



Photo by Peter Schaeffer

# ANNUAL REPORT 2001

## Division of Resource Management

Davis College of Agriculture, Forestry and Consumer Sciences  
West Virginia University – Morgantown, WV 26506-6108  
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**Electronic Version of the Division's Annual Report 2001:**

An electronic version of the Division's Annual Report 2001 can be viewed at:  
<http://www.caf.wvu.edu/RESM/2001AnnualReport.pdf>

**Title Photo:**

The title photo shows a view from the Dolly Sods Wilderness Area. Dolly Sods is located in eastern West Virginia in the Monongahela National Forest, on the Allegheny Plateau. It is spread over 10,215 acres and was designated a Wilderness Area in 1975. Go to <http://www.patc.net/hiking/destinations/dolysods.html> for more information.

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# INTRODUCTION

The Division of Resource Management is an interdisciplinary academic unit consisting of the Programs in Agricultural and Environmental Education, Agricultural and Resource Economics, and Landscape Architecture, respectively. The faculty conducts research in agricultural and environmental education and leadership, agricultural economics and trade, environmental and natural resources analysis and policy, landscape architecture and landscape ecology, and community and economic development.

The Division's primary mission is to prepare leaders who influence the economic, social, educational, aesthetic and functional development of communities, states, and nations, dedicated to the improvement of quality of life for all members of society in harmony with the natural environment.

This report covers the year 2001. Its emphasis is on research, particularly publications and grants, but the report also lists service contributions to West Virginia and its communities, and to the professions represented in the Division. On teaching the report contains a list of all degrees offered by the Division, and their enrollments in fall 2001.

A comparison of this report to last year's report shows that the overall enrollment has been stable. An encouraging development is the growth in the number of freshmen in three of our four majors. It bodes well for the future. We are also pleased with the increase in the number of graduate students, which can be attributed to enrollment growth in the M.S. in Agricultural and Environmental Education. The PhD program continues to do well, and one of the three students finishing the dissertation last year has been admitted into the World Bank's competitive Young Professionals Program.

The number and volume of externally funded projects keeps growing and the annual expenditures from external grants exceeded \$800,000 in 2001.



In summary, this report reflects the mission of the Division in teaching, research, and service. More detailed information about the Division's faculty and programs is available on our web site. Please contact us if you have any questions about our programs.

Peter Schaeffer, Director & Professor  
[pschaef@wvu.edu](mailto:pschaef@wvu.edu)

# TEACHING

## Degrees offered by the Division of Resource Management

<b>Degree</b>	<b>Major</b>	<b>Enrollment</b>	<b>Accreditation</b>
B.S. in Agriculture	Agricultural and Environmental Education	50	Yes (teaching)
B.S. in Resource Management	Agribusiness Management and Rural Development	30	Not applicable
	Environmental and Natural Resource Economics	13	
B.S.L.A.	Landscape Architecture	149	Yes
<i>Total Undergraduate Enrollment</i>		<i>242</i>	
M.S.	Agricultural and Environmental Education	12	Yes (teaching)
M.S.	Agricultural and Resource Economics	13	Not applicable
Ph.D.	Natural Resource Economics	15	Not applicable
<i>Total Graduate Enrollment</i>		<i>40</i>	

# FACULTY AND STAFF

In 2001 the Division employed twenty full-time tenure track faculty members and the director. The secretarial and administrative support staff consists of four secretaries and an administrative associate. Our research support staff has been growing and in 2001 consisted of six full-time employees. In addition, the Division funds an average of sixteen graduate research assistants and one to four temporary full-time research staff positions.

WVU Extension is a separate unit and not part of the Davis College of Agriculture, Forestry and Consumer Sciences. Therefore, the table does not show any budgeted effort in Extension. Dr. Sanjay Shah is an Extension faculty member with a part-time teaching appointment in the Division. He is an agricultural and environmental engineer, and his expertise contributes particularly to the Program in Agricultural and Environmental Education.

The majority of the Division's faculty members have nine-month contracts. A handful of faculty members have twelve-month contracts, and we employed several part-time instructors. To add the different positions to come up with the total faculty full-time equivalents, twelve-month and part-time appointments were converted into nine-month appointments.

<b>FACULTY OF THE DIVISION OF RESOURCE MANAGEMENT</b>				
<b>Name</b>	<b>Rank</b>	<b>Appointment Term</b>	<b>Budgeted Allocation of Effort</b>	
			<b>Teaching</b>	<b>Research</b>
<b>AGRICULTURAL AND ENVIRONMENTAL EDUCATION</b>				
Robert G. Diener	Professor	6 months	60%	40%
Stacy A. Gartin	Professor	12 months	90%	10%
Kerry S. Odell	Associate Professor	12 months	90%	10%
Layle D. Lawrence	Professor	12 months	90%	10%
Harry Boone	Assistant Professor	9 months	100%	0%
Sanjay Shah	Extension Specialist/Lecturer	4.5 months	20%	0%
John Lozier	Adjunct Assistant Professor		0%	0%
Total 9-month FTE, Agricultural and Environmental Education			5.43 FTE	0.67 FTE
<b>AGRICULTURAL AND RESOURCE ECONOMICS</b>				
Laura A. Blanciforti	Adjunct Associate Professor		0%	0%
Alan R. Collins	Associate Professor	9 months	30%	70%
Dale K. Colyer	Professor	9 months	50%	50%
Qi Dai	Adjunct Assistant Professor		0%	0%
Stratford M. Douglas	Adjunct Associate Professor		0%	0%
Gerard E. D'Souza	Professor	9 months	35%	65%
Jerald J. Fletcher	Professor	9 months	30%	70%
Tesfa G. Gebremedhin	Professor	9 months	65%	35%
Fonda Holehouse	Lecturer	4.5 months	20%	0%
David W. Hughes	Adjunct Associate Professor		0%	0%
Walter C. Labys	Professor	9 months	50%	50%
Carson Mencken	Adjunct Associate Professor		0%	0%
Tim T. Phipps	Professor	9 months	40%	60%
Randall Rosenberger	Assistant Professor	9 months	30%	70%
John Saymansky	Visiting Assistant Professor	9 months	100%	0%
Peter V. Schaeffer	Division Director/ Professor	12 months Administration: 80%	10%	10%
Dennis K. Smith	College, Associate Dean/ Professor		10%	0%
Thomas F. Torries	Professor	2 months	50%	50%
Total 9-month FTE, Agricultural and Resource Economics			4.78 FTE	5.34 FTE
<b>LANDSCAPE ARCHITECTURE</b>				
Donald R. Armstrong	Associate Professor	9 months	100%	0%
Stuart Echols	Assistant Professor	4.5 months	100%	0%
Alexander G. Karther	Associate Professor	9 months	100%	0%
George Longenecker	Professor	9 months	100%	0%
Steven B. McBride	Associate Professor	9 months	100%	0%
Elizabeth Messer Diehl	Assistant Professor	4.5 months	100%	0%
Charles B. Yuill	Associate Professor	9 months	100%	0%
Gail Zink	Visiting Lecturer	4.5 months	100%	0%
Total 9-month FTE, Landscape Architecture			7.50 FTE	0 FTE
<b>DIVISION TOTAL</b>		<b>ADMINISTRATION</b>	<b>TEACHING</b>	<b>RESEARCH</b>
<b>Total Faculty Resources: 24.8 9-month full-time equivalents (does not represent headcount)</b>		<b>1.07 FTE</b>	<b>17.71 FTE</b>	<b>6.01 FTE</b>

