. Use of Geographical Information Systems for Assessing Non-point Source Pollution Potential in Large Watersheds. *Journal of Environmental Monitoring and Assessment*

Mix, K., Lopes, V. L. and Rast, W. Annual and Growing Season Climate Changes in the Alpine Desert of the San Luis Valley, Colorado. *Journal of Applied Meteorology and Climatology*. American Meteorological Society

b. Published

Mix, K., Rast, W. and Lopes, V. L. Increases in Growing Degree Days in the Alpine Desert of the San Luis Valley, Colorado. *Journal of Water, Air and Soil Pollution* (in press)

Lopes, V. L. and Vogl, A. L. (2008). Integrating Modeling and Field Experiments to Evaluate Impacts of Vegetative Practices on Ponderosa Pine Watersheds. *Journal of the American Water Resources Association*, 44(5):1284-1294.

Vogl, A. L. and Lopes, V. L. (2008). Impacts of Water Resources Development on Flow Regimes in the Brazos River. *Journal of Environmental Monitoring and Assessment* (in press)

Chaves, I. B., Lopes, V. L., Ffolliott, P. F. and Paes-Silva, A.P. (2008). Uma Classificacao Morpho-Estrutural para Descricao e Avaliacao da Biomassa da Vegetacao da Caatinga. *Revista Caatinga*, 21(2): 204-213

Lopes, V. L., Osterkamp, W. R. and Bravo-Espinosa, M. and (2007). A Method for Improving Predictions of Bed-load Discharges to Reservoirs. *Lakes & Reservoirs: Research and Management*, 12:59-72

Lopes, V.L. and Canfield, H.E. (2004). Effect of Watershed Representation on Runoff and Sediment Yield Modeling. *Journal of the American Water Resources Association*, 40(2): 311-320

Canfield, H.E. and Lopes, V.L. (2004). Parameter Identification in a Two-Parameter Sediment Yield Model. *Journal of the American Water Resources Association*, 40(2): 321-332

Bravo-Espinosa, M., Osterkamp, W. R. and Lopes, V. L. (2004). Transporte de Sedimentos en Corrientes Naturals: Revision Tecnica de Ecuaciones Empiricas de Prediccion del Arrastre de Sedimentos de Fondo. *Terra Latinoamericana*, 22(3): 377-386.

Bravo-Espinosa, M., Osterkamp, W. R. and Lopes, V. L. (2003). Bedload Transport in Alluvial Channels. *ASCE Journal of Hydraulic Engineering*, 129(10): 783-795.

Lopez-Sabater, C. J., Renard, K. G. and Lopes, V. L. (2002). Neural-Network-Based Algorithms of Hydraulic Roughness for Overland Flow. *Transactions of the ASAE*, 45(3): 661-667

Lopes, V. L., Ffolliott, P. F. and Baker, M. B. Jr. (2001). Impacts of Vegetative Practices on Suspended Sediment from Watersheds of Arizona. *ASCE Journal of Water Resources Planning and Management*, 127(1):41-47.

Canfield, H. E., Lopes, V. L. and Goodrich, D. C. (2001). Hillslope Characteristics and Particle Size Composition of Surficial Armoring on a Semiarid Watershed in the Southwestern United States, *CATENA* 44(2001): 1-11.

Freedman, V. L., Lopes, V. L. and Hernandez, M. (2001). Parameter Identifiability for three Sediment Entrainment Equations. *ASCE Journal of Irrigation and Drainage Engineering*, 127(2): 92-99.

Lopes, V. L., Andreassian, V. P. and Andrade, E. M. (1999). Analise Comparativa do Comportamento de Bacias sob Clima Tipo Mediterraneo. *Revista Brasileira de Recursos Hidricos*, 4(1): 49-56.

- Lopes, V. L., Ffolliott, P. F. and Baker, M. B., Jr. (1999). Impacts of Vegetative Treatments on Sediment Concentrations from the Beaver Creek Watersheds in North-Central Arizona. *Hydrology and Water Resources in Arizona and the Southwest*, pp. 49-55.
- Freedman, V. L., Lopes, V. L. and Hernandez, M. (1998). Parameter Identifiability for Catchment-Scale Erosion Modelling: A Comparison of Optimization Algorithms. *Journal of Hydrology*, 207(1988): 83-97.
- Sanchez-Cohen, I., Lopes, V. L., Slack, D. C. and Fogel, M. M. (1997). A Water Balance Model for Small-Scale Water Harvesting Systems. *ASCE Journal of Irrigation and Drainage Engineering*, 123(2): 123-128.
- Lopes, V. L. (1996). On the Effect of Uncertainty in Spatial Distribution of Rainfall on Catchment Modelling. *CATENA*, 28(1996): 107-119.
- Wigdor, Y., Lopes, V. L. and Ffolliott, P. F. (1996). Comparison of Sediment Discharge Predictions for Small Watersheds in the Southwestern United States. *International Journal of Sediment Research*, 11(1): 22-33.
- Zeigler, B. P., Moon, Y., Lopes, V. L. and Kim, J. (1996). DEVS Approximation of Infiltration Using Genetic Algorithm Optimization of a Fuzzy System. *Journal of Mathematical and Computer Modeling*, 23:215-228.
- Lopes, V. L., Ffolliott, P. F., Gottfried, G. J. and Baker, Jr. M. (1996). Sediment Rating Curves for Pinyon-Juniper Watersheds in Northern Arizona. *Hydrology and Water Resources in Arizona and the Southwest*. 26:29-33.
- Sanchez-Cohen, I., Lopes, V. L., Slack, D. C. and Yanez, C. H. (1995). Assessing Risk for Water Harvesting Systems in Arid Environments. *Journal of Soil and Water Conservation*, 50(5): 446-449.
- Tiscareno-Lopez, M., Weltz, M. A. and Lopes, V. L. (1995). Assessing Uncertainties in WEPP's Soil Erosion Predictions on Rangelands. *Journal of Soil and Water Conservation*, 50(5): 512-516.
- Gimblett, H. R., Ball, G., Lopes, V. L., Zeigler, B. P., Marefat, M. and Sanders, B. (1995). Massively Parallel Simulations of Complex, Large-Scale, High Resolution Ecosystem Models. *Complexity International* (an electronic journal), vol, 2 (April 1995).
- Tiscareno-Lopez, M., Lopes, V. L., Stone, J. J. and Lane, L. J. (1994). Sensitivity Analysis of the WEPP Watershed Model for Rangeland Applications - II. Channel Processes. *Trans. of American Society of Agricultural Engineers*, 37(1): 151-158.
- Lopes, V. L. and Shirley E. D. (1993). Computation of Flow Transitions in Open Channels with Steady Uniform Lateral Inflow. *ASCE Journal of Irrigation and Drainage Engineering*, 119(1): 187-200.
- Lopes, V. L. and Ffolliott, P. F. (1993). Sediment Rating Curves for a Clear-Cut Ponderosa Pine Watershed in Northern Arizona. *Water Resources Bulletin*, 29(3): 369-382.

