

## **Kyle R. Douglas-Mankin, Ph.D.**

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### **Professional Experience**

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**Professor, Natural Resources and Environmental Engineering**, Kansas State University, Department of Biological and Agricultural Engineering, July 2008 to present. *Teaching*: Watershed modeling, Water and Waste in the Environment, Intro. BAE/Technology, Intro. Design for BAE, BSE Design Project I/II. *Research*: Watershed water quality & ecosystem modeling; Microbial pathogen degradation in natural systems & watersheds; Constructed wetlands, vegetative filter strips & riparian buffers for residential, crop & livestock wastewater treatment.

**Director, Agricultural Resources and Environmental Management (AREM) Graduate Certificate Program**, Kansas State University, May 2010 to present.

**Associate Professor, Natural Resources and Environmental Engineering**, Kansas State University, Department of Biological and Agricultural Engineering, July 2003 to 2008. *Teaching*: Natural Treatment Systems, Watershed Modeling, Water and Waste in the Environment, Intro. to Biol. and Agric. Eng./Technology. *Research*: Microbial pathogen degradation in natural systems & watersheds; Constructed wetlands, vegetative filter strips & riparian buffers for residential, crop & livestock wastewater treatment; Watershed water quality & ecosystem modeling.

**Assistant Professor, Natural Resources and Environmental Engineering**, Kansas State University, Department of Biological and Agricultural Engineering, August 1998 to June 2003. *Teaching*: Hydrology, Energy in Biological Systems, Soil Erosion and Sediment Pollution Control, Water Resources and Hydrology (Internet Course for distance learning). *Research*: Microbial pathogen degradation; Constructed wetlands & vegetative/riparian filters for residential, crop & livestock wastewater treatment; Watershed water quality & ecosystem modeling; Vegetative reclamation of saline seeps, abandoned feedlots & lagoons.

**Research Assistant Professor, Natural Resources and Environmental Engineering**, Kansas State University, Department of Biological and Agricultural Engineering, July 1995 to August 1998. *Teaching*: Hydrology, Energy in Biological Systems, Soil Erosion and Sediment Pollution Control. *Research*: Watershed water quality modeling; Bioremediation of saline seeps; Constructed wetlands for on-site residential and animal waste treatment.

**Post-doctoral Researcher**, The Ohio State University, Department of Agricultural Engineering, September 1994 to June 1995. Lead knowledge acquisition and development of an expert system tool relating farming practices to soil hydrologic characteristics. Assist in incorporation of a soil-plant-water hydrology model into an interactive expert system framework, making this system to be accessible to non-technical users as a decision aide for drainage system design. Provide teaching support to hydrology courses within the department.

**Instructor**, The Ohio State University, School of Natural Resources, January 1994 to June 1994. Organized and taught undergraduate course in Water Quality Management: Winter, 40 students; Spring 100 students. Developed all course materials, lectures, labs, exams, and field trips. Supervised 1 and 3 graduate teaching assistants. Examined physical, chemical, biological, as well as societal aspects of water quality. Applied these factors to management of aquatic systems featuring case study examples and exams. Student evaluations were very positive, rating instructor better than university mean in all categories.

**Thorne Graduate Associate**, OARDC/The Ohio State University, Department of Agricultural Engineering, September 1992 to August 1993. Recipient of the first Charles E. Thorne Memorial Assistantship, a competitive award created by a Thorne family endowment and granted to a candidate selected from a field of OARDC departmental nominees. Research under this associateship included work in design and control of greenhouse and controlled environment systems, studying and modeling plant responses to environmental stimuli, and developing water/nutrient application systems to meet plant needs.

**Director's Fellow**, OARDC/The Ohio State University, Department of Agricultural Engineering, September 1990 to August 1993. The Director's Fellowship is a three-year merit-based award including full tuition and fees, and a fellowship stipend.

**Structural Analyst, Level II**, Rocketdyne Division of Rockwell International, November 1987 to July 1990. Modeled and evaluated structural integrity of space shuttle main engine turbopump components for flight and

engine testing. Fatigue and fracture analyses required use of hand and finite element methods to evaluate component useable life.