Notes: FTE=full-time equivalent. All appointments have been converted to 9-months equivalents for calculating program and division totals in Teaching, Research, and Administration. The "Totals" therefore do not represent the number of faculty.

A full-time teaching assignment consists of 24 credit hours/9 months or 30 credit hours/12 months

FULL-TIME STAFF		
Name	Title	Appointment Term
OFFICE SUPPORT STAFF		
Ellen Hartley Smith	Division Administrative Associate	12 months
Melanie Jimmie	Division Administrative Secretary	12 months
Lisa Lewis	Secretary	10 months
Alice Compton	Secretary	12 months
Dianne Spring	Secretary	12 months
Research Support Staff—Natural Resource Analysis Center		
Jacquelyn Strager	Research Coordinator (Biological Sciences)	12 months, grant-funded
Michael P. Strager	Research Coordinator (Economics and Management)	12 months, 70% grant-funded, 30% Hatch-funded
Daniel Miller	Senior Project Coordinator (Aquaculture)	12 months, grant-funded
Jerry Stekete	Research Assistant	12 months, grant-funded
John B. Churchill	Research Assistant	12 months, grant-funded
Qingyun Sun	Post-doctoral Fellow	12 months, grant-funded

## NEWS



Tom and Nancy Torries

Last spring we lost a good colleague and friend, when **Dr. Thomas F. Torries** died after a long battle with cancer. He impressed us all with his optimism and positive outlook on life. He refused to give in to his illness, deciding instead to enjoy the time left with his wife, family, and fishing. Walter Labys wrote a tribute to Tom that is reprinted on our web site at

[www.cafcs.wvu.edu/RESM/Torries\\_Tribute.htm](http://www.cafcs.wvu.edu/RESM/Torries_Tribute.htm)

Thanks to the generosity of Tom's wife Nancy, and of Greg and Nasrin Helbig, we were able to start the Thomas F. Torries Fund. Within a very short time, donations from family, friends, and former students from around the world amounted to enough to allow us to make it an endowed fund. Proceeds from the endowment will be used to support student travel to conferences, student-initiated seminars, and student-faculty interactions, to honor and remember Tom and his commitment to students.



Robert Diener about twelve years ago.

Last summer, **Dr. Robert Diener**, Professor of Agricultural and Environmental Education, retired after more than thirty-three years of service. Over time, Dr. Diener significantly changed his research and teaching, from agricultural toward environmental engineering and waste management. He also used his expertise in waste management to offer the certification courses for waste managers, and has consulted with state agencies and West Virginia communities. He hopes to continue some of his consulting and service activities in the future.



Dale Colyer (r) with Peter Schaeffer (l) at his retirement party. His family was also present, including his two grandsons.

**Dr. Dale Colyer**, Benedum Distinguished Scholar and Professor of Agricultural and Resource Economics, retired effective December 31, 2001. He joined the Division in 1970, after having served on the research staff of the Federal Reserve Bank of Kansas City and then the University of Missouri. While at WVU he served for five years as Division director and one year as acting associate director of the Experiment Station. He has been the major professor to more PhD graduates than any other faculty in the Division and has an enviable record of research and service accomplishment.



In fall 2001, **Stuart P. Echols**, MLA, joined the Division as Assistant Professor of Landscape Architecture. Stuart earned the BSLA from Texas A & M. After earning the MLA from Virginia Tech he later returned to Texas A & M and earned the MS in Land Development. He is currently a PhD candidate at Virginia Tech. His major current research deals with environmentally sensitive storm water management. Stuart's expertise will strengthen the teaching of landscape technology and computer applications. His practical experience is also valuable and will no doubt be reflected in his classes and studios.

# PUBLICATIONS

## Explanations

The names of Division faculty members are in **Bold Letters**

The names of Division students and recent graduates are in *Italics*

The names of members of the Division support staff are in ***Bold Italics***

## Proceedings

Boone, Harry N., Jr., editor, 2001. 55<sup>th</sup> Annual AAAE Eastern Research Conference Proceedings.

Fletcher, Jerald J., editor, 2001. Benefits and Costs of Resource Policies Affecting Public and Private Land. Proceedings from the Annual Meeting of the W-133 Project. Miami, FL, February 26-28, 2001.

## Refereed Journal Articles

Cohen, Bruce C., **Walter C. Labys** and *Paavo Eliste*, 2001. "An Econometric Time-Series Analysis of Global CO<sub>2</sub> Concentrations and Emissions." International Journal of the Environment and Pollution 15(4): 371-385.

**Colyer, Dale**, 2002. "Changes in Appalachian Agriculture: 1965-2000." Journal of Appalachian Studies, forthcoming.

*Crocker, Donald* and **Gerard E. D'Souza**, 2002. "Spatial Characteristics of Delisted CERCLIS Sites: An Application and Some Policy Implications for Brownfield Redevelopment." Environmental Practice, forthcoming.

*Kim, Chongwon*, **Tim Phipps**, and Luc Anselin, 2002. "Measuring the Benefits of Air Quality Improvement: A Spatial Hedonic Approach." Journal of Environmental Economics and Management, forthcoming.

