

# ALAN R. COLLINS

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## EDUCATION

Ph.D. Agricultural and Resource Economics, Oregon State University, December 1988  
M.S. Range Resource Economics, Utah State University, July 1981  
B.S. Range Management, University of Arizona, May 1979

## PROFESSIONAL EXPERIENCE

2020- Director, Division of Resource Economics and Management, West Virginia University  
2018-2020 Interim Director, Division of Resource Economics and Management, West Virginia University  
2014-2018 Graduate Coordinator, Division of Resource Economics and Management, West Virginia University  
2011-2018 Assistant Director, Division of Resource Economics and Management, West Virginia University  
2007- Professor, Division of Resource Management, West Virginia University  
2002-2012 Chair, Agricultural and Resource Economics Program, West Virginia University  
1997-2011 Undergraduate Coordinator, Agricultural and Resource Economics Program, West Virginia University  
1995-2007 Associate Professor, Division of Resource Management, West Virginia University  
1989-1995 Assistant Professor, Division of Resource Management, West Virginia University  
1984-1988 Graduate Research Assistant and Instructor, Department of Agricultural and Resource Economics, Oregon State University  
1981-1984 Research Associate, Division of Agricultural Economics, University of Wyoming  
1979-1981 Graduate Research Assistant, Department of Range Science, Utah State University

## RESEARCH

My research interests include economic and policy issues related to a wide range of environmental and natural resource topics including: watershed management; water quality; energy; land; performance-based incentives and solid plus agricultural waste management.

### Manuscripts in Preparation

Ajanaku, B. and **A.R. Collins**. Economic Growth and Deforestation in African Countries: Is the Environmental Kuznets Curve Hypothesis Applicable? Revise and re-submit to *Forest Policy and Economics*.

Ajanaku, B. and **A.R. Collins**. Perceptions of Cannibalization: Empirical investigation of wind generation impacts on the wholesale electricity market. Manuscript submitted to *Energy Economics*.

Ajanaku, B., M. Strager, and **A.R. Collins**. GIS-based multi-criteria decision analysis of utility-scale wind farm site suitability in West Virginia. Manuscript submitted to *GeoJournal*.

Alzahrani, F. and **A.R. Collins**. The Impact of Public Water Supply Unreliability on Residential Property Prices in Marion County, West Virginia. Manuscript being prepared for submission to *Agricultural and Resource Economics Review*.

Warr, A.S. and **A. R. Collins**. The Impacts of Energy Development on Agricultural Land Values in North-Central West Virginia. Manuscript being prepared for submission to the *Appraisal Journal*.

### Refereed Journal Articles

1. Nkansah, K., B. Beardmore, R. H. Holsman, and **A. Collins**. Accepted. "Determinants of Support for Funding Options for Fish and Wildlife Conservation in Wisconsin" *Wildlife Society Bulletin*.
2. Kariburyo, M.S., L. Andress, **A. Collins**, and P. Kinder. 2020. Place Effects and Chronic Disease Rates in a Rural State: Evidence from a Triangulation of Methods. *International Journal of Environmental Research and Public Health*. 17(18), 6676; <https://doi.org/10.3390/ijerph17186676>.
3. Alzahrani, F, **A.R. Collins**, and E. Erfanian. 2020. Water Quality Impact on Health Care Expenditures in the United States. *Water Resources and Economics*. Vol. 32, <https://doi.org/10.1016/j.wre.2020.100162>.

4. He, Y. and **A.R. Collins**. 2020. "The Effect of Information Structure on Farmland Contractual Choice: Toward a Revised Theory of Share Tenancy with New Evidence from Guangdong, China." *International Review of Law and Economics*. Volume 64, <https://www.sciencedirect.com/science/article/pii/S0144818820301629?via%3Dihub>.
5. Poudel, R., **A. Collins**, K. Gazal, and J. Wang. 2020. "Benefit Transfer Estimation of Willingness-to-Pay for U.S. Wetlands Conservation." *Forest Policy and Economics*. Vol. 115. <https://doi.org/10.1016/j.forpol.2020.102157>
6. Erfanian, E. and **A. R. Collins**. 2020. "Air Quality and Asthma Hospitalization Rates: Evidence of PM<sub>2.5</sub> Concentrations in Pennsylvania Counties." *Journal of Regional Analysis and Policy*. 50(1): 1-15.
7. Maille, P., **A. Collins**, and S. Tanner. 2019. "When More Democracy Means More Inequality: A Path Analysis." *Journal of Applied Business and Economics*. 21(7). <https://doi.org/10.33423/jabe.v21i7.2543>.
8. He, Y. and **A. R. Collins**. 2019. "Does Environmental Pollution Affect Metropolitan Housing Prices? Evidence from Guangzhou, China (1987-2014)". *Applied Economics Letters*. [https://www.tandfonline.com/doi/full/10.1080/13504851.2019.1613485#.XOK\\_FTyv3QU.email](https://www.tandfonline.com/doi/full/10.1080/13504851.2019.1613485#.XOK_FTyv3QU.email)
9. Tawfeeq, M., **A.R. Collins**, L. Elbakidze and G. Zaynutdinova. 2019. "Linking Crude Oil Prices and Middle East Stock Markets." *OPEC Energy Review*. <https://doi.org/10.1111/opec.12145>
10. Erfanian, E. **A. R. Collins**, and D. Grossman. 2019. "The Impact of Naloxone Access Laws on Opioid Overdose Deaths in the U.S." *Review of Regional Studies* 49(1): 45-72.
11. Nkansah, K. and **A.R. Collins**. 2018. "Willingness to Pay for Wind versus Natural Gas Generation of Electricity." *Agricultural and Resource Economics Review*. <https://doi.org/10.1017/age.2017.40>.
12. Erfanian, E. and **A. R. Collins**. 2018. "Charges for Water and Access: What Explains the Differences among West Virginian Municipalities?" *Water Economics and Policy*. 4(4) DOI: 10.1142/S2382624X18500170.
13. Arbab, N., J.F Conley, and **A. R. Collins**. 2016. "Projections of Watershed Pollutant Loads Using a Spatially Explicit, Agent-Based Land Use Conversion Model: A Case Study of Berkeley County, West Virginia." *Applied Spatial Analysis and Policy*. DOI 10.1007/s12061-016-9197-z.

14. **Collins, A.R.** and K. Nkansah. 2015. "Divided Rights, Expanded Conflict: Split Estate Impacts on Surface Owner Perceptions of Shale Gas Drilling." *Land Economics*. 91(4): 688-703.
15. **Collins, A. R.** and N. Gillies. 2014. "Constructed Wetland Treatment of Nitrates: Removal Effectiveness and Cost Efficiency." *Journal of the American Water Resources Association*. 50(4): 898-908.
16. Maskey, V. and **A.R. Collins**. 2014. "Examining College Community's Knowledge, Attitude and Opinion towards Recycling: Does Access Matter?" *The International Journal of Environmental Sustainability*. 9(3): 17-31.
17. Maskey, V., **A.R. Collins**, and C. Brown. 2013. "Three Ownership Scenario Analyses of a Historic Site Management: Lessons Learned from a Historic Mill." *Journal of Management and Sustainability* 3(2):1-9.
18. Pierskalla, C.D., R. Ramthun, **A.R. Collins**, and K.J. Semmens. 2103. "The Discriminant Validity of Event Quality and Quantity: An Evaluation of Fishing Experiences". *Human Dimensions of Wildlife* 18:1-2.
19. **Collins, A.R.**, E. Hansen, and M. Hendryx. 2012. "Wind versus Coal: Comparing the Local Economic Impacts of Energy Resource Development in Appalachia." *Energy Policy* 50:551-661.
20. Maille, P. and **A.R. Collins**. 2012. "A Simple Approach to Calculating Performance-Based Payments for Water Quality." *Journal of Environment Management* 99:27-35.
21. Evans, J.R., G.D'Souza, **A. Collins**, C. Brown, and M. Sperow. 2011. "Determining Consumer Perceptions of and Willingness to Pay for Appalachian Grass-fed Beef: An Experimental Economics Approach" *Agricultural and Resource Economics Review* 40(2):233-250.
22. Catma, S. and **A. R. Collins**. 2011. "Phosphorus Imbalances in the Chesapeake Bay Watershed: Can Forest Land and Manure Processing Facilities be the answers?" *Agricultural and Resource Economics Review* 40(1): 116-132.
23. **Collins, A.R.** and P. Maille. 2011. "Group Theory and Behavior under Performance-Based Water Quality Incentives." *Ecological Economics* 70(4):806-812.
24. Rodriguez,I., G. D'Souza, and **A. Collins**. 2011. "Social Benefits of Niche Agricultural Products; A Conceptual Framework." *Environmental Economics* 2(3):9-23.