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## International Experience

**University Collaboration**, Ecole Supérieure d'Agriculture de Purpan – Toulouse, France, Sept. 2005 to present. Faculty collaboration and exchange with Purpan to develop and implement bilateral graduate program. Included three 1-week trips to France (Sept. 2005, Nov. 2008, March 2011), invited guest lectures, field tours, and course/curriculum development.

**Immersion Spanish Program** – Morelia, Mexico, 18 May to 18 June 2000 (80 hrs in class). Lived with Spanish-speaking host family for 1 month. Visited Instituto de Monterrey – Queretaro.

**Consultant**, Volunteers in Overseas Cooperative Assistance – Gjirokastra, Albania, 21 March to 3 April 1995. Agricultural engineering consultant on project to improve productivity and marketing of two recently privatized greenhouse fruit and vegetable operations. Cooperate with host organizations, member farmers, and VOCA field staff.

**Consultant**, Volunteers in Overseas Cooperative Assistance – Lipetsk, Russia, 12 August to 27 August 1994. Agricultural engineering consultant on several projects implementing "ecologically-clean" and energy efficient greenhouse production of fruits and vegetables on state, collective, and private farm operations. Cooperated with host organizations, member farmers, and VOCA field staff.

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## Education

**Ph.D. Agricultural Engineering**, The Ohio State University, 1994. Minor areas in plant environmental physiology, microclimatology, and expert systems. Dissertation title: Modeling nutrient and water uptake responses to the environment by New Guinea *Impatiens*.

**M.S. Agricultural Engineering**, The Pennsylvania State University, 1987. Thesis title: Comparison of the effects of water-cooled and air-cooled high pressure sodium (HPS) lamps on lettuce growth.

**B.S. Agricultural Engineering**, The Pennsylvania State University, 1985. Areas of focus: analysis and design of irrigation systems, agricultural process systems, and agricultural structures and environments.

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## Professional Registration/Certification

**Engineer in Training**, Commonwealth of Pennsylvania, Department of State, Bureau of Professional and Occupational Affairs, State Registration Board for Professional Engineers, Harrisburg, PA, April, 1985.

**Diversity Trainer I**, National Multicultural Institute, Washington, D.C., April, 2010.

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## Publications

### *Books and Proceedings*

1. Dale, V., C. Kling, J.L. Meyer, J. Sanders, H. Stallworth, T. Armitage, D. Wangsness, T. Bianchi, A. Blumberg, W. Boynton, D.J. Conley, W. Crumpton, M. David, D. Gilbert, R.W. Howarth, R. Lowrance, **K. Mankin**, J. Opalauch, H. Paerl, K. Reckhow, A.N. Sharpley, T.W. Simpson, C. Snyder, D. Wright. 2010. Hypoxia in the Northern Gulf of Mexico. Springer: New York. 300 pp. ISBN: 978-0-387-89685-4
2. Dale, V., T. Bianchi, A. Blumberg, W. Boynton, D.J. Conley, W. Crumpton, M. David, D. Gilbert, R.W. Howarth, C. Kling, R. Lowrance, **K. Mankin**, J.L. Meyer, J. Opalauch, H. Paerl, K. Reckhow, J. Sanders, A.N. Sharpley, T.W. Simpson, C. Snyder, D. Wright, H. Stallworth, T. Armitage, D. Wangsness. 2007. Hypoxia in the Northern Gulf of Mexico: An Update by the EPA Science Advisory Board. EPA-SAB-08-003. EPA Science Advisory Board: Washington, D.C. 333 pp. <http://yosemite.epa.gov/sab/sabproduct.nsf/WebReportsbyYearBOARD!OpenView&Start=1&Count=800&Expand=1#1>.
3. **Mankin, K.R.**, ed. 2004. *Proceedings of the 10<sup>th</sup> National Symposium on Individual and Small Community Sewage Systems*. March 21-24, Sacramento, CA. ASAE: St. Joseph, MI. 761 pp.
4. Cundiff, J.S. and **K.R. Mankin**. 2003. *Dynamics of Biological Systems*. ASAE Press, St. Joseph, MI. 398 pp.