Lange, Eckart and **Peter Schaeffer**, 2001. "A Comment on the Market Value of *A Room with a View*." Landscape and Urban Planning 55: 113-120.

*Jones, Kezelee* and **Gerard D'Souza**, 2001. "Trading Poultry Litter at the Watershed Level: A Goal Focusing Application." Agricultural and Resource Economics Review 30 (1, April): 56-65.

**Strager, Michael P.** and **Jerald J. Fletcher**, 2002. "An Interdisciplinary Approach to Watershed Analysis with GIS: The Watershed Characterization and Modeling System." Journal of the American Water Resources Association, forthcoming.

## **Chapters in Books and Proceedings**

**Boone, Harry N., Jr., Crystal R. Buckingham, Stacy A. Gartin, Kerry S. Odell, Layle D. Lawrence**, 2001. "Philosophies of Adult Education as Practiced by Agricultural Education Teachers" Proceedings of the National Agricultural Education Research Conference, New Orleans, December 12, 2001. Volume XXVIII: 526-538.

*Bukenya, James Obadiah*, 2001. "Application of GIS in Ecotourism Development Decisions: Evidence from the Pearl of Africa." In Vijay R. Kannan, editor, Proceedings of the 31<sup>st</sup> Annual Meeting of the Southeast Decision Sciences Institute, Charlotte, NC, February 21-23: 299-303.

**Colyer, Dale**, 2001. "Poultry Industry Positions on New Farm Legislation." In Parr Rosson and Aaron Hobbs, editors. Summary of Testimony on 2001-02 Farm Legislation. CNAS 2001-3. Center for North American Studies, Texas A&M University, August.

**Fletcher, Jerald J., Qingyun Sun, and Michael P. Strager**, 2001. "Using GIS to Model Stream Water Quality and Acid Loading in West Virginia." In Xie Heping, Yuehan Wang, and Yaodong Jiang, editors: Computer Applications in the Mineral Industries. The Netherlands: Balkema: 773-778.

**Fletcher, Jerald J., Qingyun Sun, and Michael P. Strager**, 2001. "GIS Application for Stream Water Management in West Virginia." Proceedings of the International Conferences on Info-tech & Info-net, Beijing, PRC, October 29-November 1.

Fortney, R.H., **Charles B. Yuill**, W. Ravenscroft, and J.A. Gillialan, 2001. "Upper Ohio River Floodplain Characterization and Change, 1954 to 2000." Annual Meeting Proceedings, American Society of Civil Engineers. August, Chicago, IL.

Hughes, J.E., **Harry N. Boone, Stacy A. Gartin, Kerry S. Odell, Layle D. Lawrence**, and Robert A. Dailey, 2001. "Attitudes and Knowledge of Biotechnology by West Virginia Agricultural Education Teachers." Fifty-fifth Annual AAAE Eastern Research Conference Proceedings.

Hughes, J.E., **Stacy A. Gartin, Harry N. Boone, Kerry S. Odell, Layle D. Lawrence**, and Robert A. Dailey, 2001. "Attitudes and Knowledge of Agriscience by West Virginia Agricultural Education Teachers." Fifty-fifth Annual AAAE Eastern Research Conference Proceedings.

**Labys, Walter C.**, 2001. "Transmaterialization." In R. Ayres and L. Ayres, editors: Handbook of Industrial Ecology. London: Edward Elgar.

**Labys, Walter C.**, 2001. "The Demand for Metals." In R. Mackinnon, editor: Encyclopedia of Materials Science. Cambridge, MA: MIT-Elsevier Sciences,

Pacuri, D., Linda Gribko, Tim Warner, and **Charles B. Yuill**, 2001. "Determination of an Optimal Spatial Resolution of Remotely Sensed Images for Mixed Appalachian Forests." Proceedings, 3<sup>rd</sup> International Conference on Geospatial Information in Agriculture and Forestry. November, Denver, CO.

**Rosenberger Randall S.**, 2001. "Testing the Validity of Benefit Transfer: A Site Correspondence Model." In Jerald J. Fletcher, editor: Benefits and Costs of Resource Policies Affecting Public and Private Land. Proceedings from the Annual Meeting of the W-133 Project. Miami, FL, February 26-28, 2001: 99-120.

*Scarborough, Connie N.*, **Harry N. Boone**, **Layle D. Lawrence**, **Stacy A. Gartin**, **Kerry S. Odell**, and Jean M. Woloshuk, 2001. "Perceptions of the Benefits and Problems Associated with Part-Time Employment by Secondary Teachers of Agricultural Education." Fifty-fifth Annual AAEE Eastern Research Conference Proceedings.

*Strager, Michael*, Peter Claggett, Emily Clifton, **Jerald J. Fletcher**, *Paul Kinder*, Don Klemage, Randy Pomponio, Todd Schroder, Matt Sherald, *Jacquelyn Strager*, and **Charles B. Yuill**, 2001. "Landscape Assessment Tools: Integrating Science and Data for Decision Support." 2001 ESRI International Conference Proceedings, July 8-12, San Diego, CA.

*Strager, Michael* and **Jerald J. Fletcher**, 2001. Watershed Characterization and Modeling System Version 2.8 Users Manual. Natural Resource Analysis Center, Division of Resource Management, West Virginia University.

*Williams, Mary*, **Layle D. Lawrence**, **Stacy A. Gartin**, **Dennis K. Smith**, and **Kerry S. Odell**, 2001. "Evaluation of the International 4-H Youth Exchange Program." Proceedings of the 17<sup>th</sup> Annual Conference of the Association for International Agricultural and Extension Education. April 6, Baton Rouge, LA.

Woloshuk, Jean, **Stacy A. Gartin**, **Harry N. Boone**, J. Nestor, **Layle D. Lawrence**, and Robert Dailey, 2001. "Unethical Practices as Observed by West Virginia Extension Agents and High School Agriculture Teachers." Proceedings of the National Association of Extension 4-H Agents. October 22, Bismarck, ND.

### **Reports and Other Publications**

*Bukenya, James* and **Tesfa G. Gebremedhin**, 2001. "Quality of Life Satisfaction: A Comparative Survey Analysis of Eastern Panhandle and Southern West Virginia Counties. Regional Research Institute Working Paper 2001-20.