Lopes, V. L. and Ffolliott, P. F. (1993). Modeling Sediment Processes on Small Watersheds: A Conceptual Framework. II. Concentrated Flow Processes. *International Journal of Sediment Research*, 8(1): 1-23.

Lopes, V. L. and Meyer, J. (1993). Watershed Management Program on Santiago Island, Cape Verde. *Journal of Environmental Management*, 17(1): 51-57.

Lopes, V. L. and Meyer, J. (1993). Watershed Development Project on Santiago Island, Cape Verde. *African Environment*, Vol. 8(3-4), no. 31/32:49-65.

Tiscareno-Lopez, M., Lopes, V. L., Stone, J. J. and Lane, L. J. (1993). Sensitivity Analysis of the WEPP Watershed Model for Rangeland Applications - I. Hillslope Processes. *Trans. of American Society of Agricultural Engineers*, 36(6): 1659-1672.

Lopes, V. L. and Ffolliott, P. F. (1992). Modeling Sediment Processes on Small Watersheds: A Conceptual Framework. I. Broad Shallow Flow Processes. *International Journal of Sediment Research*, 7(3): 21-44.

Shirley, E. D. and Lopes, V. L., (1991). Normal Depth Calculations in Complex Channel Sections. *ASCE Journal of Irrigation and Drainage Engineering*, 117(2): 220-232.

Lopes, V. L. (1991). Using Erosion Equations to Predict Sediment Yield from Overland Flow Systems. *Hydrology and Water Resources in Arizona and the Southwest*. 21:1-9.

c. Conference Proceedings

Chaves, I. B., Slack, D. C., Ffolliott, P., Lopes, V. L. and Paes-Silva, A. P. (2004). Uma Classificacao Morfo-Estrutural para Descricao e Avaliacao da Vegetacao da Caatinga. *Proceedings of the XV Meeting of the Soil Water Conservation and Management, Santa Maria, Rio Grande do Sul, Brazil.*

Chaves, I. B., Slack, D. C., Guertin, D. P. and Lopes, V. L. (2004). Estimativa da Erodibilidade e sua Relacao com Outros Atributos dos Solos do Estado da Paraiba. *Proceedings of the XV Meeting of the Soil Water Conservation and Management, Santa Maria, Rio Grande do Sul, Brazil.*

de Steiguer, J. E., Duberstein, J. and Lopes, V. L. (2003). The Analytic Hierarchy Process as a Means for Integrated Watershed Management. In: Renard, Kenneth G., McElroy, Stephen A., Gburek, William J., Canfield, H. Evan and Scott, Russell L., eds. 2003. *First Interagency Conference on Research in the Watersheds, October 27-30, 2003. U.S. Department of Agriculture, Agricultural Research Service, pp. 736-740.*

Canfield, H.E., Lopes, V.L. and Goodrich, D.C. (2002). Watershed Geometric Representation and the Search for Effective Parameter Values for Sediment Yield Prediction in a Distributed Hydrologic Model. *ASAE Paper No. 02-2226. Presented at the 2002 International Meeting of the American Society of Agricultural Engineers and the CIGR. July 28-July 31, Chicago, IL.*