25. Hong, S. and **A. R. Collins**. 2010. "The Impact of Anti-Smoking Policies in Korea on Quit Success and Smoking Intentions." *Contemporary Economic Policy* 28(4):474-487.
26. Vista, A.B., R. Rosenberger and **A.R. Collins**. 2009. "If You Provide It, Will They Read It? Response Time Effects in a Choice Experiment" *Canadian Journal of Agricultural Economics* 57(3):365-378.
27. Borisova T., **A. R. Collins**, G. D'Souza, M. Benson, M.L. Wolf, and B. Benham. 2008. "A Benefit-Cost Analysis of Total Maximum Daily Load Implementation." *Journal of the American Water Resources Association* 44(4):1009-1023.
28. **Collins, A.R.** and R. Rosenberger. 2007. "Protest Adjustments in the Valuation of Watershed Restoration Using Payment Card Data." *Agricultural and Resource Economics Review* 36(2): 321-335.
29. Maskey, V., C. Brown, **A.R. Collins**, and H.F. Nassar. 2007. "What is Historic Integrity Worth to the General Public? Evidence from a Proposed Relocation of a West Virginia Agricultural Mill." *Agricultural and Resource Economics Review* 36(1): 39-52.
30. Hong, S. and **A. Collins**. 2006. "Societal Responses to Familiar versus Unfamiliar Risk: Comparisons of Influenza and SARS in Korea." *Risk Analysis* 26(5), doi:10.1111/j.1539-6924.2006.00812.x.
31. **Collins, A.R.** and T. Basden. 2006. A Policy Evaluation of Transport Subsidies for Poultry Litter in West Virginia. *Review of Agricultural Economics* 28(1): 72-88.
32. **Collins, A.**, R. Rosenberger, and J. Fletcher. 2005. "The Economic Value of Stream Restoration." *Water Resources Research* 41, W02017, doi:10.1029/2004WR003353.
33. Rosenberger, R.S., **A.R. Collins**, and J.B. Svetlik. 2005. "Private Provision of a Public Good: Willingness to Pay for Privately Stocked Trout." *Society and Natural Resources* 18: 75-87.
34. Cline, S. and **A.R. Collins**. 2003. "Watershed Associations in West Virginia: Their Impact on Environmental Protection." *Journal of Environmental Management* 67(4): 373-383.
35. **Collins, A.R.**, D. Bainbridge, and J. Murphy. 2000. "Optimal Loading Rates and Economic Analyses for Anaerobic Digestion of Poultry Waste" *Journal of the Air and Waste Management Association* 50(June): 1037-1044.
36. Biggs, A.R. H.W. Hogmire, and **A. R. Collins**. 2000. "Assessment of an Alternative IPM Program for the Production of Apples for Processing." *Plant Disease* 84(10): 1140-1146.

37. Biggs, A.R., T.A. Baugher, **A.R. Collins**, H.W. Hogmire, J.B. Kotcon, D.M. Glenn, A.J. Sexstone, and R.E. Byers. 1997. "Growth of Apple Trees, Nitrate Mobility and Pest Populations following a Corn versus Fescue Crop Rotation." *American Journal of Alternative Agriculture* 12(4): 162-172.
38. Martin, J.H., **A.R. Collins**, and R.G. Diener. 1995. "A Sampling Protocol for Composting, Recycling, and Re-use of Municipal Solid Waste." *Journal of the Air & Waste Management Association* 45(November): 864-870.
39. Biggs, A.R., J.B. Kotcon, T.A. Baugher, **A.R. Collins**, D.M. Glenn, H.W. Hogmire, R.E. Byers, A.J. Sexstone, and G.W. Lightner. 1994. "Comparison of Corn and Fescue Rotations on Pathogenic Nematodes, Nematode Biocontrol Agents, and Soil Structure and Fertility on an Apple Replant Site." *Journal of Sustainable Agriculture* 4(4): 39-56.
40. Fritsch, D.A. and **A.R. Collins**. 1993. "The Economic Feasibility of Poultry Litter Composting Facilities in Eastern West Virginia." *Agricultural and Resource Economics Review* 22(2): 199-209.
41. Diener, R.G., J.H. Martin, **A.R. Collins**, and W.B. Bryan. 1993. "Composting of Source-Separated Municipal Solid Waste for Agricultural Utilization - A Conceptual Approach for Closing the Loop." *Applied Engineering in Agriculture* 9(5): 427-436.
42. **Collins, A.R.** and S. Steinback. 1993. "Rural Household Response to Water Contamination in West Virginia." *Water Resources Bulletin* 29(2): 199-209.
43. **Collins, A. R.** and F. W. Obermiller. 1992. "Interdependence between Public and Private Forage Markets." *Journal of Range Management* 45(2): 183-188.
44. **Collins, A. R.**, W. N. Musser, and R. Mason. 1991. "Prospect Theory and Risk Preferences of Oregon Grass Seed Producers." *American Journal of Agricultural Economics* 73(2): 429-435.
45. Vanvig, A. and **A. R. Collins**. 1986. "Influence of Seller Financing on Ranch Prices." *Journal of the American Society of Farm Managers and Rural Appraisers* 50: 48-51.
46. **Collins, A. R.**, J. P. Workman, and D. W. Uresk. 1984. "An Economic Analysis of Black-tailed Prairie Dog (*Cynomys ludovicianus*) Control." *Journal of Range Management* 37: 358-361.

### **Books, Book Chapters, Journal Publications, and Papers in Proceedings**

1. Wang, J., Y. Ma, and **A. Collins**. 2018. "Measuring the Benefits of Rural-to-Urban Water Transfer: A Case Study from Puyang River Basin, China. *Chinese Journal of Population Resources and Environment*.  
<https://www.tandfonline.com/doi/full/10.1080/10042857.2019.1613628>
2. **Collins, A.R.** 2015. Book Review of: A Twenty-First Century U.S. Water Policy. *The Review of Regional Studies*. 45(1): 105-107.
3. Mojica-Howell, M.N. and **A.R. Collins**. 2012. "What Do Riparian Landowners Know and Want? Survey Results from the Headwaters of the Potomac River." *Environment and Natural Resources Research*. 2(1): doi:10.5539/enrr.v2n1p10.
4. Maille, P., and **A. Collins**. 2009. "Farmers as Producers of Clean Water: A Field Experiment" in *Water, Agriculture and Sustainable Well-Being*, Eds. U. Pascual, A. Shah, J. Bandyopadhyay. Oxford University Press: New Delhi. pp. 93-114.
5. Maille, P., and **A. Collins**. 2009. *Performance-Based Payments for Conservation: Experience from a Water Quality Field Test with Farmers*. VDM Verlag Dr. Muller: Saarbrücken, Germany.
6. Maille, P., **A. Collins**, and **N. Gillies**. 2009. "Performance-based Payments for Water Quality: Experiences from a Field Experiment." *Journal of Soil and Water Conservation*. 64(3):85-87.
7. **A.R. Collins**, R. Rosenberger, and J. Fletcher. 2009. "Valuing the Restoration of Acidic Streams in the Appalachian Region," in *Environmental Economics for Watershed Restoration*, Eds. M.T. Heberling, A. Schrecongost, H.W. Thurston. CRC, Routledge: Boca Raton, FL. pp. 29-52.
8. Bendapudi, R., G. D'Souza, and **A.R. Collins**. 2002. "The Impact of Urban Influence on Land Use Decisions and Sustainability: The Case of the Conservation Reserve Program", *Conserving Farm and Forest in a Changing Rural Landscape: Current and Potential Contributions of Economics*, Conference summary proceedings of the Land Use Policy Workshop at Harrisburg, PA, published by the Northeast Regional Center for Rural Development.
9. Basden, T., C. Ritz, and **A.R. Collins**. 2002. "Incentive-Based Policies and Poultry Waste Management in West Virginia" Proceedings of the 2002 National Poultry Waste Management Symposium, ed. P.H. Patterson, J.P. Blake, and K.D. Roberson. Published by National Poultry Waste Management Symposium Committee, pp. 211-220.