*Bukenya, James* and **Tesfa G. Gebremedhin**, **Dennis K. Smith**, and **Peter V. Schaeffer**, 2001. "An Empirical Analysis of Income Distribution in West Virginia." West Virginia Agricultural and Forestry Experiment Station Bulletin No. 725.

**Colyer, Dale**, 2001. "Final Report: Activities at the Faculty of Agriculture, Catholic University of Mozambique, May 12-22, 2001." West Virginia University, June.

**Fletcher, Jerald J.**, Jack A. Fuller, and **Tim T. Phipps**, 2001. "Watershed Economics: A Guide to Watershed Management." Report to the U.S. Department of Energy, National Energy Technology Laboratory, October.

**Gebremedhin, Tesfa G.**, *Brian Lego*, and **Kerry S. Odell**, 2001. "A Survey Analysis of the Role of Institutions of Higher Education in Employee Recruitment in West Virginia." Regional Research Institute Working Paper 2001-4.

Godfrey, Robert W. and **Gerard D'Souza**, 2001. Hair Sheep Production in the U.S. Virgin Islands: Management Practices and Economic Analysis. St. Croix, U.S. Virgin Islands: University of the Virgin Islands Agricultural Experiment Station Report, 22 pages.

Hammat, Heather, 2001. Links with the Past: Landscape Architecture and Industrial Design Combine Forces in a Plan for Riverfront Improvements." Landscape Architecture, January: 22. [Review and discussion of the design and master plan for riverfront redevelopment for Star City, WV by Division faculty member **Alexander G. Karther**.]

Kouassi, Eugene, **Walter C. Labys**, and François Aka, 2001. "Forecasting the Index of Industrial Production: A Nonlinear Seasonal Time Series Approach." Regional Research Institute Working Paper 2001-2.

**Labys, Walter C.**, J.-B. Lesourd, and E. Girondin, 2001. "Patterns in Three Centuries of Commodity Prices, Interest Rates and Stock Market Prices." GREQAM Working Paper, University of Aix-Marseille, France.

*Lewis, Jennifer* and **Schaeffer, Peter V.**, 2001. "Market Study and Marketing Approach for Highland Harvest LLC." Progress report.

*Loy, Beth A.* and **Tesfa G. Gebremedhin**, 2001. "Disability Legislation: An Empirical Analysis of Employer Cost." Regional Research Institute Working Paper 2001-3.

Peterson, George L., Thomas C. Brown, **Rosenberger, Randall S.**, B.L. Mace, and Andrea Clarke, 2001. "Sensitivity of Paired Comparison Results to the Range of Dollar Magnitudes in the Choice Set." USDA Forest Service Rocky Mountain Research Station Working Paper.

**Rosenberger, Randall S.**, 2001. "Rationality, Decision Theories, and Thresholds: Implications for Environmental Valuation." Regional Research Institute Working Paper 2001-13.

**Rosenberger, Randall S.**, 2001. "An Integrative Hierarchical Framework for Environmental Valuation: Value Pluralism, Thresholds, and Deliberation." Regional Research Institute Working Paper 2001-14.

**Rosenberger, Randall S.** and *Geraldine Jones*, 2001. "Growth, Land Use, and Development in the Eastern Panhandle: Summary Report of Open Meeting."

**Rosenberger, Randall S.** and John B. Loomis, 2001. "Benefit Transfer of Outdoor Recreation Use Values: A Technical Document Supporting the Forest Service Strategic Plan." General Technical Report RMRS-GTR-72, Fort Collins, USDA Forest Service Rocky Mountain Research Station.

**Rosenberger, Randall S.**, George L. Peterson, Andrea M. Clarke, and Thomas C. Brown, 2001. "Dispositions for Lexicographic Preferences of Environmental Goods: Integrating Economics, Psychology, and Ethics." Regional Research Institute Research Paper 2001-12.

**Rosenberger, Randall S.**, and **Tim T. Phipps**, 2001. "Improving the Validity of Benefit Transfers: A Site Correspondence Model and Meta-Analysis Transfer." Regional Research Institute Research Paper 2001-6.

**Rosenberger, Randall, Tim T. Phipps**, and **Jerry J. Fletcher**, 2001. "Measuring the Net Benefits of Acid Mine Pool Drainage Mitigation." Final report, WV-173 project.

*San, N., Dan Miller, Gerard E. D'Souza, Dennis K. Smith*, and Ken Semmens, 2001. "West Virginia Trout Enterprise Budgets." Version 2. WVU Extension Service, Publication No. AQ01-1.

**Saymansky, John, Tim T. Phipps**, and *Courtney Black*, 2001. "Measuring the Cost of AMD Mitigation in the Mon River." Final report, WV-173 project.

**Schaeffer, Peter V.**, 2001. "Toward a Regional Economic Development Strategy for the Greater Kunming Area." Final Report to the Institute for Local, Regional, and National Planning, Swiss Federal Institute of Technology, Zurich.

**Schaeffer, Peter V.** and Scott Loveridge, 2001. "Towards an Understanding of Types of Public-Private Cooperation." Regional Research Institute Working Paper 2001-5.

### **Dissertations for the PhD in Natural Resource Economics**

*James Obadiah Bukenya*. Analysis of Quality of Life, Income Distribution, and Rural Development in West Virginia. **Tesfa G. Gebremedhin**, Chair.

*Eliste, Paavo*. Three Empirical Essays On Environmental Regulations, Strategic Interaction, And Regional Trade Agreements. **Jerald J. Fletcher**, Chair.

Loy, Beth A. The Economic Impact of the Americans with Disability Act: An Analysis of Title I. **Tesfa G. Gebremedhin**, Chair.

### **Theses for the MS in Agricultural and Environmental Education**

Hughes, Jason E. Attitudes, Knowledge and Implementation of Biotechnology and Agriscience by West Virginia Agricultural Education Teachers. **Stacy A. Gartin**, Chair.

Jacobus, Robert J. Defining Environmental Theology: Content Analysis of Associated Literature. **Layle D. Lawrence**, Chair.

Nestor, Jared N. Unethical Practices in Exhibiting Animals as Observed by West Virginia Extension Agents and High School Agriculture Teachers. **Layle D. Lawrence**, Chair.