- Canfield, H.E., Lopes, V.L. and Goodrich, D.C. (2002). Catchment Geometric Representation and Identification of Sediment Yield Parameters in a Distributed Catchment Model. In: Proceedings of the 2nd Federal Interagency Hydrologic Modeling Conference (CD-ROM), July 28-August 1, 2002. Las Vegas, NV. Session 8B, p. 1-12
- Lopes, V. L., Osterkamp, W. R. and Bravo-Espinosa, M. (2001). Evaluation of Selected Bedload Equations under Transport- and Supply-Limited Conditions. In: 7th Federal Interagency Sedimentation Conference, Reno, Nevada, March 25-29, 2001, pp. I.192-I.195.
- Rapp, J. F., Lopes, V. L. and Renard, K. G. (2001). Comparing Soil Erosion Estimates from RUSLE and USLE on Natural Runoff Plots. In: Ascough II, J. C. and Flanagan, D. D. (eds). Soil erosion research for the 21st century, International Symposium, Honolulu, Hawaii, pp. 24-27.
- Lopez-Sabater, C. J., Renard, K. G. and Lopes, V. L. (2001). An Empirical Model of Hydraulic Roughness for Overland Flow. In: Ascough II, J. C. and Flanagan, D. D. (eds). Soil erosion research for the 21st century, International Symposium, Honolulu, Hawaii, pp. 615-618.
- Lopes, V. L., Ffolliott, P. F. and Baker, M. B., Jr. (2000). Effects of Watershed Management Practices on Sediment Concentrations in the Southwestern United States: Management Implications. In: Conference on Land Stewardship in the 21st century: The Contributions of Watershed Management, Tucson, Arizona, pp. 352-355.
- Canfield, H. E. and Lopes, V. L. (2000). Simulating Soil Moisture Change in a Semiarid Rangeland Watershed with a Process-Based Water-Balance Model. Conference on Land Stewardship in the 21st century: The Contributions of Watershed Management, Tucson, Arizona, pp. 316-319.
- Ffolliott, P. F., Baker, M. B. Jr. and Lopes, V. L. (2000). Watershed Management Perspectives in the Southwest: Past, Present, Future. Conference on Land Stewardship in the 21st century: The Contributions of Watershed Management, Tucson, Arizona, pp. 30-36.
- Lopes, V. L., Ffolliott, P. F. and Baker, M. B., Jr. (1999). Impacts of Vegetative Manipulations on Sediment Concentrations from Pinyon-Juniper Woodlands. In: Monsen, S. B. and Stevens, R. (eds). Ecology and Management of Pinyon-Juniper Communities Within the Interior West. USDA Forest Service, Rocky Mountain Research Station, (RMRS-P-000), pp. 302-305.
- Lopes, V. L. (1996). Dynamic Simulation of Catchment Erosion and Sediment Yield. In: Webb, W. (ed). Erosion and Sediment Yield: Global and Regional Perspectives, Symposium of the International Association of Hydrological Sciences (IAHS), Exeter, UK, 15-19 July 1996, pp. 76-78.
- Lopes, V. L. and Renard, K. G. (1996). Hydrology of Semiarid Rangeland Watersheds. In: Casas-Rodriguez, J. (ed). Second International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, pp. 17-42.
- Lopes, V. L. (1995). CHDM - Catchment Hydrology Distributed Model. ASCE Watershed Management Symposium, ASCE, San Antonio, Texas (August 1995), pp. 144 -154.
- Lopes, V. L. and Ffolliott, P. F. (1995). Effects of Forest Harvesting Practices on Streamflow-Sediment Relationships for Southwestern Ponderosa Pine Watersheds. ASCE Watershed Management Symposium, San Antonio, Texas (August 1995), pp. 64-72.

Tiscareno-Lopez, M., Weltz, M. and Lopes, V. L. (1994). Soil Erodibility Parameter Estimates for WEPP Application on Rangelands Utilizing Bayesian Theory. Current and Emerging Erosion Prediction Technology. Soil and Water Conservation Society, Norfolk, Virginia (August 1994), pp. 77-84.

Lopes, V. L. and Ffolliott, P. F. (1993). A Distributed Model of Erosion and Sediment Transport on Small Watersheds. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico (November 1992), pp. 1-12.

Lopes, V. L. and Renard, K. G. (1993). Hidrologia de las Cuencas Hidrograficas de Pastizales Semiaridos. In: Galvan, C. H. A. and Sahagun, L. V. (eds). 1993. Manejo Integral y Sostenible del Pastizal, IX Congreso Nacional sobre Manejo de Pastizales, Hermosillo, Sonora, Mexico, pp. 21-50.

Lopes, V. L., Ffolliott, P. F. and Fogel, M. M. (1993). Integrated Watershed Management for Sustainable Use of Natural Resources: A Framework for Consideration. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico (November 1992), pp. 105-114.

Ffolliott, P. F. and Lopes, V. L. (1993). Acidity and Chemistry of Snowpacks in Arizona: A Preliminary Analysis. ASCE National Conference on Irrigation and Drainage Engineering, Park City, Utah (July 1993), pp. 305-310.

Ffolliott, P. F. and Lopes, V. L. (1993). Opportunities for Water Yield Improvement in Dryland Regions: A Review of Catchment Experiments. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). 1993. First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico (November 1992), pp. 24-29.

Ffolliott, P. F. and Lopes, V. L. (1993). Process Studies in Watershed Hydrology: A Worldwide Review. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). 1993. First International Seminar of Watershed Management, Hermosillo, Mexico (November 1992), pp. 87-104.

Ffolliott, P. F., Lopes, V. L., Esquivel, C. and Sanchez-Cohen, I. (1993). Conservation and Sustainable Development of Encinal Woodlands: A Watershed Management Approach. In: Rocky Mountain Forest and Range Experiment Station, USDA Forest Service General Technical Report RM-240, CO., pp. 61-66.

Tiscareno-Lopez, M., Lopes, V. L., Stone, J. J. and Lane, L. J. (1993). Testing a Non-Linear Hydrologic Model Through a Sensitivity Analysis. In: Allen, R. G. and Neale, C. M. (eds.). ASCE National Conference on Irrigation and Drainage Engineering, Park City, Utah (July 1993), pp. 319-326.