10. Basden, T., C. Ritz, and **A.R. Collins**. 2000. "Incentive-Based Policies and Poultry Waste Management in West Virginia" *The West Virginia Public Affairs Reporter*. 17(3): 2-6. Institute for Public Affairs, West Virginia University, Morgantown, WV.
11. Hollenhurst, S., R. Fraser, and **A.R. Collins**. 1999. "A Different Shade of Green: West Virginians' Attitudes and Perceptions about the Environment" *The West Virginia Public Affairs Reporter*. 16(1): 2-8. Institute for Public Affairs, West Virginia University, Morgantown, WV.
12. Fraser, R., S. Hollenhurst, and **A.R. Collins**. 1999. "Shades of Green: Public Opinion and the Economics of Environmental Protection in West Virginia." In Bruce Keith and Ronald Althouse (Eds), *Inside West Virginia Public Policy Perspectives for the 21st Century*. Morgantown, WV: West Virginia University Press, pp.107-133.
13. **Collins, A.R.**, G. Constantz, S. Hunter, and S. Selin. 1998. "Collaborative Watershed Planning: The West Virginia Experience." *Conservation Voices*. 1(2): 31-35.
14. Selin, S., **A. Collins**, and S. Hunter. 1997. "Rural Watershed Partnerships: Lessons from West Virginia" Northeastern Recreation Research Symposium, Landing, NY, April 6-8.
15. Hogmire, H.W., D.L. Peterson, K.C. Elliott, and **A.R. Collins**. 1995. Tunnel Sprayers for Dwarf Apple Trees. Proceedings of the National Conference on Pesticide Application Technology, Guelph, Ontario, August 10-11, 1995.
16. **Collins A.R.** and S. Hunter. 1994. "Recycling and Solid Waste Management in West Virginia." *The West Virginia Public Affairs Reporter*. Institute for Public Affairs, West Virginia University, Morgantown, WV. Vol. 11, No. 2.
17. Baugher, T.A., J.B. Kotcon, A.R. Biggs, D.M. Glenn, **A.R. Collins**, A.J. Sexstone, H.W. Hogmire, C.D. Monks, M.L. McFarland, R.E. Byers, and G.W. Lightner. 1994. "The West Virginia University Ecosystem Project for Processing Apples: The First Year of Establishment." *Pennsylvania Fruit News*. 74:23-34.
18. Hogmire, H.W., K.C. Elliott, **A.R. Collins**, and T. Winfield. 1994. Pest Control on Dwarf Apples with WVU Containment Spray Systems. Proceedings of the 70th Cumberland-Shenandoah Fruit Worker's Conference in Winchester, VA, November 17-18, 1994.
19. Hogmire, H.W., K.C. Elliott, and **A.R. Collins**. 1994. A Containment Spray System for Dwarf Apples. Proceedings of the 123rd Annual Meeting of the Michigan State Horticultural Society in Grand Rapids, MI, December 7-9, 1993.



20. Hogmire, H.W., K.C. Elliott, and **A.R. Collins**. 1993. Containment Spray Systems for Apples. Proceedings of the Fourth National Research Conference on Pesticides, November 1-3, 1993. pp. 388-401.
21. Baugher, T.A., J.B. Kotcon, A.R. Biggs, **A.R. Collins**, A.J. Sexstone, H.W. Hogmire, C.D. Monks, M.L. McFarland, R.E. Byers, and G.W. Lightner. 1993. "The Rotation Phase of the West Virginia University Ecosystem Project for Processing Apples." *Pennsylvania Fruit News*. 73:92-100.
22. **Collins, A.R.**, D.A. Fritsch, and R. Diener. 1993. "Expanding Uses for Poultry Litter." *Biocycle*. 34(1): 64-67.
23. **Collins, A.R.**, T.A. Baugher, and K.C. Elliott. 1992. The Impact of Mechanical Thinning of Peaches on Orchard Costs and Returns. Mid-Atlantic Regional Fruit School Proceedings, Blackwood, NJ, p. 20-28.
24. **Collins, A.R.** and S. Hunter. 1992. "Recycling in West Virginia." *The West Virginia Public Affairs Reporter*. Institute for Public Affairs, West Virginia University, Morgantown, WV. Vol. 9, No. 1.
25. **Collins, A. R.** 1991. "What can Farmers Afford to Pay for MSW Compost." *Biocycle*. 32(10): 66-69.
26. **Collins, A. R.** and G. Constantino. 1990. "Fair Grazing Fees on Public Lands." *Rangelands*. 12: 278-281.
27. **Collins, A. R.** and E. Bradley. 1984. "Historical and Political Perspectives on Selling the Public Domain." *Rangelands*. 6: 158-160.

## Abstracts

1. Maille, P. and **A. Collins**. 2008. "Efficiency and Watershed Payments: How will Farmers Respond?" *Agricultural and Resource Economics Review* 37(2): 307.
2. **Collins, A.R.** and D. Parker. 2007. "Poultry Litter Management in Two Mid-Atlantic States" *Agricultural and Resource Economics Review* 36(2): 352.
3. **Collins, A.R.**, M. Benson, T. Borisova, and G. D'Souza. 2006. "The Impact of Watershed Location and Total Maximum Daily Load (TMDL) on Willingness to Pay for Water Quality Improvements." *Agricultural and Resource Economics Review* 35(2): 392.

4. **Collins, A.R.** and S. Catma. 2005. "Enrollment and Acceptance Decisions in the Conservation Reserve Program under Urbanization Influences." *Agricultural and Resource Economics Review* 34(2): 284.
5. **Collins, A.R.**, R. Rosenberger, and J. Fletcher. 2003. "Total Economic Valuation of Stream Restoration Using Internet and Mail Surveys." *Agricultural and Resource Economics Review* 32(2): 296.
6. **Collins, A.R.** and C. Colistra. 2002. "User Access Fees: Revenue Generation Potential and Impact on Low-Income Recreational Users at a State Forest in West Virginia." *Agricultural and Resource Economics Review* 31(2): 264.
7. Corwin, K. and **A.R. Collins**. 1999. "Infrastructure and Economic Development: What is their Relationship in West Virginia?" *Agricultural and Resource Economics Review* 8(2): 230.
8. Cline, S.A. and **A.R. Collins**. 1999. "An Evaluation of Organizational Effectiveness: A Study of West Virginia Watershed Associations." *Agricultural and Resource Economics Review* 28(2): 232.
9. **Collins, A.R.**, G. Constantz, S. Hunter, and S. Selin. 1997. "Collaborative Watershed Planning: The West Virginia Experience." *Journal of Soil and Water Conservation* 52(4): 288.
10. Clemons, R. and **Collins, A.R.** 1995. "Contingent Valuation of Protection Groundwater Quality by a Wellhead Protection Program." *American Journal of Agricultural Economics* 77(5): 1360.
11. **Collins, A.R.**, S. Hunter, and K. Leyden. 1994. "Citizen Response to Siting of Noxious Facilities: An Application of Prospect Theory." *Agricultural and Resource Economics Review* 23(2): 247.
12. Biggs, A.R., J.B. Kotcon, T.A. Baugher, **A.R. Collins**, D.M. Glenn, H.W. Hogmire, R.E. Byers, A.J. Sexstone, and G.W. Lightner. 1994. "The West Virginia University Ecosystem Project for Processing Apples: Comparisons among Liberty, Golden Delicious, York and Fuji in the first year of growth." *Fruit Varieties Journal* 48: 37.
13. **Collins, A.R.** and S. Steinback. 1993. "Rural Water Contamination in West Virginia: Household Response and Monetary Benefit from Contamination Reduction." *Agricultural and Resource Economics Review* 22(2): 228.
14. **Collins, A.R.** 1991. "Implications and Existence of Federal/Private Forage Market Interdependence." *American Journal of Agricultural Economics* 73(5): 1554.

15. **Collins, A.R.**, Organizer and Moderator. 1990. Symposium entitled "Regional Considerations in Municipal Solid Waste Management in the Northeast United States." Abstract. *Northeast Journal of Agricultural and Resource Economics* 19(2): 145.

### **Experiment Station Publications**

1. Corwin, K. and **A.R. Collins**. 1999. "Infrastructure and Economic Development: What is the Relationship in West Virginia?" WVU Agriculture and Forestry Experiment Station Bulletin 719, Morgantown, WV.
2. Simmons, J., R.G. Diener, L. Lawrence, W.T. Jones, K. Elliott, B. Bearce, and **A.R. Collins**. 1998. "The Development of a Manure Composting System for West Virginia Dairy Producers." WVU Agriculture and Forestry Experiment Station Bulletin 717, Morgantown, WV.
3. Jones, K., G. D'Souza, **A.R. Collins**, T. Phipps, and D. Bhumbra. 1998. "Trading Poultry Litter at the Watershed Level in West Virginia: A Goal Focusing Applications." WVU College of Agriculture, Forestry, and Consumer Sciences, Resource Management Publication No. 98-01, Morgantown, WV.
4. Diener, R.G., **A.R. Collins**, G. Bissonnette, and B. Bearce. 1993. "Composting of Solid Waste in West Virginia." 1993 Annual Report of the West Virginia Agricultural and Forestry Experiment Station, Morgantown, WV, p. 6-11.
5. Diener, R.G., **A.R. Collins**, J.H. Martin. 1993. "West Virginia Solid Waste Management: A 1993 Status Report and Blueprint for the Future." WVU Agriculture and Forestry Experiment Station Miscellaneous Publication 23, Morgantown, WV.
6. **Collins, A.R.**, T.A. Baugher, and K.C. Elliott. 1993. The Impact of Mechanical Thinning of Peaches on Orchard Costs and Returns. 1993 Annual Report, Research and Extension Programs, West Virginia University Experiment Farm, Kearneysville, WV. p. 50-51.
7. H. Hogmire, K. Elliott, **A.R. Collins**, and T. Winfield. 1993. Evaluation of Spray Delivery from Containment and Air blast Sprayers on Three-Wire Trellis Apples. 1993 Annual Report, Research and Extension Programs, West Virginia University Experiment Farm, Kearneysville, WV. p. 15-19.