### *Book Chapters*

1. Koelsch, R., J. Lorimor, **K. Mankin**. 2004. Chapter 9. Review of Literature. *In: Vegetated Treatment Systems Guidance Document*. R. Koelsch, ed. CSREES Heartland Regional Water Quality Coordination Initiative.

Cooperative State Research, Education and Extension Services, U.S. Department of Agriculture, 32 pp.  
<http://www.heartlandwq.iastate.edu/ManureManagement/AlternativeTech/vtsguidance/chapter9.htm>

2. **Mankin, K.R.** 2003. Wetlands as Treatment Systems. In: *The Encyclopedia of Water Science*. Marcel Dekker, Inc., New York.

#### *Refereed Journal Articles*

1. **Douglas-Mankin, K.R.**, and **C. Okoren**. 2011. Field assessment of bacteria and nutrient removal by vegetative filter strips. *Intl. J. of Agricultural and Biological Engineering* 4(2).
2. **Nejadhashemi, A.P.**, S.A. Woznicki, and **K.R. Douglas-Mankin**. 2011. Comparison of four models (STEPL, PLOAD, L-THIA, SWAT) in simulating sediment, nitrogen, and phosphorus loads and pollutant source areas. *Transactions of the ASABE* 54(3).
3. **Daggupati, P.**, **K.R. Douglas-Mankin**, **A.Y. Sheshukov**, P.L. Barnes, and D.L. Devlin. 2011. Field-Level Targeting using SWAT: Mapping Output from HRUs to Fields and Assessing Limitations of GIS Input Data. *Transactions of the ASABE* 54(2): 501-514.
4. **Douglas-Mankin, K.R.**, **K. Precht**, M.B. Kirkham, and S.L. Hutchinson. 2010. Vegetative reclamation of abandoned swine lagoon soils in a greenhouse soil-column study. *Intl. J. Agricultural and Biological Engineering* 3(4): 44-51.
5. **Douglas-Mankin, K.R.**, R. Srinivasan, J.G. Arnold. 2010. Soil and Water Assessment Tool (SWAT) Model: Current Developments and Applications. *Transactions of the ASABE* 53(5): 1423-1431.
6. **Tuppad, P.**, **K.R. Douglas-Mankin**, J.K. Koelliker, J.M.S. Hutchinson, and M.C. Knapp. 2010. NEXRAD Stage III Precipitation Local Bias Adjustment for Streamflow Prediction. *Transactions of the ASABE* 53(5): 1511-1520.
7. **Douglas-Mankin, K.R.**, **D. Maski**, K.A. Janssen, **P. Tuppad**, and G.M. Pierzynski. 2010. Modeling nutrient runoff yields from combined in-field crop practices using SWAT. *Transactions of the ASABE* 53(5): 1557-1568.
8. **Tuppad, P.**, **K.R. Douglas-Mankin**, and K.A. McVay. 2010. Strategic targeting of cropland management using watershed modeling. *Agricultural Engineering Intl.: CIGR J.* 12(3): 12-24.