Lopes, V. L. and Fogel, M. M. (1992). Mountainous Convective Storm Rainfall Model: Hydrologic Applications. International Symposium on Hydrology of Mountainous Areas, Shimla, India (May 1992), pp. 39-47.

Lopes, V. L. and Ffolliott, P. F. (1992). Hydrology and Watershed Management of Oak Woodlands in Southeastern Arizona. Symposium on Ecology and Management of Oak and Associated Woodlands: Perspectives in the Southwestern United States and Northern Mexico. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Sierra Vista, Arizona (April 1992), pp. 71-77.

Lopes, V. L., Fogel, M. M., Duckstein, L. and Imam, B. M. (1991). Event-based Models of Precipitation for Analyzing Occurrence and Severity of Summer Droughts in Southern Arizona and New Mexico. In: Kirby, W. H. and Tan, W. Y. (eds). 1991. US-China Bilateral Symposium on Droughts and Arid-Region Hydrology, Tucson, Arizona (September 1991), pp. 247-253.

Hawkins, R. H., Lopes, V. L., Parker R. A. and Weltz, M. A. (1991). Effects of Global Climate Change on Erosion Stability in Arid Environments. In: Kirby, W. H. and Tan, W. Y. (eds). US-China Bilateral Symposium on Droughts and Arid-Region Hydrology, Tucson, Arizona (September 1991), pp. 85-90.

van der Zweep, R., Lopes, V. L. and Stone, J. J. (1991). Validation of the WEPP Watershed Model. Paper No. 91-2552, ASAE winter meeting, Chicago, IL.

Lopes, V. L. and Lane, L. J. (1990). Simulating Runoff and Sediment Yield on Semiarid Watersheds. ASCE National Symposium on Watershed Management, Durango, CO. (July 1990), pp. 174-183.

Stone, J. J., Lopes, V. L. and Lane, L. J. (1990). Water Erosion Prediction Project (WEPP) Watershed Model: Hydrologic and Erosion Calculations. ASCE National Symposium on Watershed Management, Durango, CO. (July 1990), pp. 184-190.

Lopes, V. L., Nearing, M. A., Foster, G. R., Finkner, S. C. and Gilley, J. E. (1989). The Water Erosion Prediction Project: Erosion Processes. ASCE National Water Conference and Symposium, Newark, DE, (October 1989), pp. 503-510.

Lopes, V. L. and Lane, L. J. (1988). Modelling Sedimentation Processes in Small Watersheds. IAHS Symposium on Sediment Budgets, Porto Alegre, Brazil (December 1988), IAHS Publication # 174, pp. 497-508.

Lane, L. J., Schertz, D. L., Alberts, E. E., Laflen, J. M. and Lopes, V. L. (1988). The US National Project to Develop Improved Erosion Prediction Technology to Replace the USLE. IAHS Symposium on Sediment Budgets, Porto Alegre, Brazil (December 1988), IAHS Publication # 174, pp. 473-481.

3. Abstracts

Lopes, V. L. (2008). Integration Science: Reconciling the Boundaries of Humans and Nature. The 52nd Annual Conference of the International Society for the Systems Science, Madison, WI, July 13-18, 2008

Lopes, V. L. (2007). Integration Science: Linking Social and Ecological Systems for Sustainability. The 92nd Annual Meeting of the Ecological society of America (ESA), San Jose, California, August 5-10, 2007

Lopes, V. L. (2006). Interactive Landscape Management Science: Dealing with Complexity. The 50th Annual Conference of the International Society for the Systems Science, Sonoma, CA July 9-14, 2006.

Lopes, V. L. (2006). Interactive Watershed Science: An Integrative Paradigm Linking Science, Policy and Community Participation. The 21st Annual Symposium of the U.S. - International Association of Landscape Ecology, San Diego, CA, March 28 – April 1, 2006.

Lopes, V. L. (2005). Watershed Science: An Emerging Paradigm for Linking Social and Natural Sciences. The 90th Annual Meeting of the Ecological Society of America (ESA), Montreal, Canada, August 7-12, 2005.

Lopes, V. L. (2003). Integrated Watershed Management: A New Paradigm for Natural Resources Management. The First Interagency Conference on Research in the Watersheds, October 27-30, 2003. U.S. Department of Agriculture, Agricultural Research Service, pp. 736-740.

Canfield, H. E., Lopes, V. L. and Goodrich, D. C. (1999). Hillslope Characteristics and Particle Size Composition of Surficial Armoring on a Semiarid Watershed. Fall Meeting of the American Geophysical Union (AGU), Supplement to EOS, Vol. 80, No. 46.

Canfield, H.E., and Lopes, V.L. (1998). Use of Multivariate Geostatistical Techniques to Estimate Spatial Variability of Soil Erodibility. The 11th Annual Symposium of the Arizona Hydrological Society (AHS), September 23-26, 1998, Tucson, Arizona.

Canfield, H.E. and Lopes, V.L. (1998). Simulating Soil Moisture Change on a Semiarid Watershed. Spring Meeting of the American Geophysical Union (AGU), Supplement to EOS, Volume. 79, Number 17.

Canfield, H.E., Lopes, V.L. and Goodrich, D.C. (1998). Parameterization of a Distributed Catchment Model Using Geomorphic Indicators. International Meeting of the American Society of Agricultural Engineers (ASAE), Orlando, Florida, July 11-16, 1998.