Scarbrough, Connie M. Perspective of Benefits/Problems of Part-time Employment on the Job Performance of Secondary Teachers of Agricultural Education. **Harry N. Boone Jr.**, Chair.

Westfall, Michael. Major Problems with the Forestry Sector in West Virginia as Perceived by WV Division of Forestry Service Foresters. **Stacy A. Gartin**, Chair.

Wilkerson, Leasa. Pest Management Practices of West Virginia Corn Growers. **Layle D. Lawrence**, Chair.

### **Theses for the MS in Agricultural and Resource Economics**

Biddle, Elyce. The Economic Cost of Fatal Occupational Injuries in the United States. **Jerald J. Fletcher**, Chair.

Cain, Mary B. Valuation of Electric Utility Generating Assets in a Competitive Environment. **Jerald J. Fletcher**, Chair.

Fincham, Ryan M. A Break-Even Analysis of Trout Processing in West Virginia: A Case Study Approach. **Gerard E. D'Souza**, Chair.

### **Master of Agriculture, Forestry, and Consumer Sciences (non-thesis degree)**

*Jack Cain*, Advisor: Layle D. Lawrence. June 1, 2001

*James Carr*, Advisor: Stacy A. Gartin. July 24, 2001

*Nina Forrest*, Advisor: Layle D. Lawrence. May 2001

*Joseph Riley*, Advisor: Stacy A. Gartin. July 24, 2001

*Ronald Watson*, Advisor: Kerry S. Odell. August 8, 2001

*Isaac Lewis*, Advisor: Stacy A. Gartin. September 7, 2001

# GRANTS AND CONTRACTS

## External Grants and Contracts

Canaan Valley Institute, \$44,000: “NRAC-2000-05GIS and Spatial Modeling Support and Consultation.” **Jerald J. Fletcher**. August 16, 2000-August 15, 2002.

Canaan Valley Institute, \$80,000: “NRAC 2000-09 Canaan Valley Institute Master Affiliation Agreement.” **Jerald J. Fletcher**, **Charles Yuill**, **Michael P. Strager** and **Jacquelyn Strager**. December 1, 2000-December 31, 2001.

Maryland Department of Energy, \$32,789: “Technical Support for the MD AML Inventory and Data Base Development.” **Charles Yuill**. May 7, 1999-March 31, 2001.

Maryland Department of the Environment/Maryland Bureau of Mines, \$35,000. “NRAC 2000-06 BOM AML and Watershed Modeling System.” **Jerald J. Fletcher** and **Michael P. Strager**. September 15, 2000-July 31, 2002.

Northeast Region Sustainable Agriculture Research and Education Program, \$217,247 (Division Share: \$8,115): “Systems of Transition from Conventional to Organic Agricultural Production.” James Kotcon, William Bryan, Louis McDonald and **Gerard E. D’Souza**. September 1, 1999-August 31, 2002.

Parsons Infrastructure Technology Group, \$729,706 (Division Share: \$106,274): “WV173-Phase II/Phase III-Abandoned Mine Pool Flooding of the Pittsburgh, Ohio and Irwin Basins.” Paul Ziemkiewicz, **Jerald J. Fletcher**, and Joseph Donovan. October 1, 2000-October 31, 2002.

United States Agency for International Development, \$89,479 (Division Share: \$10,000): “Jiu Valley—West Virginia Renaissance Partnership for Community Development.” Daniel Weiner, **Randall S. Rosenberger**.

United States Department of Agriculture, \$35,031 (Division Share: \$1,200): “Mid-Atlantic Region Pesticide Information Network.” John Baniecki and **Alan R. Collins**.

United States Department of Agriculture, Agricultural Research Service, \$541,571 (Division Share: \$14,924): “Pasture-Based Beef Systems for Appalachia: Land and Pasture Use, Supplementation and Systems Analysis.” William Bryan, Edward Prigge, Paul Lewis, **Gerard E. D’Souza**, Edward Rayburn, Louis McDonald, Phillip Osborne, and Alan Sexstone. April 1, 2000-March 31, 2005.

United States Department of Agriculture, Cooperative State Research, Education and Extension Service, \$1,260,864 (Division Share: \$452,065): “Aquaculture Food and Marketing Development Project—FY 2001 Funding.” Kenneth Semmens, **Gerard E. D’Souza**, **Dennis K. Smith**, et al. September 15, 1998-September 30, 2003.

United States Department of Agriculture, Cooperative State Research, Education and Extension Service, National Research Initiative, WVA00162, \$74,938: “Economic Valuation of Stream Restoration.” **Alan R. Collins**, **Randall S. Rosenberger**, and **Jerald J. Fletcher**. September 1, 2001-September 30, 2003.

United States Department of Agriculture, Cooperative State Research, Education and Extension Service (Small Business Innovative Research Program), \$70,000 (Division Share: \$12,640): “Highland Harvest LLC Food Processing and Marketing Economic Development Cluster.” Harvey Christie, Anthony Smith, and **Peter V. Schaeffer**.

United States Department of Agriculture, Forest Service, \$24,995: “NRAC 00-03 USFS-Adaptation of User Interface to ArcView-Gypses.” **Charles B. Yuill** and **Jacqueline Strager**. September 28, 2000-September 30, 2002.

United States Department of Agriculture, Forest Service, \$23,000: “NRAC 2001-2006 USFS-Adaptation of User Interface to ArcView-Gypses.” **Jerald J. Fletcher**, **Jacqueline Strager**, and **Charles B. Yuill**. October 1, 2001-September 30, 2002.

United States Department of Agriculture, Forest Service, Natural Resource Information System, \$97,370: “NRAC 2001-07 NHD Development for the Monongahela National Forest.” **Jacquelyn Strager** and **Charles B. Yuill**. September 13, 2001-September 30, 2002.

United States Department of Agriculture, Forest Service, Rocky Mountain Research Station, \$7,500: “Empirical Estimates of Recreation Values of the National Forests.” **Randall S. Rosenberger**. September 5, 2001-December 31, 2003.

United States Department of Agriculture, Forest Service, Southern Research Station, \$80,000: “Impacts and Role of Wilderness Designation on Rural Communities in the Appalachian Region and National Wilderness Assessment.” **Randall S. Rosenberger**. June 1, 2001-December 31, 2004.