9. **Tuppad, P.**, **K.R. Douglas-Mankin**, J.K. Koelliker, and J.M.S. Hutchinson. 2010. SWAT discharge response to spatial rainfall variability in a Kansas watershed. *Transactions of the ASABE* 53(1): 65-74. (Winner: ASABE Honorable Mention Paper Award, 2010)
10. **Parajuli, P.B.**, **K.R. Douglas-Mankin**, P.L. Barnes, and C.H. Green. 2009. Fecal Bacteria Source Characterization and Sensitivity Analysis of SWAT 2005. *Transactions of the ASABE* 52(6): 1847-1858.
11. **Nejadhashemi, A.P.**, A. Shirmohammadi, J.M. Sheridan, H.J. Montas, and **K.R. Mankin**. 2009. Case Study: Evaluation of Streamflow Partitioning Methods. *J. Irrigation and Drainage Engineering* 135(6): 791-801.
12. **Parajuli, P.B.**, N.O. Nelson, L.D. Frees, and **K.R. Mankin**. 2009. Comparison of AnnAGNPS and SWAT model simulation results in USDA-CEAP agricultural watersheds in south-central Kansas. *Hydrological Processes* 23(5): 748-763.
13. **Parajuli, P.B.**, **K.R. Mankin**, and P.L. Barnes. 2009. Source Specific Fecal Bacteria Modeling using Soil and Water Assessment Tool Model. *Bioresource Technology* 100(2): 953-963.
14. **Douglas-Mankin, K.R.** 2008. Assessment of Student Learning of Design Skills from a First-Semester Design Project. *Transactions of the ASABE* 51(6): 2249-2254.
15. **Parajuli, P.B.**, **K.R. Mankin**, and P.L. Barnes. 2008. Applicability of Targeting Vegetative Filter Strips to Abate Fecal Bacteria and Sediment Yield using SWAT. *J. Agricultural Water Management* 95: 1189-1200.
16. **Maski, D.**, **K.R. Mankin**, K.A. Janssen, P. Tuppad, and G.M. Pierzynski. 2008. Modeling runoff and sediment yields from combined in-field crop practices using SWAT. *J. Soil and Water Conservation* 63(4): 193-203.
17. Simpson, T.W., A.N. Sharpley, R.W. Howarth, H.W. Paerl, and **K.R. Mankin**. 2008. The New Gold Rush: Fueling Ethanol Production while Protecting Water Quality. *J. Environmental Quality* 37(2): 318-324.
18. **Mankin, K.R.**, **L. Wang**, S.L. Hutchinson, and G.L. Marchin. 2007. *Escherichia coli* sorption to sand and silt loam soil. *Transactions of the ASABE* 50(4): 1159-1165.
19. **Mankin, K.R.**, **D.M. Ngandu**, C.J. Barden, S.L. Hutchinson, and W.A. Geyer. 2007. Grass-shrub riparian buffer removal of sediment, P, and N from simulated runoff. *J. American Water Resources Association* 43(5): 1108-1116.
20. **Anand, S.**, **K.R. Mankin**, K.A. McVay, K.A. Janssen, P.L. Barnes, and G.M. Pierzynski. 2007. Calibration and validation of ADAPT and SWAT for field-scale runoff prediction. *J. American Water Resources Association* 43(4): 899-910.