Canfield, H.E., Goodrich, D.C. and Lopes, V.L. (1998). Estimating the Spatial Variability of Soil Erodibility Using Geomorphic Indicators. Spring Meeting of the American Geophysical Union (AGU), Supplement to EOS, Volume. 79, Number 17.

4. Reports

Lopes, V. L. and Oliver, L. L. (2008). Hydrologic Assessment of the Pedernales River Watershed. Technical Report. The River Systems Institute/ The Nature Conservancy

Lopes, V.L., Ulman, P.L. and Luce, C. (1994). Techniques for improved erosion prediction models. Technical Report INT-92716-RJVA, U.S. Forest Service Intermountain Research Station, Moscow, Idaho, 83 pp.

Nicks, A. D., Lopes, V. L., Nearing, M. A. and Lane, L. J. (1989). Overview of WEPP hillslope profile erosion model. In: Lane, L. J. and Nearing, M. A. (eds). 1989. USDA – Water Erosion Prediction Project: Hillslope Profile Version, NSERL, Report No. 2, W. Lafayette, IN, pp. 1.1-1.8.

5. Book Reviews: N/A

6. Other

B. Works not in Print

1. Papers Presented at Professional Meetings

Integration Science: Reconciling the Boundaries of Humans and Nature. Presented at the 52nd Annual Conference of the International Society for the Systems Science, Madison, WI, July 13-18, 2008

Integration Science: Linking social and Ecological Systems for Sustainability. Presented at the 92nd Annual Meeting of the Ecological society of America (ESA), San Jose, California, August 5-10, 2007

Interactive Landscape Management Science: Dealing with Complexity. Presented at the 50th Annual Conference of the International Society for the Systems Science, Sonoma, CA July 9-14, 2006.

Interactive Watershed Science: An Integrative Paradigm Linking Science, Policy and Community Participation. Presented at the 21st Annual Symposium of the U.S. - International Association of Landscape Ecology, San Diego, CA, March 28 – April 1, 2006.

Watershed Science: An Emerging Paradigm for Linking Social and Natural Sciences. Presented at the 90th Annual Meeting of the Ecological Society of America (ESA), Montreal, Canada, August 7-12, 2005.

Integrated Watershed Management: A New Paradigm for Natural Resources Management. Presented at the First Interagency Conference on Research in the Watersheds, U.S. Department of Agriculture, Agricultural Research Service, Benson, Arizona, October 27-30, 2003.

Hillslope characteristics and particle size composition of surficial armoring on a semiarid watershed. Presented at the Fall Meeting of the American Geophysical Union (AGU), San Francisco, 1999.

Simulating Soil Moisture Change on a Semiarid Watershed. Presented at the Spring Meeting of the American Geophysical Union (AGU), New Orleans, 1998.

The Water Erosion Prediction Project: erosion processes. Presented at the ASCE National Water Conference and Symposium, Newark, DE, October 1989.

2. Invited Talks, Lectures, Presentations

Presenter at the 52nd Annual Conference of the International Society for the Systems Science, Madison, WI, July 13-18, 2008, Talking about “Integration Science: Reconciling the Boundaries of Humans and Nature”

Invited speaker at the Philosophy Dialogue Series – Fall 2008, Department of Philosophy/Texas State University, talking about “Pathways to Sustainability”

Presenter at the 92nd Annual Meeting of the Ecological Society of America (ESA), San Jose, California, August 5-10, 2007, talking about “Integration Science: Linking social and Ecological Systems for Sustainability.”

Invited speaker at the Philosophy Dialogue Series – Fall 2007, Department of Philosophy/Texas State University, talking about “Guattari’s Environmental Philosophy and its Implications for an Integral Ecology”

Presenter at the Third International Conference on Race, Ethnicity, and Place – Fall 2006, Texas State University – San Marcos, talking about “Participatory Sustainability: Facilitating Environmental Sustainability and Justice Through Participatory Processes”

Presenter at the 50th Annual Conference of the International Society for the Systems Science, Sonoma, CA July 9-14, 2006, talking about “Interactive Landscape Management Science: Dealing with Complexity.”

Presenter at the 21st Annual Symposium of the U.S. - International Association of Landscape Ecology, San Diego, CA, March 28 – April 1, 2006, talking about “Interactive Watershed Science: An Integrative Paradigm Linking Science, Policy and Community Participation.”

Presenter at the 90th Annual Meeting of the Ecological Society of America (ESA), Montreal, Canada, August 7-12, 2005, talking about “Watershed Science: An Emerging Paradigm for Linking Social and Natural Sciences.

Invited speaker at the Philosophy Dialogue Series – Spring 2006, Department of Philosophy/Texas State University, talking about “Sustainability and the Environment.”

Invited speaker at the Philosophy Dialogue Series – Fall 2005, Department of Philosophy/Texas State University, talking about “Philosophy and Sustainability in High Education.”

Keynote speaker at the Fifth Brazilian Symposium of Water Resources held in Natal, Rio Grande do Norte, Brazil, November 21-24, 2000, talking about “Dryland Hydrology: Integrating Models and Experiments.”

Invited speaker at the Texas A&M Agricultural Experiment Station in San Angelo, Texas, March 2000, talking about "Spatially Explicit Modeling of Rangeland Hydrology."

Invited speaker at the Department of Agricultural Engineering, Federal University of Ceara, Fortaleza, Brazil, July 1997, talking about “An Evolutionary Approach to Understanding Land Degradation in Northeastern Brazil.”