United States Department of Agriculture, \$35,031: Mid-Atlantic Region Pesticide Information Network. John Baniecki, **Alan R. Collins**.

United States Department of Energy/Federal Energy Technology Center, \$695,755 (Division Share: \$185,822): “WV 173—Monongahela Basin Mine Pool Project.” **Jerald J. Fletcher**.

United States Forest Service, \$24,995: “NRAC 2000-03-Adaption of User Interface to ArcView Gypses.” **Jerald J. Fletcher**, **Charles B. Yuill** and **Jacqueline Strager**.

United States Geological Survey, \$54,054 (Division Share: \$28,383): “Ohio River Characterization and Change Detection Project.” **Charles B. Yuill** and Ronald Fortney. September 8, 2000-September 30, 2003.

United States Geological Survey, \$207,385: “Water Resources Research Institute Annual Base Program.” Paul Ziemkiewicz, Kenneth Semmens, **Daniel J. Miller**, Tamara Vandivort, and *Courtney Black*. March 1, 2001 – February 28, 2002.

West Virginia Army National Guard, 18,955. “NRAC 2000-08 GIS Technical Support for Camp Dawson.” **Jerald J. Fletcher** and *Michael Strager*. December 1, 2000-December 31, 2001.

West Virginia Department of Agriculture, \$539,678: “WVU-140- Increasing Farm Income by a Strategic Shift in Breeding Time for Ewe Flocks.” Keith Inskeep, **Dennis K. Smith**.

West Virginia Department of Agriculture, \$125,454 (Division Share: \$7,206): “Risk Management Education.” Thomas McConnell, **Gerard E. D’Souza**, David Workman, David Seymour, Robert Cheves. November 11, 2001-September 30, 2002.

West Virginia Department of Education, \$18,576: “Teacher Education in Agriculture: A Proposal Designed to Accomplish Professional Personnel Development Objectives in Vocational Education.” **Layle D. Lawrence** and **Stacy A. Gartin**. July 1, 2000-June 30, 2001.

West Virginia Department of Education, \$21,481: “Teacher Education in Agriculture: A Proposal Designed to Accomplish Professional Personnel Development Objectives in Vocational Education.” **Layle D. Lawrence**, **Stacy A. Gartin**, **Kerry S. Odell** and **Harry M. Boone, Jr.**. July 1, 2001-June 30, 2002.

West Virginia Department of Environmental Protection, \$208,336: “Development of Hollowfill Inventory for GIS Analysis for Permit Maps.” **Jerald J. Fletcher** and **Charles B. Yuill**. November 1, 1998-December 31, 2003.

West Virginia Department of Tax and Revenue, \$5,700. “NRAC 2000-07-Valuation of Timberland.” **Charles B. Yuill** and **Jerald J. Fletcher**. August 1, 2001-December 31, 2001.

West Virginia Division of Environmental Protection, \$110,000. “NRAC 99-01 Extending the Capabilities of the Watershed Characterization and Modeling System.” **Jerald J. Fletcher**.

West Virginia Division of Environmental Protection, \$193,884. “Development of Hollowfill Inventory for GIS Analysis from Permit Maps.” **Jerald J. Fletcher** and **Charles Yuill**. November 1, 1998-December 31, 2003.

West Virginia Division of Environmental Protection, Division of the Office of Water Resources, \$101,015 (Division Share: \$35,643). “WR124 Enhanced Decision Support for TMDLs.” Paul Zimkiewicz, James Stiles, **Jerald J. Fletcher**, and *Michael Strager*. April 17, 2000-December 31, 2001.

West Virginia Division of Environmental Protection, \$61,000. “Mountaintop Removal Data Development.” **Charles Yuill** and **Jerald J. Fletcher**.

West Virginia Division of Natural Resources, \$9,500: “Remote Sensing for Stream/River Aquatic Habitat Characterization in West Virginia.” **Charles Yuill**.

West Virginia Legislature/Joint Committee on Governance and Finance, \$45,000: “NRAC-99-02: Mountaintop Removal Mining and Land Use.” **Charles Yuill**. October 13, 1999-January 15, 2001.

West Virginia Water Resource Research Institute, \$36,501: “NRAC 2001-01/WRRI 131-AMD Models for TMDL Development and Implementation.” **Jerald J. Fletcher**.

#### **Hatch and State Projects, WV Agricultural and Forestry Experiment Station**

WVA00144—Program Development in Agricultural Education. **Layle D. Lawrence** and **Stacy A. Gartin**, October 1, 1999 – September 30, 2004.

WVA00364/W-133—Benefits and Costs of Resource Policies Affecting Public and Private Land. **Jerald J. Fletcher**, **Tim T. Phipps**, and **Randall S. Rosenberger**, October 1, 1997 – September 30, 2002.

WVA00392—Higher Education in Rural and Community Economic Development: The Case of West Virginia. **Tesfa G. Gebremedhin** and **Kerry S. Odell**, May 1, 1997 – April 30, 2001.

WVA00394—Rural Development Through Environmentally Enhanced Poultry Production. **Alan R. Collins**, **Dale Colyer**, and **Jerald J. Fletcher**, October 1, 1997 – September 30, 2002.

WVA00395—Commodities, Consumers, and Communities: Local Food Systems in a Globalizing Environment. **Gerard E. D’Souza** and **Dennis K. Smith**, October 1, 1997 – September 30, 2002.

WVA00397—Bioremediation of Pesticide Contaminated Media. **Robert G. Diener**, **Alan R. Collins**, B. Bearce and Gary Bissonnette, December 1, 1997 – September 30, 2002.

WVA00404—Impacts of Trade Agreements and Economic Policies on Southern Agriculture. **Dale Colyer, Walter C. Labys and Jerald J. Fletcher**, October 1, 1998 – September 30, 2003.

WVA00409—Policy Implications of Changes in Rural Employment, Poverty and Income Distribution in West Virginia. **Tesfa G. Gebremedhin, Dennis K. Smith and Peter V. Schaeffer**, October 1, 1999 – September 30, 2004.

WVA00411—Implications of the New Agriculture for West Virginia. **Gerard E. D’Souza, Alan R. Collins, Jerald J. Fletcher, Tim T. Phipps**, K. J. Semmens and **Dennis K. Smith**, October 1, 1999 – September 30, 2004.