8. **Collins, A.R.**, D.A. Fritsch, G. D'Souza, and R. Diener. 1992. "The Economics of Composting Poultry Litter." West Virginia University Extension Service.
9. Baugher, T., **A.R. Collins**, and K. Elliott. 1992. The Impact of Mechanical Thinning of Peaches on Orchard Costs and Returns. 1992 Annual Report, Research and Extension Programs, West Virginia University Experiment Farm, Kearneysville, WV. p. 31-32.
10. Hogmire, H., K. Elliott, **A.R. Collins**, and T. Winfield. 1992. Spray Deposit on Dwarf Apple from a Containment Spray System and a Conventional Air blast Sprayer. 1992 Annual Report, Research and Extension Programs, West Virginia University Experiment Farm, Kearneysville, WV. p. 57-59.
11. **Collins, A.R.** and S. Steinback. 1990. Rural Household Response to Domestic Water Contamination. 1990 Annual Report of the West Virginia Agricultural and Forestry Experiment Station, Morgantown, WV, p. 2-5.
12. Vanvig, A. and **A. R. Collins**. 1987. "Credit for Wyoming Agricultural and Commercial Sectors: The Scope and Size of Public Lending Programs." Wyo. Ag. Exp. Sta. Bulletin 880, University of Wyoming, Laramie, WY.
13. Soule, C. B., J. S. St. Clair, J. E. Vercimak, A. Vanvig and **A. R. Collins**. 1984. "Cost Comparison of Private vs. For-Hire Trucking of Cattle." Wyo. Ag. Exp. Sta. Research Journal 198, University of Wyoming, Laramie, WY.
14. Vanvig, A. and **A. R. Collins**. 1984. "Wyoming Farm and Ranch Land Market: 1982-1984." Wyo. Ag. Exp. Sta. Research Journal 196, University of Wyoming, Laramie, WY.
15. **Collins, A. R.** 1983. "A Ranch Land Price Model in Wyoming." Wyo. Ag. Exp. Sta. Science Monograph 44, University of Wyoming, Laramie, WY.
16. Vanvig, A. and **A. R. Collins**. 1982. "Wyoming Farm and Ranch Land Market." Wyo. Ag. Exp. Sta. Research Journal 176, University of Wyoming, Laramie, WY.

### **Final Reports and Other Publications**

1. Boettner, F., E. Fedorko, E Hansen, S. Goetz, Y. Han, C. Gyoval, E. Carlson, A. Sentilles, **A. Collins**, and B. Zimmerman. 2019, Strengthening Economic Resilience in Appalachia Technical Report. Appalachian Regional Commission, Washington, D.C. [https://www.arc.gov/research/researchreportdetails.asp?REPORT\\_ID=150](https://www.arc.gov/research/researchreportdetails.asp?REPORT_ID=150)
2. **Collins, A.R.** and G. Bowman. 2018. Assessment of the Distribution of NRCS Assistance Programs in West Virginia and Strategic Enhancement of Future Outreach

Efforts, Phase II, Final Report. Submitted to the Natural Resource Conservation Service.

3. Boettner, F., K. Hatcher, E. Carlson, M. Betcher, **A. Collins**, K. Nkansah, R. Stull, and R. Gajout. 2014. Tucker County, West Virginia: Small Business and Housing Needs Assessment. Final report prepared for the Woodland Development Group.
4. Boettner, F., R. McIlmoil, **A. Collins**, and E. Hansen. 2013. Proposed Birthplace of Rivers National Monument: The Economic Impacts of Designation. Final report prepared for West Virginia Wilderness Coalition, Lewisburg, WV.
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9. Hansen, E., **A. Collins**, M. Hendryx, F. Boettner and A. Hereford. 2008. The Long-Term Economic Benefits of Wind versus Mountaintop Removal Coal on Coal River Mountain, West Virginia. Final report submitted to Coal Mountain Watch by Downstream Strategies, Morgantown, WV.
10. Hansen, E., **A. Collins**, J. Svetlik, S. McClurg, A. Schrecongost, R. Stenger, M. Schilz, and F. Boettner. 2008. An Economic Benefits Analysis for Abandoned Mine Drainage Remediation in the West Branch Susquehanna River Watershed, PA. Final report submitted to Trout Unlimited by Downstream Strategies, Morgantown, WV.
11. **Collins, A.**, E. Hansen, S. Hunter, and M. Pavlick. 2005. "Mid-Atlantic Highlands Survey Results." Submitted to the Canaan Valley Institute, Davis, WV.

12. **Collins, A.R.**, R. Rosenberger, and J. Fletcher. 2003. "Economic Valuation of Stream Restoration." Submitted to USDA, CSREES for Grant Agreement # 2001-35106-11070, Washington D.C.
13. **Collins, A.R.** and J. Kotcon. 2000. "An Investigation of the Impact of Biocomplexity on Productivity and Resistance to Pest Invasion in Diversified Agroecosystems- a Survey of Disease Management and Farming Practices among Organic Tomato Growers." Final Report of a Competitive Hatch Project Submitted to the West Virginia University Agricultural Experiment Station, Morgantown, WV.
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17. **Collins, A.R.** and S. Hunter. 1995. "Classroom Simulation of Complex Decision Making for Policy Analysis: A Case Study Featuring Closure of a Municipal Solid Waste Landfill." Final Report submitted to the Senate Research Grant Program, West Virginia University, Morgantown, WV.
18. **Collins, A.R.** and R.G. Diener. 1994. "Operator Training for Rural Composting Facilities." Final report of a pilot training program submitted to the National Environmental Training Center for Small Communities, Morgantown, WV.
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21. **Collins, A.R.** and S. Hunter. 1992. "A Survey of University Recycling Programs." Final Report for the WVU Cooperative Extension Service, Morgantown, WV.

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23. Biggs, A.R., H.W. Hogmire, and **A.R. Collins**. "Assessment of an Alternative IPM Program for the Production of Apples for Strategies for Processing Part II." *PA Fruit News* 80(11): 18-21.
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28. Biggs, A.R., J.B. Kotcon, T.A. Baugher, **A.R. Collins**, D.M. Glenn, H.W. Hogmire, R.E. Byers, A.J. Sexstone, and G.W. Lightner. 1992. "The West Virginia University Ecosystem Project for Processing Apples: The Rotation Phase." *Northeast Sustainable Apple Production Newsletter* 3(2): 5-12.
29. Kotcon, J.B., T.A. Baugher, A.J. Sexstone, A.R. Biggs, H.W. Hogmire, and **A.R. Collins**. 1992. "Alternative Processing Apple Production Systems and Impacts on Ground Water Quality." *The Mountaineer Grower* 512: 15-20.

## **Grants and Contracts**

### Principal and Co-Principal Investigator

"Appraisal of Market Values for Real Properties plus an Evaluation of the Economic Impacts of Mineral Rights and Leasing on Agricultural Land Values in West Virginia"

Co-investigators: Doolarie Singh-Knights and Marlon Knights

Agency: USDA, Natural Resource Conservation Service

Duration: 4/1/16 to 12/31/16

Amount: **\$53,034**

“Assessment of the Distribution of NRCS Assistance Programs in West Virginia and Strategic Enhancement of Future Outreach Efforts”

Co-investigator: Don Lacombe and Jackie Strager

Agency: USDA, Natural Resource Conservation Service

Duration: 2/1/16 to 12/31/17 Amount: **\$50,124**

“Farmers as Producers of Clean Water: Providing Economic Incentives for Reducing Agricultural Non-point Pollution”

Co-investigators: Neil Gillies and Peter Maille

Agency: USDA, National Research Initiative

Duration: 7/1/06 to 1/31/10 Amount: **\$250,431**

“Tracking the Use and Transport of Poultry Litter where Excess Nutrients Exist”

Co-investigators: Doug Parker (University of Maryland) and Jim Pease (Virginia Tech)

Agency: Mid-Atlantic Water Quality Project Min-Grant

Duration: 11/1/04 to 9/15/05 Amount: **\$38,515**

“Economic Valuation of Stream Restoration”

Co-investigators: Randy Rosenberger and Jerry Fletcher

Agency: USDA, National Research Initiative

Duration: 10/1/01 to 8/31/04 Amount: **\$74,938**

“The Impacts of Transportation Cost Subsidies on Land Application of Poultry Litter in West Virginia”

Co-investigator: Tom Basden

Agency: Competitive Hatch funding from the WVU Ag. Exp. Sta.

Duration: 5/15/01 to 9/30/01 Amount: **\$8,102**

“An Investigation of the Impact of Biocomplexity on Productivity and Resistance to Pest Invasion in Diversified Agroecosystems- a Survey of Disease Management and Farming Practices among Organic Tomato Growers”

Co-investigator: Jim Kotcon

Agency: Competitive Hatch funding from the WVU Ag. Exp. Sta.