Invited Lecturer at the Department of Geography at King’s College, London, January 1996, talking about “Process-based Erosion Prediction models.”

Invited speaker at the Second International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, 1996, talking about “Hydrology of semiarid rangeland watersheds.”

Invited speaker at the IX Congreso Nacional sobre Manejo de Pastizales, Hermosillo, Sonora, Mexico, 1993, talking about “Hidrologia de las cuencas hidrograficas de pastizales semiaridos.”

Invited speaker at the First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, November 1992, talking about “A distributed model of erosion and sediment transport on small watersheds.”

Invited speaker at the First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, November 1992, talking about “Integrated watershed management for sustainable use of natural resources: a framework for consideration.”

Invited speaker at the Symposium on Ecology and Management of Oak and Associated Woodlands: Perspectives in the Southwestern United States and Northern Mexico. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Sierra Vista, Arizona, April 1992, talking about “Hydrology and watershed management of oak woodlands in southeastern Arizona.”

3. Consultancies: N/A

4. Workshops

Designed and presented the following international workshops:

University of Fortaleza, Fortaleza, Brazil	<u>Integral Ecology: Reconciling the Boundaries of Humans and Nature</u> , Dept. Environmental Engineering	2008
Federal University of Paraiba, C. Grande, Brazil	<u>Distributed Modeling of Watershed Hydrology</u> , Department of Civil Engineering	1999
Federal University of Ceara, Fortaleza, Brazil	<u>Modeling Small Watershed Hydrology</u> , Department of Agricultural Engineering	1998
Federal University of Paraiba, C. Grande, Brazil	<u>Distributed Modeling of Watershed Hydrology</u> , Department of Civil Engineering	1997
Federal University of Paraiba, C. Grande, Brazil	<u>Distributed Modeling of Watershed Hydrology</u> , Department of Civil Engineering	1995
University of Sao Paulo, Sao Paulo, Brazil	<u>Diffuse Water Pollution Modeling</u> , Escola Politecnica, Universidade de Sao Paulo	1994

5. Other

C. Grants and Contracts

1. Funded External Grants and Contracts

a. State

Decision Support System for Participatory Planning in the Cypress Creek Watershed, Texas. Duration of Award: 1/2008 – 12/2010. Total Award Amount: \$120,000. Other PI's: N/A. Source of Support: US Environmental Protection Agency /Texas Commission on Environmental Quality/River Systems Institute/Texas Watch

Integrated Assessment of the Lower Brazos Basin, Texas. Duration of Award: 1/2008 – 12/2009. Total Award Amount: \$48,000.00. Other PI's: N/A. Source of Support: Houston Endowment/River Systems Institute

Integrated Assessment of the Pedernales Watershed, Texas. Duration of Award: 5/2007 – 5/2008. Total Award Amount: \$30,000. Other PI's: N/a. Source of Support: Texas Nature Conservancy/River Systems Institute Project with Texas Nature Conservancy/River Systems Institute

Texas Impaired Water Systems Assessment. Duration of Award: 4/2006 – 12/2006. Total Award Amount: \$71,000. Other PI's: Dr. Walter Rast. Source of Support: Texas Commission on Environmental Quality.

Historical Zoogeography and Abundance of Fishes in Three Texas River Basins with an Annotated Species List. Duration of Award: 1/2006 – 12/2006. Total Award Amount: \$59,000. Other PI's: Dr. Timothy H. Bonner. Source of Support: Texas Water Development Board.

Modeling Soil Erosion Using a Strip Model Approach. Duration of Award: 6/1998 - 5/1999. Total Award Amount: \$4,767. Other PI's: N/A. Source of Support: Small Grants Program – The University of Arizona, Foundation Grant No.425951.

b. Federal

Comprehensive Watershed Management for the Valley of the Sun. Duration of Award: 06/2002 – 05/2004. Total Award Amount: \$180,000, Other PI's: Dr. David Walker (Department of Soil, Water and Environmental Science, University of Arizona). Source of Support: National Science Foundation (NSF)/University of Arizona Water Quality Center/City of Peoria/Central Arizona Project, Grant No. UA471156.

Improved Erosion Prediction Technology for Sediment TMDL Compliance on Rangeland Watersheds. Duration of Award: 7/2001- 9/2004. Total Award Amount: \$50,467. Other PI's: N/A. Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139023-M-12-154.

Fluvial Material Budget in a Changing Forest Environment. Duration of Award: 9/1997- 9/2001. Total Award Amount: \$60,000. Other PI's: N/A. Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139015-M-12-122

Sediment Budgets on Forested Watersheds (Phase II). Duration of Award: 9/1993 - 8/1995. Total Award Amount: \$25,900. Other PI's: N/A Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139015-M-12-122

Massive Parallel Simulation of Large Scale, High Resolution Ecosystem Models. Duration of Award: 9/1993 - 8/1996. Total Award Amount: \$900,000. Other PI's: Drs. B. Zeigler, W. Sanders, M. Marefat, G. Ball, and R.Gimblett. Source of Support: National Science Foundation (NSF) – High Performance Computing and Communications Grant Challenge No. BIR9318169

Mathematical Modeling of Sediment, Fluid, and Flow Characteristics: Applications to the Ozark-Ouachita Highlands. Duration of award: 9/1993 - 10/1995. Total Award Amount: \$50,000. Other PI's: Dr. Peter F. Ffolliott (University of Arizona) Source of Support: USDA Forest Service, Southern Forest Experiment Station, Hot Springs, Arkansas, Cooperative Agreement No. 19-93-088