WVA00416—Evaluation of Land Uses, Policy, and Amenity Benefits of Land in West Virginia. **Randall S. Rosenberger, Jerald J. Fletcher, Tim T. Phipps, Peter V. Schaeffer**, and **Charles B. Yuill**, October 1, 2001 – September 30, 2006.

WVA00419—An Analysis of the Role of Small Business in Rural Development in West Virginia. **Tesfa G. Gebremedhin** and **Peter V. Schaeffer**, January 1, 2002 – September 30, 2006.

WVA00420—Development and Evaluation of TMDL Planning and Assessment Tools and Processes. J. T. Petty and **Jerald J. Fletcher**, October 1, 2001 – September 30, 2006.

WVA00421—Feasibility Analysis of Split-Flow Infiltration Systems. **Stuart P. Echols**, May 1, 2002 – September 30, 2005.

# SERVICE

## Service Highlight in 2001

Service to the state is an integral part of the mission of the Davis College of Agriculture, Forestry, and Consumer Sciences. This is also reflected in the activities of the faculty of the Division of Resource Management. One of the highlights of our contributions in 2001 is George Longenecker's service as executive director of the recently founded West Virginia Botanic Garden. For several years, he has been one of the driving forces to establish the Botanic Garden on land owned by the City of Morgantown.



Ellen Hrabovsky Finishing the Sign She Hand Carved



Senior Thesis Master Plan by Sandra Robertson

The project is exemplary for service provided by Division faculty in several respects. First, it is a sustained effort over several years. Second, it involves volunteers from across the University and the community. Third, the project provides students with service learning opportunities. Finally, the project will provide benefits for years to come.



Site Work Volunteers 2/17/01

Professor Longenecker is the third person from the left.

The idea to establish the Botanic Garden (BG) was first conceived in 1983, but it took almost twenty years and the commitment of many volunteers to make it a reality. The BG occupies 82 acres of land and is readily accessible from Morgantown. When completed, the BG will feature a large variety of plants appropriate to the region's climate and soils, located in both designed and natural settings. Most of the wooded land will be left undisturbed. The site includes a reservoir that will be transformed into two smaller pools. The old water works will remain as a link to the past.

## **List of Service Rendered to the State and Professions**

Donald R. Armstrong

- Organizer, coordinator, and instructor for the Landscape Design Study Course 4, for the South Atlantic Regional National Council of State Garden Clubs, May 20-23, 2001. West Virginia University, Morgantown, WV.
- Co-director, West Virginia Community Design Team and Member of the Steering Committee.
- Team Leader, WV Community Design Team Visit to Sistersville, WV, and coordinator of downtown improvements team. August 17 and November 8-10, 2001.

Harry N. Boone, Jr.

- Chair, Managing and Review Board, Journal of Agricultural Education.
- Vice-Chair, Research Committee, American Association of Agriculture Educators (AAAE).
- Coordinator, Eastern Region AAAE Research Conference.
- Executive Committee Member, Five Star Consortium (WV, PA, DE, NJ, MD), Hershey, PA.
- Member, Program Committee, First Annual Five Star Consortium Student Teacher Retreat. Smyrna, DE, April 29-May 1.
- Member, West Virginia Joint Staff Agricultural Education Conference.
- Member, Policy Committee, West Virginia Association of Agricultural Educators.
- Advisor, Northwestern District Agriculture Teachers.
- Master of the West Virginia Agricultural Education Listserv.
- Judge, State Computers in Agriculture Contest, July, Cedar Lakes, WV.
- Judge, State FFA Prepared Speaking Contest, July, Cedar Lakes, WV.
- Judge, Northern Region FFA Prepared Speaking Contest. March, Morgantown, WV.
- Judge, Northern Region FFA Extemporaneous Speaking Contest, March, Morgantown, WV.
- Results Coordinator, WV Agriculture Career Development Events (Judging Contests), September 26-28, West Virginia University, Morgantown, WV.
- Results Coordinator, WV 4-H and FFA Equine Judging Contest, June 19, Clarksburg, WV and Bruceeton Mills, WV, June 13.
- Results Coordinator, WV 4-H and FFA Dairy Judging Contest, August 13, Weston, WV.

Alan R. Collins

- Organizer, Stream Valuation Workshop for representatives from federal and state agencies and not-for-profit organizations. Morgantown, WV, September 5.
- Secretary-Treasurer, Northeastern Agricultural and Resource Economics Association.

Dale Colyer

- Planning of Land Use Conference/Public Meeting in the Eastern Panhandle. Cooperative effort with Shepard College. Workshop was held January 27, 2001 in Martinsburg, WV.
- Member, West Virginia Community Design Team Advisory Committee.

Robert G. Diener

- Expert witness, attorney general, for circuit court in Wellsburg, WV on waste management, composting, and odor considerations. Prepared several technical reports.
- Presented a 3-hour seminar on outdoor lighting to the West Virginia Garden Club.

Gerard E. D'Souza

- Member, Board of Directors of the Northeastern Agriculture and Resource Economics Association.
- Presentation on the economics of organic farming to the West Virginia Organic Growers Association. Moundsville, WV, November 3.
- *Pro bono* assistance to West Virginia Ginseng Growers Association with development of research proposal, fall 2001.

Jerald J. Fletcher

- Member of the Economic Statistics and Information Resources Committee, American Agricultural Economics Association.
- President, W-133 Regional Project. Organized 2001 meetings in Miami, FL.
- Member and Past Chair of the Board of Director and Member of the Council of Professional Associations on Federal Statistics, representing the American Agricultural Economics Association.
- Planning of Land Use Conference/Public Meeting in the Eastern Panhandle. Cooperative effort with Shepard College. Workshop was held January 27, 2001 in Martinsburg, WV.

Stacy A. Gartin

- Vice-President, American Association for Agricultural Education (AAAE).
- Chair, Distinguished Service Selection Committee, AAAE.
- Chair, Honorary Membership Committee, AAAE.
- President, Eastern Region of the American Association for Agriculture Educators.
- Executive Committee, Five Star Consortium (WV, PA, DE, NJ, MD), Hershey, PA.
- Co-Coordinator, First Annual Five Star Consortium Student Teacher Retreat. Smyrna, DE, April 29-May 1.
- Member, Joint Staff Agricultural Education Conference, West Virginia.
- Member, Program and Policy Committee, West Virginia Vocational Agriculture Teachers Association.
- Advisor, Northern District (of West Virginia) Agriculture Teachers.
- Coordinator, West Virginia FFA Degree Review, Northern District.