Duration: 5/15/00 to 10/15/00 Amount: **\$11,123**

“Continuation of WVU Lincoln County Collaborative to Develop Youth Camp on the Mud River Watershed”

Co-investigators: Jim Kotcon and Danny Bainbridge

Agency: WVU/ W.K. Kellogg Community Partnership Program

Duration: 10/99 to 9/00 Amount: **\$4,000**



“Development of a College-wide Internship Program plus Student Internships on Poultry Litter Transport Evaluation and Recycling”  
Agency: WVU/ W.K. Kellogg Community Partnership Program  
Duration: 12/98 to 9/99 Amount: **\$12,912**

“WVU Lincoln County Collaborative to Develop Youth Camp on the Mud River Watershed”  
Co-investigators: Jim Kotcon, Danny Bainbridge, and Ric McDowell  
Agency: WVU/ W.K. Kellogg Community Partnership Program  
Duration: 12/98 to 9/99 Amount: **\$5,622**

”Achieving Watershed Goals: Effectiveness of Adversarial Versus Collaborative Organizations”  
Co-investigators: Susan Hunter and Steve Selin  
Agency: Tennessee Valley Authority Rural Studies  
Duration: 1/97 to 12/97 Amount: **\$17,500**

“Assessment of Alternative and Conventional IPM Strategies for the Production of Apples for Processing”  
Co-investigators: Alan Biggs and Henry Hogmire  
Agency: USDA, CSRS, Integrated Pest Management Special Grant Program  
Duration: 9/95-12/98 Amount: **\$31,003**

“The Impact of Infrastructure on Economic Development”  
Agency: West Virginia University Office for Research and Economic Development  
Duration: 7/95 - 7/96 Amount: **\$4,200**

"Simulation of Public Response to Siting of a Municipal Solid Waste Landfill"  
Co-investigator: Susan Hunter  
Agency: West Virginia University Senate Research Grant  
Duration: 7/94-3/95 Amount: **\$5,500**

"Recycling and Solid Waste Management in West Virginia"  
Co-investigator: Susan Hunter  
Agency: West Virginia University Institute of Public Affairs  
Duration: 5/93-10/93 Amount: **\$3,000**

"A Survey of University Recycling Programs"  
Co-investigator: Susan Hunter  
Agency: West Virginia University Cooperative Extension Service  
Duration: 7/92-12/92 Amount: **\$2,500**

"A Feasibility Study of Establishing a Poultry Manure Composting Facility in Eastern West Virginia"

Co-investigator: Gerard D'Souza

Agency: West Virginia University Cooperative Extension Service

Duration: 3/91-12/91 Amount: **\$13,000**

"Rural Household Response to Domestic Water Contamination"

Co-investigators: Kendall Elliott and Virgil Norton

Agency: West Virginia University Water Research Institute and U.S. Geological Survey

Duration: 5/90-4/92 Amount: **\$18,200**

### Co-Investigator

"Appalachian Assessment of Natural Assets: Water"

Principal Investigators: Jinyang Deng and Fritz Boettner

Agency: Appalachian Regional Commission

Duration: 9/22/09 to 11/30/10 Amount: **\$248,150**

"Kanawha River Basin Nutrient Trading Feasibility Assessment"

Principal Investigator: Rick Herd, WVU Water Research Institute

Agency: U.S. Environmental Protection Agency

Duration: 6/1/09 to 5/31/12 Amount: **\$190,952**

"Gasification of Poultry Litter to Produce Bio-Energy for Heat"

Principal Investigator: Michael McGolden, President, Coaltec Energy

Agency: USDA, NRCS

Duration: 7/1/06 to 6/30/08 Amount: **\$550,000**

"Effective Strategies for Reducing Nutrient Loads from the Opequon Creek Watershed of Virginia and West Virginia"

Principal Investigator: Conrad Heatwole, Virginia Polytechnic Institute and State University

Agency: Chesapeake Bay Targeted Watersheds Grant

Duration: 8/1/06 to 5/31/09 Amount: **\$1.35 million**

"Mid-Atlantic Regional Water Quality Coordination Project"

Principal Investigator: Tom Basden (Extension Water Quality)

Agency: USDA

Duration: 9/15/04 to 9/14/08 Amount: **\$58,023**

"Mid-Atlantic Regional Water Quality Coordination Project"

Principal Investigator: Tom Basden (Extension Water Quality)

Agency: USDA

Duration: 10/1/02 to 9/30/05

Amount: **\$43,992**

“Mid-Atlantic Region Pesticide Information Network - WV 2001-2004”

Principal Investigator: John Baniecki (Plant Science)

Agency: USDA

Duration: 1/1/01 to 9/14/02

Amount: **\$35,031**

“Anaerobic Digestion System Converting Animal Carcasses and Poultry Wastes into Methane and Electricity”

Principal Investigator: Edmond Collins (Extension)

Agency: National Research Center for Coal and Energy

Duration: 1/96 - 7/97

Amount: **\$26,712**

"Operator Training for Rural Composting Facilities"

Principal Investigator: Robert Diener (Ag. Engineer)

Agency: National Environmental Training Center for Small Communities

Duration: 1/94-10/94

Amount: **\$10,636**

"Ecosystem-Based Orchard Management for Processing Apples"

Principal Investigator: Tara Baugher (Entomology)

Agency: National Research and Education Program on Sustainable Agriculture

Duration: 2/93-2/94

Amount: **\$16,200**

"An Analysis of Factors Influencing the Development and Implementation of Recycling Policies" Principal investigator: Susan Hunter (Political Science)

Agency: West Virginia University Senate Research Grant

Duration: 7/91-12/91

Amount: **\$6,400**

"Development of Containment Spray Systems for Pesticide Application on Apple Orchards" Principal investigator: Kendall Elliott (Ag. Engineer)

Agency: Northeast Regional Pesticide Impact Assessment Grant

Duration: 9/90-8/92

Amount: **\$48,700**

"Novel Rotation Crops as Alternatives to Fumigant Nematicide Treatment in Deciduous Tree Fruit Production"

Principal investigators: J.M. Halbrendt (Plant Science) and J. Kotcon (Nematologist)

Agency: USDA, Low Input Farming Systems Research and Education Programs in the Northeast Regions

Duration: 6/90-6/92

Amount: **\$16,600**

## **Consulting**

- For Downstream Strategies:

- Project entitled: “Economic Impact of Solar Energy Development in Southwest Virginia” for the Solar Workgroup of Southwest Virginia, May 2017 to July 2017
- Project entitled: “Strengthening Economic Resilience in Appalachian Communities” for the Appalachian Region Commission, November 2016 to November 2017
- Project entitled: “Tucker County Housing and Small Business Needs Assessment” for the Woodlands Development Group, March 2014 to November 2014.
- Project entitled: “The Economic Benefits of the Proposed Birthplace of Rivers National Monument”, for the West Virginia Wilderness Coalition, October 2012 to January 2013
- Project entitled: “Acid Mine Drainage Remediation Study”, for Board of County Commissioners, Garrett County, MD, January 2010 to November 2010
- Project entitled: “Financial and Local Economic Benefits of Wind Power Generation versus Mountaintop Removal on Coal River Mountain, West Virginia”, for Coal River Mountain Watch, August 2008 to December 2008.
- Project entitled, “An Economic Benefits Analysis for Acid Mine Drainage Remediation in the West Branch Susquehanna River Watershed, Pennsylvania”, for Trout Unlimited, October 2006 to December 2007.
- Project entitled, “Implementing Canaan Valley Institute’s Mid-Atlantic Highlands Survey” for the Canaan Valley Institute, Davis, WV, January 2005 to June 2005.
- Project entitled, “Assistance in Designing a Survey for the Mid-Atlantic Highlands Region” for the Canaan Valley Institute, Davis, WV, May 2004 to August 2004.
- Evaluated the economic feasibility of a horse manure composting operation in Bruceton Mill, WV, April to May 1999.
- West Virginia Office of the Attorney General as an expert on landfill tipping fees for a lawsuit filed against the state, October 1997 to March 1998.

### **Presentations and Posters at Professional Meetings**

1. “GIS-based Multi-Criteria Decision Analysis of Utility-Scale Wind Farm Site Suitability in West Virginia” Bolarinwa Ajanaku (Presenter), Michael P. Strager, and Alan R. Collins, virtual presentation at the Southern Economics Association Annual Meeting for 2020, November 23.
2. “Economic Growth and Deforestation in Developing Countries: Is the Environmental Kuznets Curve Hypothesis Still Applicable? Evidence from a Panel of Selected African Countries” Bolarinwa Ajanaku (Presenter) and Alan R. Collins, virtual presentation at the Southern Economics Association Annual Meeting for 2020, November 21.
3. “The Impact of Water Supply Unreliability on Residential Property Values in Marion County, West Virginia”, Fahad Alzahrani and Alan R. Collins (Presenter), SWELL (Seminar in Water Economics onLLine), October 13, 2020.
4. “Economic Growth and Deforestation in Developing Countries: Is the Environmental Kuznets Curve Hypothesis Still Applicable? Evidence from a Panel of Selected African Countries” Bolarinwa Ajanaku (Presenter) and Alan R. Collins, virtual presentation at