Development of an Approach for Assessing Management- Induced Risks to Water and Riparian Resources in Southwestern Forests: Water Quality and Quantity Conceptual Modeling. Duration of Award: 1995. Total Award Amount: \$14,550. Other PI's: Drs. R. H. Hawkins and George Ball. Source of Support: USDA Forest Service Rocky Mountain Forest & Range Experiment Station, Contract No. 53-82FT-2-33

Evaluation of Interrill Erodibility for Improved Erosion Prediction Models. Duration of Award: 7/1992 - 9/1994. Total Award Amount: \$51,000. Other PI's: N/A. Source of Support: USDA Forest Service Intermountain Research Station, Moscow, Idaho, Contract No. INT-92716-RJVA

Habitat Use by Humpback Chub, Gila Cypha, in the Little Colorado River and other Tributaries of the Colorado River: Evaluation of the Impacts of Streamflow Fluctuations by River Simulation Analysis. Duration of award: 2/1991 - 9/1994. Total Award Amount: \$154,504. Other PI's: Dr. Eugene Maughan. Source of Support: U.S. Bureau of Reclamation/Fish and Wildlife Service, Glenn Canyon Environmental Studies Phase II Research, Contract No. 1416000291222

Sediment Budgets on Forested Watersheds (Phase I). Duration of Award: 9/1990 - 8/1993. Total Award Amount: \$45,000. Other PI's: N/A. Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139015-M-12-122

Development and Evaluation of Model Parameter Estimates of Improved Erosion Prediction Models. Duration of Award: 9/1989 - 9/1992. Total Award Amount: \$30,000. Other PI's: N/A. Source of Support: USDA Agricultural Research Service, Southwest Watershed Management Research Unit, Tucson, Arizona, Cooperative Agreement No. 58-91H2-8-141.

c. International

An Evaluation of Soil Erosion Hazard in Southeast Africa Using Geomatics Technology. Duration of Award: 2/1996 - 7/1999. Total Award Amount: \$250,000. Other PI's: Dr. Stuart Marsh (University of Arizona). Source of Support: U.S. Agency for International Development (USAID), Malawi/Arid Lands Grant No. 6900235A00606000

Tepetate Reclamation Using Erosion Prediction Technology, Montecillo, Mexico. Duration of Award: 1/1993 - 12/1995. Total Award Amount: \$150,000. Other PI's: Dr. Leonard J. Lane (USDA-ARS) and Dr. Jose Luis Oropeza (Colegio de Post-graduados, Montecillo, Mexico). Source of Support: U.S. Agency for International Development (USAID), Grant No. PSTC-936-5600-523-11.453

2. Submitted, but not Funded, External Grants and Contracts

Developing a Support Program for Adaptive Co-Management of Bee Creek Watershed in the Texas Hill Country. Duration of Award: 2006 – 2009. Total Award Amount: \$610,025. Other PI's: Drs. Dittmar Hahn (Biology, TSU), Michael Forstner (Biology, TSU), Raymond Slade (USGS; EARDC) and Rene A. Barker (USGS; EARDC). Source of Support: US Environmental Protection Agency

Developing a Support Program for Adaptive Management of Human-Impacted Watersheds in the Rio Conchos Basin. Duration of Award: 9/2006 – 8/2007. Total Award Amount: \$124,944. Other PI's: Drs. David L. Villarreal, Melida Gutierrez, Pablo A. L. Murcio, Michael R. J. Forstner, Dittmar Hahn, Timothy H. Bonner, Alan W. Groeger and Weston H. Nowlin. Source of Support: New IDEAS Partnership Program/US Agency for International Development.

Cluster Environment for Computational Topology and Quantitative Ecology. Duration of Award: 06/01/06 – 08/31/07. Total Award Amount: \$96,791. Other PI's: Drs. Susan Schwinning (Biology/TSU), David Snyder (Math/TSU), Lucius Meredith, (Oregon State). Source of Support: National Science Foundation (NSF).

Institutional and Social Ecology for Integrated Water Resources Management in the Pecos River. Duration of Award: 09/01/06 – 08/31/07. Total Award Amount: \$75,000. Other PI's: N/A. Source of Support: Rio Grande Basin Initiative - Sustainable Agricultural Water Conservation in the Rio Grand Basin Research.

Modeling Land Management Impacts on Water Quality and Quantity in the Pecos River Watershed. Duration of Award: 09/01/05 – 08/31/07. Total Award Amount: \$120,000. Other PI's: N/A. Source of Support: Rio Grande Basin Initiative - Sustainable Agricultural Water Conservation in the Rio Grand Basin Research.

3. Funded Internal Grants and Contracts: N/A

4. Submitted, but not Funded, Internal Grants and Contracts

Resilience and Adaptation in western Gulf Slope Watersheds: The Impact of Social-Ecological Interactions on Watershed Condition. Duration of award: 01/01/06 – 12/31/06. Total Award Amount: 16,000. Other PI's: Dr. Timothy H. Bonner. Source of Support: Texas State University/ Research Enhancement Program.