Tesfa G. Gebremedhin

- Member, Technical Advisory Committee of the Northeastern Regional Center for Rural Development.
- Member, Graduate Students Paper Award Committee, Southern Agricultural Economics Association.
- Organizer and Presenter, Workshops on Leadership and Management, June 1-30, Asmara, Eritrea.

Alexander G. Karther

- Member, Planning Committee, Star City, WV Riverfront Vision 2000. Assisted in development of master plan updating and outline of land use requirement. Provided extensive *pro bono* design services, which were featured in Landscape Architecture (see above).
- Member, Educational Council and International Committee, respectively, of the Industrial Designers Society of America.

Walter C. Labys

- Member of the Editorial Board, Environmental and Resource Economics.
- Member of the Editorial Board, Journal of Global Environmental Issues.
- Member of the Board, West Virginia Wine and Jazz Festival. Organizer of Wine Evaluation Panel.
- Member, Scientific Committee, Group for Analyses of Primary Commodity Markets. University of Grenoble, France.
- Chair and Organizer, Session of Globalization and International Markets and Trade, 10<sup>th</sup> Annual Conference of the Mineral Economics and Management Society, Pittsburgh, PA, April 4-6, 2001.

Layle D. Lawrence

- Editor, Journal of Extension Systems.
- Editor, West Virginia Ag Ed News and Views.
- Co-coordinator and coordinator of agricultural mechanics contest, WV Agriculture Career Development Events (Judging Contests), September 26-28, West Virginia University. Morgantown.
- Chair, Publications Committee, Eastern Region of the American Association for Agricultural Education.
- Member, Program Committee, Association of International Agricultural and Extension Education.

George W. Longenecker

- President and Executive Director, West Virginia Botanic Garden, Inc.
- Landscape Advisor and Student Internship Coordinator, Fallingwater, Bear Run, PA.
- Instructor, West Virginia Garden Club Summer Course, May 21-22, 2001.
- Co-organizer, Walnut Farm Garden Party, an event organized to raise funds for the West Virginia Botanic Garden and for the West Virginia Highland Conservancy.

Steven B. McBride

- Member, Site Visitation Team to the University of Nevada at Las Vegas, Landscape Architecture Accreditation Review, Spring 2001.
- Studio Instructor, Fairmont, WV Neighborhood Revitalization service learning project, September-October, 2001.
- Member, City of Morgantown, WV Design Review Board.
- Member, City of Morgantown, WV Beautification Commission.
- Member, Main Street, Morgantown, WV Design Awards Jury.

Daniel Miller

- Identification of high volume water discharges from inactive mine sites in West Virginia. In cooperation with coal, conducted trout bioassay research at four mine sites. Establishing aquaculture as a post mining land use could result in local economic development through fee fishing as well as land reclamation savings for the coal industry.
- Developed a digital data base of spring and mine water sources in West Virginia.

Kerry S. Odell

- Member, Editorial Review Board, Journal of Agricultural Education.
- Member, Program Improvement Committee of the American Association of Agricultural Education.
- Eastern Secretary, American Association of Agricultural Education.
- Manuscript Judge, WV FFA Prepared Speaking Contest, and Judge, WV FFA Convention. July, Cedar Lakes, WV.

Tim T. Phipps

- Planning of Land Use Conference/Public Meeting in the Eastern Panhandle. Cooperative effort with Shepard College. Workshop was held January 27, 2001 in Martinsburg, WV.
- Reviewer of USDA/ERS research program “Land Use and the Environment at the Extensive Margin.” October 29, 2001, Washington, DC.

Randall S. Rosenberger

- Panelist, Changing Communities—Changing Habitats Panel. May 23, Shepherdstown, WV.
- Participant, Mon River Trails Conservancy planning workshop “Tri-County Rail-Trail Sustainability.” April 5, WVU Forest.
- Planning of and Presenter at Land Use Conference/Public Meeting in the Eastern Panhandle. Cooperative effort with Shepard College. Workshop was held January 27, 2001 in Martinsburg, WV.
- Moderator for a partnership meeting with youth and political organizations in the Jiu Valley. July, Petrosani, Romania.

Peter V. Schaeffer

- Member of the Board of Directors, Member of the Board of Directors' Executive Committee, and Treasurer, Lightstone Foundation, Inc., Moyers, Pendleton County, WV.
- Member, Steering Committee, West Virginia Community Design Team.
- Chair, Planning Accreditation Site Visit Team, Eastern Michigan University, October 7-10, 2001.
- Member of the Financial Oversight Committee of the Regional Science Association International.
- Member of the Editorial Board, International Regional Science Review.
- Member of the Editorial Board, Journal of Planning Education and Research.
- Member of the Editorial Board, Journal of Planning Literature.

Sanjay B. Shah

- Sanjay B. Shah is a WVU Extension faculty member with a non-tenure track teaching appointment in the Division of Resource Management. As part of his service obligation as an Extension specialist, he responds to queries from stakeholders and clients on engineering and agriculture-related issues.

Dennis K. Smith

- Planning of Land Use Conference/Public Meeting in the Eastern Panhandle. Cooperative effort with Shepard College.
- Research proposal reviewer for the U.S. Department of Agriculture's Small Business Innovation Research Program.

Jacquelyn M. Strager

- Co-taught "Introduction to ArcView GIS" short courses to natural resource professionals from WV DEP and other state agencies.
- Provided short course to WV Division of Environmental Protection personnel on the use and applications of the Watershed Modeling and Characterization System.

Michael P. Strager

- Co-taught "Introduction to ArcView GIS" short courses to natural resource professionals from WV DEP and other state agencies.

Thomas F. Torries

- President, Mineral Economics and Management Society (MEMS). Conference Chair, 10<sup>th</sup> Annual MEMS Conference, Pittsburgh, PA, April 4-6, 2001.

Charles B. Yuill

- Member, Governor's Task Force on Flooding, GIS Subcommittee.
- Member, Landscape Design Task Force, Pricketts Fort State Park, WV.
- West Virginia Representative, NASA State Data Needs Committee.
- Representative, West Virginia GIS Coordinating Committee