- the Agricultural and Applied Economics Association Annual Meeting for 2020, August 11.
5. "Payments by Ambient Outcomes: How does Targeting Arise?" Alan R. Collins, Neil Gillies, and Peter Maille. Invited presentation at Targeting BMP Workshop sponsored by the Chesapeake Bay Program, Scientific and Technical Advisory Committee, Fairfax, VA, November 12, 2019.
  6. "The Impact of Water Supply Reliability on Residential Property Values in Marion County, West Virginia." Fahad Alzahrani (Presenter) and Alan R. Collins, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Portsmouth, NH, June 11, 2019.
  7. "The Impacts of Energy Development on Agricultural land Values in North-Central West Virginia", Adama Warr and Alan R. Collins, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Philadelphia, PA, June 11, 2018.
  8. "Expanding the Concept of Property Rights in Water Quality: A case study from Xin'an River Watershed in China" Juanli Wang (Presenter), Alan R. Collins, and Yongxi Ma, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Philadelphia, PA, June 11, 2018.
  9. "Analyzing the Spatial Distribution of NRCS Conservation Programs in West Virginia", Brianne Zimmerman, Alan R. Collins, and Don J. Lacombe, selected lighting presentation at the Agricultural and Applied Economics Association Annual Meeting, Chicago, IL, July 31, 2017.
  10. "Naloxone Access Law and Opioid Overdose in the U.S." Erfanian Elham (Presenter), Alan Collins, and Dan Grossman, presented at the Southern Regional Science Association meeting, Memphis, TN, March 31, 2017.
  11. "Water Utility Pricing and Minimum Charges: What Explains the Differences in West Virginia?" Alan R. Collins and Elham Erfanian, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Bar Harbor, ME, June 20, 2016.
  12. "The Impact of Location and Proximity on Consumers' Willingness to Pay for Renewable and Alternative Electricity", Alan R. Collins and Kofi Nkansah, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Newport, RI, June 30, 2015.
  13. "Decomposition Analysis of Domestic and Import Related CO<sub>2</sub> Emission Changes for the U.S. Economy", Chairat Choesawan (Presenter) and Alan R. Collins, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Newport, RI, June 30, 2015.
  14. "Spatial Logistic Methods for Spatially Explicit Neighborhood Externalities", Nazia Arbab (Presenter) and Alan Collins, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Morgantown, WV, June 2, 2014.
  15. "The Impact of Location and Proximity on Consumers' Willingness to Pay for Renewable and Alternative Electricity: The Case of West Virginia" Kofi Nkansah and Alan R. Collins, selected poster presented at the Agricultural and Applied Economics Association Annual Meeting, Minneapolis, MN, July 28, 2014.
  16. "The Value of Water in Extraction of Natural Gas from the Marcellus Shale" Renata

- Rimsaite (Presenter), Charlie Abdalla, and Alan R. Collins, selected presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 9-13, 2013.
17. "Land Use Change and Spatial Externalities in Berkeley County, WV: A Spatially Explicit Agent-Based Model" Nazia Arbab (Presenter) and Alan R. Collins, poster presented at the annual conference for Computational Social Science Society of the Americas, Santa Fe, NM, August 22, 2013.
  18. "Reducing Phosphorus Impairments with Nutrient Trading", Arun KC and Alan R. Collins, selected paper presented at the American Agricultural Economics Association Annual Meeting, Washington, D.C., August 6, 2013.
  19. "Divided Rights, Expanded Conflict: The Impact of Split Estates in Natural Gas Production", Kofi Nkansah and Alan R. Collins, selected paper presented at the American Agricultural Economics Association Annual Meeting, Washington, D.C., August 5, 2013.
  20. "Agent's Heterogeneity and its Role in Changing Land Use Patterns: An Agent Based Model Framework for Potomac River Basin" Nazia Arbab and Alan R. Collins, poster presented at the Agricultural and Applied Economics Association Annual Meeting, Seattle, WA, August 13, 2012.
  21. "Wind versus Coal: A Comparison of Local Economic Impacts from Alternative Energy Resource Developments in Appalachia." Alan R. Collins, Evan Hansen, and Michael Hendryx, presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, Lowell, MA, June 12, 2012.
  22. "Wetland Treatment of Nitrates: Design and Cost Efficiency" Alan R. Collins and Neil Gillies, presented at the Land and Sea Grant National Water Conference, Portland, OR, May 23, 2012.
  23. "Water's Journey Through the Shale Gas Drilling and Production Processes in the Mid-Atlantic Region" C. Abdalla, J. Drohan, B. Rahm, J. Jacquet, J. Becker, A. Collins, A. Klaiber, G. Poe, and D. Grantham., poster presented at the 2012 Land Grant and Sea Grant National Water Conference held in Portland, OR May 20-22.
  24. "Decision Making and Land Use Change in Potomac River Basin: A Case Study of Opequon Creek, West Virginia" Nazia Arbab and Alan R. Collins, poster presented at the 58<sup>th</sup> Annual North American Meetings of the Regional Science Association, Miami, FL, November 10, 2011.
  25. "Estimation of a Surface Water Quality Value Index for the Appalachian Region", Arun KC (Presenter) and Alan R. Collins, selected paper presented at the American Agricultural Economics Association Annual Meeting, Pittsburgh, PA, July 26, 2011.
  26. "Engaging Farmers on a Watershed Basis to Solve Agricultural Pollution", Alan R. Collins, Neil Gillies, and Peter Maille, poster presented at the Land and Sea Grant National Water Conference, Washington, D.C., February 1, 2011.
  27. "Engaging Farmers on a Watershed Basis to Solve Agricultural Pollution", Alan R. Collins, Neil Gillies, and Peter Maille, selected presentation at the 2010 West Virginia Water Conference, Morgantown, WV October 6, 2010.

28. “Reflections on Regional Cropland Nutrient Budgets”, Jim Pease (Presenter), Doug Parker, Alan Collins, Dave Hansen, Doug Beegle, presented at the Land and Sea Grant National Water Conference, Hilton Head, SC, February 23, 2010.
29. “Solving Agricultural Nitrate Pollution by Conversion of Non-Point Into Point Sources”, Alan Collins and Neil Gillies, presented at the Land and Sea Grant National Water Conference, Hilton Head, SC, February 24, 2010.
30. “Economic Assessment of Land Retirement in a Transition Economy: A Case Study of Ukraine”, Oleg Kucher (Presenter), Alan Collins, and Jerry Fletcher, selected paper presented at the Annual Meeting of Southern Agricultural Economics Association, Orlando, FL, February 7, 2010.
31. “Opportunities for Wind Energy in the Coal Fields of Southern West Virginia”, Alan Collins, invited paper presented at the West Virginia Wind Working Group, Canaan Valley, WV, October 20, 2009.
32. “What Do Riparian Owners Really Want? Survey Results from Virginia and West Virginia”, Alan Collins and Maribel Mojica, presented at the USDA-CSREES National Water Conference, St. Louis, MO, February 10, 2009.
33. “Efficiency and Watershed Payments: How will Farmers Respond?”, Peter Maille (Presenter) and Alan Collins, selected paper presented at the Northeast Agricultural and Resource Economics Association, Quebec City, Quebec, Canada, June 20, 2008.
34. “Farmers as Producers of Clean Water: Getting Incentive Payments Right and Encouraging Farmer Participation”, Alan Collins and Peter Maille, selected paper presented at the American Agricultural Economics Association Annual Meeting, Orlando, FL, July 28, 2008.
35. “Farmers as Producers of Clean Water: Getting Incentive Payments Right”, Alan Collins and Peter Maille, presented at the USDA-CSREES National Water Conference, Sparks, NV, February 5, 2008.
36. “Controlling Pollution with Opportunities, not Regulations”, Peter Maille and Alan Collins, selected poster at the USDA-CSREES National Water Conference, Sparks, NV, February 3-7, 2008.
37. “Farmers as Producers of Clean Water: Getting Incentive Payments Right”, Peter Maille (Presenter) and Alan Collins, presented at the Virginia / West Virginia Water Research Symposium, Blacksburg, VA, November 29, 2007.
38. “Inducing Farmer Participation in a Watershed Level Program to Improve Water Quality”, Alan Collins, Peter Maille, and Neil Gillies, presented at the Virginia / West Virginia Water Research Symposium, Blacksburg, VA, November 29, 2007.
39. “An Economic Benefits Analysis for Acid Mine Drainage Remediation in the West Branch Susquehanna River Watershed, Pennsylvania”, Evan Hansen (Presenter), Sarah McClurg, Julie Svetlik, and Alan Collins, presented at the Virginia / West Virginia Water Research Symposium, Blacksburg, VA, November 29, 2007.
40. “Poultry Litter Management in Two Mid-Atlantic States”, Alan R. Collins and Doug Parker, selected paper presented at the Northeast Agricultural Economics Association, Rehoboth Beach, DE, June 11, 2007.
41. “A Different Shade of Green: Evidence and Explanations of West Virginian