D. Fellowships, Awards, Honors

American Society of Agricultural Engineers (ASAE)	Outstanding reviewer - Soil & Water Division	1997
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USDA-ARS	Unit Award for Superior Service “For outstanding research, innovation and teamwork in designing, producing, and transferring a new generation of erosion prediction technology to user agencies.”	1990
USDA-ARS	Certificate of Appreciation “In recognition of your excellent work as a member of the WEPP Core Team, for your outstanding efforts in leading the system analysis and programming for the WEPP model, for your contributions to development of the model structure, for your help in model documentation, and for your dedication and loyalty to the Project.”	1989

IV. SERVICE

A. University

Member, Committee for Graduate Program in Arid Lands Sciences, Office of Arid Lands, University of Arizona 1996 - 2004

Member, Global Change Program, University of Arizona 1998 - 2004

B. Departmental

Chair, Opportunity Minority Committee, Department of Biology, Texas State University 2008-present

Member, Search Committee for Wildlife/Conservation Biologist, Department of Biology, Texas State University 2008

Member, Freeman Building Operations Committee, Department of Biology, Texas State University 2006-present

Chair, Search Committee for Groundwater Hydrologist/Hydrogeologist, Department of Biology, Texas State University 2006/07

Member, Search Committee for General Science Lecturer, Department of Biology, Texas State University 2006

Member, Search Committee for Stream Ecologist position, Department of Biology, Texas State University 2005/06

Member, Search Committee for Department Chair, Department of Biology, Texas State University 2005/06

Member, Curriculum Committee, Department of Biology, Texas State University 2005/06

Member, Graduate Committee, Department of Biology, Texas State University.	2005 - 2008
Member, Aquatic Biology Committee, Department of Biology, Texas State University.	2005 - present
Chair, Environmental Hydrology Committee, Department of Biology, Texas State University.	2005
Advisor, Undergraduate Program in Watershed Hydrology and Management, School of Renewable Natural Resources, University of Arizona	2002 - 2004
Member, Curriculum and Instruction Committee (CRIC), School of Renewable Natural Resources, University of Arizona	2002 - 2004
Member, Agricultural Systems Management Committee, Department of Agricultural and Biosystems Engineering, University of Arizona	2002 - 2004
Member, RNR Studies Committee (RNRSC), School of Renewable Natural Resources, University of Arizona	2001 - 2004
Member, SRNR Computer Resources Committee (CRC), School of Renewable Natural Resources, University of Arizona	2001 - 2004
Member, SRNR Computer Resources and ART Advisory Committee, School of Renewable Natural Resources, University of Arizona	1999 - 2000
Member, SRNR Policy Committee, School of Renewable Natural Resources, University of Arizona	1999 - 2000
Member, SRNR Program for Dryland Ecosystem Analysis and Management Steering Committee, School of Renewable Natural Resources, University of Arizona	1998 - 2000
Member, SRNR Post Tenure Review Committee, School of Renewable Natural Resources, University of Arizona	1998 - 1999
Member, SRNR Awards Committee	1989 - 1995
Member, SRNR Computer Teaching Lab Committee	1989 - 1998

C. Community

President and co-founder of the Gaian Institute (http://www.gaianinstitute.org), a non-profit organization dedicated to research and education that fosters more compassionate, creative and sustainable communities.	2006
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D. Professional

Associate Editor, International Journal of Urban and Environmental Engineering (Online: http://periodicos.ufpb.br/ojs2/index.php/juee/index)	2007-present
Chair, Social-Ecological Systems Group, International Society for Systems Sciences	2009
Organizer, Technical Session on Sustainability and Environmental Justice, Third International Conference on Race, Ethnicity, and Place, Texas State University, San Marcos, Texas, November 1-4, 2006	2006
Member, Watershed Hydrology and Management Committee of the American Water Resources Association	2002 - 2005
Member, Native American Issues Committee of the American Water Resources Association	2002 - 2005
Member, Surface Hydrology and Sedimentation Committee, Associacao Brasileira de Hidrologia e Recursos Hidricos (ABRH), Sao Paulo, Brazil.	2001 - 2005
Organizer, Technical Session on Watershed Hydrology, Symposium of the Arizona Hydrological Society, Tucson, Arizona.	1998
Member, Organizing Committee, Watershed Management Symposium of the American Society of Civil Engineers, San Antonio, Texas.	1995
Member, Organizing Committee, Second International Seminar of Watershed Management, University of Sonora (Mexico) and University of Arizona, Hermosillo, Mexico.	1995
Member, Urban Hydrology, International Affairs, and Education Committees of the American Water Resources Association.	1994 - 1995
Member, Advisory Committee, UNESCO International Research and Training Center on Urban Drainage for Tropical Climates (IRTCUD-TC), Sao Paulo, Brazil.	1994 - 1996
Chair, Watershed Management Committee, Irrigation and Drainage Division of the American Society of Civil Engineers	1992 - 1994
Secretary, Watershed Management Committee, Irrigation and Drainage Division of the American Society of Civil Engineers	1990 - 1991
Expert participant, Evaluation of the USAID/Cape Verde Watershed Development Project.	1990

E. Organizations

1. Honorary: N/A

2. Professional

American Geophysical Union (AGU)	1984 - present
American Society of Civil Engineers (ASCE)	1985 - present
Associação Brasileira de Hidrologia e Recursos Hídricos (ABRH)	1995 - present
International Association of Hydrological Sciences (IAHS)	1989 - present
American Water Resources Association (AWRA)	2002 - present
Ecological Society of America (ESA)	2005 - present
International Association of Landscape Ecology (IALE)	2005 – present
International Society for Systems Science (ISSS)	2006- present