- Environmental Attitudes and Perceptions”, Alan Collins, Susan Hunter, Steve Hollenhorst, and Rory Fraser, presented at “Transforming Appalachian Scholarship: A Conference Honoring Ronald Lewis”, Morgantown, WV, April 13, 2007.
42. “Farmers as Producers of Clean Water: Providing Economic Incentives for Reducing Agricultural Non-Point Source Pollution”, Alan R. Collins and Peter Maille, paper presented at USDA-CSREES National Water Conference, Savannah, GA, January 30, 2007.
  43. “Converting Conservation from a Threat into an Opportunity: A Demonstration of a Performance-Based Payment Approach”, Peter Maille (Presenter) and Alan R. Collins, paper presented at the Ninth Biennial on “Ecological Economics and Human Well-Being” International Society for Ecological Economics New Delhi, India, December 15-18, 2006.
  44. “Differences among Watershed Sub-Populations in Willingness to Pay for Water Quality Improvements: The Impact of TMDL Development”, Alan R. Collins, Matt Benson, Tatiana Borisova, and Gerard D’Souza, selected paper presented at the American Agricultural Economics Association Annual Meeting, Long Beach, CA, July 26, 2006.
  45. “The Impact of Watershed Location and TMDL Development on Willingness to Pay for Water Quality Improvements”, Alan R. Collins, Matt Benson (Presenter), Tatiana Borisova, and Gerard D’Souza, selected paper prepared for presentation at the Northeast Agricultural Economics Association 2006 Annual Meeting, Mystic, CT June 11-14, 2006.
  46. “Evaluating Relocation of a Historic Mill”, Vishakha Maskey (Presenting Author), Cheryl Brown, Alan R. Collins, and Hala F. Nassar, selected paper prepared for presentation at the Northeast Agricultural Economics Association 2006 Post Conference Workshop on Rural Creative Economy, June 14, 2006.
  47. “Benefits From Improved Water Quality: An Economic Valuation Study On The Opequon Watershed In West Virginia And Virginia”, Tanya Borisova, Matt Benson, Alan R. Collins, Gerard D’Souza, and Brian Benham, paper presented at USDA-CSREES National Water Conference, February 5-9, 2006, San Antonio, TX.
  48. “Poultry Litter Use and Transport Survey in Maryland and West Virginia”, Alan Collins, Yoganand Budumuru, Serkan Catma, Doug Parker, and Qing Li, poster presentation at USDA-CSREES National Water Conference, February 5-9, 2006, San Antonio, TX.
  49. “Enrollment and Acceptance Decisions in the Conservation Reserve Program under Urbanization Influences”, Alan R. Collins, Serkan Catma, and Gerald D’Souza, paper presented at the Annual Meeting of the Northeastern Agricultural and Resource Economics Association, Annapolis, MD, June 13, 2005.
  50. “Economics of Stream Restoration”, Alan R. Collins, paper presented at the USDA, CSREES National Water Quality Conference, La Jolla, CA, February 9, 2005.
  51. “Total Economic Valuation of Stream Restoration Using Internet and Mail Surveys”, Alan R. Collins, Randy Rosenberger, and Jerald Fletcher, selected paper presented at the American Agricultural Economics Association Annual Meeting, Denver, CO, July 29, 2004.



52. "A Policy Evaluation of Transport Subsidies for Poultry Litter in West Virginia", Alan R. Collins and Tom Basden, poster presentation at the USDA, CSREES National Water Quality Conference, Clearwater, FL, January 11-14, 2004.
53. "Total Economic Valuation of Stream Restoration Using Internet and Mail Surveys", Alan R. Collins, Randy Rosenberger (Presenting Author) and Jerald Fletcher, paper presented at the Annual Meeting of the Northeastern Agricultural and Resource Economics Association, Portsmouth, NH, June 9, 2003.
54. "User Access Fees: Revenue Generation Potential and Impact on Low-Income Recreational Users at a State Forest in West Virginia", Alan R. Collins and Craig Colistra, paper presented at the Annual Meeting of the Northeastern Agricultural and Resource Economics Association, Harrisburg, PA, June 10, 2002.
55. "Urban Influence on Land Use Decisions and Sustainability: The Case of the Conservation Reserve Program", Ramkumar Bendapudi (Presenting Author), Gerard D'Souza, and Alan R. Collins, paper presented at the Land Use Policy Workshop, Harrisburg, PA, June 12, 2002.
56. "Labeling of Food Products Containing Genetically Modified Organisms", Ramkumar Bendapudi (Presenting Author) and Alan R. Collins, selected paper presented at the American Agricultural Economics Association Annual Meeting, Tampa, FL, August 1, 2000.
57. "The Impact of Watershed Associations on Conserving Watersheds: An Assessment of State Government Policy", paper presentation at the 8<sup>th</sup> International Symposium on Society and Resource Management, Bellingham, WV, June 19, 2000.
58. "Infrastructure and Economic Development: What is their Relationship in West Virginia?", Kristen Corwin (Presenting Author) and Alan R. Collins, paper presented at the annual meeting of the Northeastern Agricultural and Resource Economics Association, Morgantown, WV, June 28, 1999.
59. "An Evaluation of Organizational Effectiveness: A Study of West Virginia Watershed Associations", Sarah A. Cline (Presenting Author) and Alan R. Collins, paper presented at the annual meeting of the Northeastern Agricultural and Resource Economics Association, Morgantown, WV, June 28, 1999
60. "Evaluating the Effectiveness of Watershed Organizations in West Virginia", paper presentation at the Annual Conference on Water Resources, American Water Resource Association, Point Clear, AL, November 19, 1998
61. "Collaborative Watershed Planning: The West Virginia Experience", paper presentation at the Soil and Water Conservation Society Annual Conference, Toronto, Ontario, Canada, July 23-26, 1997
62. "Public Participation and Risk: A Classroom Simulation", poster presentation at the Society for Risk Analysis Conference, New Orleans, LA, December 8-11, 1996 (Unable to attend, but sent manuscript for distribution).
63. "Contingent Valuation of Protection Groundwater Quality by a Wellhead Protection Program", Alan R. Collins, Roy Clemons, and Ken Green, selected paper presentation at the American Agricultural Economics Association Annual Meeting, Indianapolis, IN, August 7, 1995.

64. "Citizen Response to Siting of Noxious Facilities: An Application of Prospect Theory", Alan Collins, Kevin Leyden, and Susan Hunter, Northeast Agricultural and Resource Economics Association Annual Meeting, Dover, DE, June 28, 1994 (paper accepted but unable to attend).
65. "A Survey and Overview of 35 University Recycling Programs", Invited Paper at conference organized by Midwest Association of Higher Education Facilities Officers entitled: Recycling: Good Stewardship for the 90's and Beyond, Oxford, OH, September 29, 1993.
66. "Rural Water Contamination in West Virginia: Household Response and Monetary Benefit from Contamination Reduction", Alan R. Collins and Scott Steinback, paper presentation at the Northeast Agricultural and Resource Economics Association Annual Meeting, Mystic CT, June 22, 1993.
67. "West Virginia Solid Waste Management: A Status Report", Northeast Agricultural/Biological Engineering Conference, Canaan Valley, WV, July 27, 1992.
68. "Implications and Existence of Federal/Private Forage Market Interdependence", selected paper presentation at the American Agricultural Economics Association Annual Meeting, Manhattan, KS, August 6, 1991.
69. "What Can Farmers Afford to Pay for MSW Compost", Invited paper presentation at the Biocycle Southeast Conference: Composting/ Recycling of Solid Waste and Sludge, Raleigh, NC, November 21, 1991.
70. "Bureaucratic Motivations for Pricing of Federal Grazing Fees", paper presentation at the Society for Range Management Annual Meeting, Washington, D.C., January 16, 1991.
71. Organizer and Moderator of Symposium entitled "Regional Considerations in Municipal Solid Waste Management in the Northeast United States" at the Annual Meeting of the Northeastern Agricultural and Resource Economics Association in Truro, Nova Scotia, June 19, 1990.
72. "A Procedural Approach to Address Fairness of Livestock Grazing Fees on Public Lands", paper presentation at the Rangeland Resource Economics Symposium, Society for Range Management annual meeting, Billing, MT, February 1989.
73. "Prospect Theory and Risk Preferences of Oregon Seed Producers", paper presentation at the Southern Agricultural Economics Association annual meeting, New Orleans, LA, February 1988.
74. "Forage Source Influences on Wyoming Ranch Prices", paper presentation at the Society for Range Management annual meeting, Rapid City, SD, February 1983.
75. "An Economic Analysis of Prairie Dog Control", paper presentation at the Society for Range Management annual meeting, Calgary, Alberta, Canada, February 1982.

## **TEACHING – 2020 COURSES BEING TAUGHT IN BOLD**

**Graduate Courses:** Advanced Environmental Economics; Advanced Natural Resource Economics Theory; Theory of Resource Economics; Applied Microeconomics; *Natural*

***Resource and Environmental Economics***; Econometrics; ***Graduate Seminar***

**Undergraduate Courses:** Current Issues in Agriculture; Introductory Environmental and Natural Resource Economics; Environmental and Resource Economics; ***Sustainable Living (team taught)***; Energy Resource Economics; Senior Seminar; Freshmen Orientation; Capstone Courses – Senior Thesis and Professional Field Experience; Recycling Economics; Advanced Farm Management and Introductory Macroeconomics (at Oregon State University)

**Graduate Committees:** I have supervised the completion of 15 PhD and 16 MS students in my career at WVU. Currently, I serve as major professor for five PhD students and on graduate committees for five PhD students.

**Undergraduate Coordinator:** I managed course offerings and scheduling for the Agricultural and Resource Economics Program from 1997 to 2011. I served as primary undergraduate advisor and was responsible for promotion of undergraduate programs. During this time period, enrollment in majors grew from 23 students in 1997 to 125 students as of spring 2011, a 443% increase. Student credit hours generated have increased about 60% during this time period.

## **NOTABLE SERVICE ACTIVITIES**

- Selected to participate in the NAREA Career Advancement and Mentorship Program as a faculty mentor for 2015 and 2016.
- Presentation entitled, “A WVU Survey of Landowners and Their Mineral Rights – Results and Conclusions”, at the WVU Extension Service 3rd Annual Enhancing Public Understanding of Natural Gas Issues, May 21, 2014.
- Presentation entitled, “Split Estates and Surface Owner Reported Problems with Marcellus Shale Gas Drilling”, before the Joint Judiciary Committee of the West Virginia Legislature, December 9, 2013.
- Presentation of split estate research on “Inside Shale”, a one hour radio program on WAJR-AM, Tuesday October 8, 2013.
- Webinar Presentation entitled “The Use and Value of Water for Marcellus Shale Gas Development” presented by Charles Abdalla, Renata Rimsaite and Alan Collins on August 28, 2013. A total of 101 people participated in this webinar.
- Faculty leader for social-economic dimensions of Scaling Up Workshop for college students sponsored by the National Ecological Observatory Network and the Ecological Society of America, Washington, D.C., June 2-6, 2013.
- Presentation entitled: “Split Estates and Surface Owner Perceptions of Shale Gas Drilling” at the Marcellus Academy sponsored by the Sierra Club, July 14, 2013.
- Presentation on the North Branch Potomac Economic Study at the Maryland Fisheries Service Summit, New Germany State Park, January 19, 2011.
- West Virginia Wind Working Group Advisory Committee, 2010.
- Faculty leader for social sciences at Data Workshop for college students sponsored by the

National Ecological Observatory Network and the Ecological Society of America, Washington, D.C., November 4-6, 2010.

- Invited presentation entitled “An Environmental Challenge” at the West Virginia 2009 Energy Summit in Roanoke, WV, December 8, 2009.
- Providing assistance to watershed associations in West Virginia in designing and analyzing mail surveys of riparian landowners, fall 2007 through spring 2009.
- Prepared a white paper entitled: “Water Pricing in West Virginia: Arguments in Support of Increasing Block Rates” for Mayor Lance Dom of Shepherdstown, WV.
- Assisted in the organization of a Master Well Owner Workshop to be held at Jackson Mill, WV on November 10<sup>th</sup>, 2007.
- Presentation on “Nutrient balances in the Mid-Atlantic: A Focus on WV”, during the fall 2005 Nutrient Management Planners CEU Training, December 8, 2005.
- Presentation at Restoration Economics planning meeting hosted by Canaan Valley Institute, March 1, 2005 at Cacapon State Park, WV.
- Provided input to the manure transfer/nutrient management guidelines for the AMA litter transfer program, June 2004.
- Presentation on the economics of poultry litter transfer to the poultry litter transport group at Seneca Rocks, WV, May 13, 2003.
- Participated as a member of the Community Design Team for a visit to Petersburg, WV on Oct. 21-23, 1999. Presented and assisted in writing of the economic development section.
- Presentation on “Economic Benefits of a Clean Environment” at the annual convention for the West Virginia Environmental Council on September 18, 1999.
- Submitted a report entitled, “Economic Feasibility Analysis of Poultry Litter Transport” to the WVU Extension Service, the West Run Soil Conservation District (SCD) and the Natural Resources Conservation Service, May 1999.
- Worked with concerned citizens in Marion and Pendleton Counties on issues related to waste composting and digestion facilities proposed in these counties.
- Presentation on the economics and marketing of compost at the Yard Waste Composting Certification Course sponsored by the Association of WV Solid Waste Authorities, June 2, 1998, Bridgeport, WV
- Presentation on “Working with the Public and Costs of Composting Facilities” at a Regional Intergovernmental Council Conference entitled: How-to for Yard Waste Composting for Cities in WV, October 16, 1996, South Charleston, WV
- Co-presentation (with Pat Munoz of the River Network) of a session entitled “Acquiring Resources at the Grassroots Level: Fundraising, Grantwriting, & Other Assets” presented at a workshop entitled “Tools for Watershed Organizations” sponsored by the WV Rivers Coalition, November 16, 1996, Huttonsville, WV
- Co-Organizer (with Dr. Robert Diener and Ed Hooper) of a conference attended by 50 people entitled, "Finally, Putting Composting into Practice in West Virginia - A Model for Putnam County" on September 16, 1994. I presented a paper on "Results of 3-bag Residential Collection Trials - Is it a Mixed Bag?"

- Co-Organizer (with Dr. Robert Diener) of a training workshop entitled, "Operator Training for Yard Waste Composting Facilities in West Virginia" on March 14-17, 1994. This workshop was approved by the West Virginia Division of Environmental Protection for certification of composting facility operators. Attendance was 29 people from three states. A total of eight instructors, including myself, were utilized over four days of classroom instruction. This training workshop has served as a model for other states to emulate.
- Prepared the budget for and wrote part of a Recycling Implementation Grant application for Monongalia County Solid Waste Authority. This grant application for Monongalia County Solid Waste Authority was approved by the WV Division of Natural Resources. I organized and administered an educational program on home composting as part of this grant in 1994.
- Co-Organizer (with Dr. Robert Diener and Ed Hooper) and Presenter at conference attended by 70 people entitled, "Composting the Waste Stream" on October 28, 1993. This conference featured regulators from state agencies (DEP, PSC, SWMB) and private businessmen from Ohio involved in the composting.
- Presentation on the "The Feasibility of a Centralized Manure Composting Facility" during the West Virginia Poultry Festival on July 24, 1992.
- Appeared on "Statewide Friday" WNPB talk show which featured a discussion on recycling in West Virginia under new state legislation on December 20, 1991.
- Presentation of "Economic Evaluation of Proposed Expansion of Vale Summit Landfill in Allegheny County, Maryland" at the invitation of the Cumberland Rotary Club on December 3, 1991.
- Co-organized (with Dr. Susan Hunter) a Roundtable Discussion on Challenges to Recycling Market Development sponsored by the WVU Institute for Public Affairs on June 28, 1991. A day-long program of speakers including State Legislators and private industry personnel involved in recycling. Attendance was 46 people from government and private industry.

### **Service at West Virginia University**

- Davis College of Agriculture, Natural Resources, and Design: Chairperson and member of the Courses and Curriculum Committee, Graduate Faculty Council, Special Events Committee, College Promotion and Tenure Committee
- University: Elected as member of the Faculty Senate, Faculty Senate Committee on Student Instruction, Review Committee for Public Service Grant Program, Faculty Senate Curriculum Committee, Faculty Senate Research and Scholarship Committee
- Faculty Advisor to: WVU Chapter of Habitat for Humanity and Friends of Literacy

### **Refereeing**

- Journals: *Agricultural and Resource Economics Review*, *Choices*, *Contemporary Economic Policy*, *Ecological Economics*, *Energy Policy*, *Environmental Management*, *Environmental Science & Policy*, *Journal of Agribusiness*, *Journal of Agricultural and Applied Economics*, *Journal of Agricultural and Resource Economics*, *Journal of the Air and Waste Management Association*, *Journal of the American Water Resources Association*, *Journal of Soil and Water Conservation*, *Land Economics*, *Southern Economic Journal*, *Water*, *Water Resources Bulletin*, *Water Resources and Economics*
- Selected Papers: American Agricultural Economics Association, Northeast Agricultural and Resource Economics Association
- USDA, NRI Review Panel for Strengthening Grants Program (1997), Markets and Trade (2007), and Rural Development Program (provided written reviews of proposals in 2002)

### **Community Involvement**

- Coopers Rock Foundation, Board Member, 2001 to present served as president from 2006 to 2010 and currently serve as treasurer
- Literacy Volunteers of Monongalia and Preston Counties
  - Tutor - 1990 to 1994
  - Board Member – 1990, 2007 to present
  - Vice-President - 1991
  - President - 1992 to 1995
  - Treasurer - 1995 to 2001
  - Secretary – 2015 to present
- READ ALOUD of Monongalia County, Treasurer from 2001 to present

### **AWARDS AND HONORS**

- In 2018, named Agricultural and Resource Economics Review Fellow for excellence in research by the Northeastern Agricultural and Resource Economics Association
- Outstanding Researcher during 2008 in the Division of Resource Management, Davis College of Agriculture, Forestry, and Consumer Sciences
- Outstanding Teacher during 2001 in the Division of Resource Management, Davis College of Agriculture, Forestry, and Consumer Sciences.
- Elected Secretary/Treasurer of the Northeastern Agricultural and Resource Economics Association for a three-year term from 1999 through 2001.
- Doctoral Scholarships and Fellowships received at Oregon State: Robert Johnston, DeLoach, and Graduate Merit