21. Buckley Zeiman, M., K.A. Janssen, D.W. Sweeney, G.M. Pierzynski, **K.R. Mankin**, D.L. Devlin, D.L. Regehr, M.R. Langemeier, and K.A. McVay. 2006. Combining management practices to reduce sediment, nutrients, and herbicides in runoff. *J. Soil and Water Conservation* 61(5): 258-267.
22. Benham, B.L., C. Baffaut, R.W. Zeckoski, **K.R. Mankin**, Y.A. Pachepsky, A.M. Sadeghi, K.M. Brannan, M.L. Soupir, and M.J. Habersack. 2006. Modeling bacteria fate and transport in watersheds to support TMDLs. *Transactions of the ASABE* 49(4): 987-1002.
23. **Mankin, K.R.**, P.L. Barnes, J.P. Harner, P.K. Kalita, and J.D. Boyer. 2006. Field evaluation of vegetative filter effectiveness and runoff quality from unstocked feedlots. *J. Soil and Water Conservation* 61(4): 209-216.
24. Koelsch, R.K., J.C. Lorimor, and **K.R. Mankin**. 2006. Vegetative treatment systems for open lot runoff: Review of literature. *Applied Engineering in Agriculture* 22(1): 141-153.
25. **Mankin, K.R.**, S.J. Bhuyan, J.K. Koelliker. 2004. Effects of cell size on AGNPS inputs and predictions. *J. Environmental Hydrology* 12(December), Paper 22.
26. **Mankin, K.R.** and C.D. Ikenberry. 2004. Batch reactor unvegetated wetland performance in treating dairy wastewater. *J. American Water Resources Association* 40(6): 1527-1535.
27. **Mankin, K.R.**, K.M. Boone, S. Flores, and M.R. Willyard. 2004. What agriculture students say motivates them to learn. *North American Colleges and Teachers of Agriculture (NACTA) J.* 48(4): 6-11. (Winner: *E.B. Knight Journal Award, 2004*)
28. Ngandu, D. and **K.R. Mankin**. 2004. A runoff sampling system for riparian buffers. *Applied Engineering in Agriculture* 20(5): 593-598.
29. Wang, L., **K.R. Mankin**, and G.L. Marchin. 2004. Survival of fecal bacteria in dairy cow manure. *Transactions of the ASAE* 47(4): 1239-1246.
30. Karthikeyan, R., **K.R. Mankin**, L.C. Davis, and L.E. Erickson. 2003. Technical Note: Fate and transport of jet fuel (JP-8) in soils with selected plants. *Intl. J. of Phytoremediation* 5(4):281-292.
31. Karthikeyan, R., **K.R. Mankin**, L.C. Davis, and L.E. Erickson. 2003. Modeling jet fuel (JP-8) fate and transport in soils with plants. *Intl. J. of Phytoremediation* 5(4):293-314.
32. **Mankin, K.R.**, S.H. Wang, J.K. Koelliker, D.G. Huggins, and J.F. DeNoyelles. 2003. Watershed-lake water quality modeling: Verification and application. *J. Soil and Water Conservation* 58(4): 188-197.
33. Liphadzi, M.S., M.B. Kirkham, **K.R. Mankin**, and G.M. Paulsen. 2003. EDTA-assisted heavy-metal uptake by poplar and sunflower grown at a long-term sewage-sludge farm. *Plant and Soil* 257(1):171-182.
34. Bhuyan, S.J., **K.R. Mankin**, and J.K. Koelliker. 2003. Watershed-scale AMC selection for hydrologic modeling. *Transactions of the ASAE* 46(2): 303-310.
35. Liphadzi, M.S., M.B. Kirkham, and **K.R. Mankin**. 2002. Remediation of ammonium contaminated abandoned waste lagoon soil: Physical properties and growth of barley. *J. Soil and Sediment Contamination* 11(6): 789-807.
36. He, Q. and **K.R. Mankin**. 2002. Performance variations of COD and nitrogen removal by vegetated submerged-bed wetlands. *J. American Water Resources Association* 38(6): 1679-1689.
37. He, Q. and **K.R. Mankin**. 2002. Assessing removal kinetics of organic matter in rock-plant filters. *Transactions of the ASAE* 45(6): 1773-1778.
38. Bhuyan, S.J., **K.R. Mankin**, J.M.S. Hutchinson, D.G. Goodin, and J.K. Koelliker. 2002. Land-cover classification of a watershed from multiple Landsat scenes. *J. Environmental Hydrology* 10(September), Paper 6.
39. **Mankin, K.R.**, R.D. DeAussen, and P.L. Barnes. 2002. Assessment of a GIS-AGNPS interface model. *Transactions of the ASAE* 45(5): 1375-1383.
40. **Mankin, K.R.** and R. Karthikeyan. 2002. Field assessment of saline seep remediation using electromagnetic induction. *Transactions of the ASAE* 45(1): 99-107.
41. He, Q. and **K.R. Mankin**. 2001. Seasonal variations in hydraulic performance of rock-plant filters. *Environmental Technology* 22(9): 991-1000.
42. **Mankin, K.R.** 2000. An integrated approach for modeling and managing golf course water quality and ecosystem diversity. *Ecological Modeling* 133(3): 259-267.
43. **Mankin, K.R.** and G.M. Powell. 2000. Field assessment of onsite rock-plant filters in Kansas. *The Small Flows J.* 1(2): 36-41.
44. **Mankin, K.R.** and J.K. Koelliker. 2000. A hydrologic balance approach to saline seep remediation design. *Applied Engineering in Agriculture* 16(2): 129-133.
45. **Mankin, K.R.**, J.K. Koelliker, and P.K. Kalita. 1999. Watershed and lake water quality assessment: An integrated modeling approach. *J. American Water Resources Association* 35(5): 1069-1080.

46. **Mankin, K.R.**, R.P. Fynn, and T.H. Short. 1998. Water uptake and transpiration characterization of New Guinea Impatiens. *Transactions of the ASAE* 41(1): 219-226.
  47. **Mankin, K.R.**, A.D. Ward, and K.M. Boone. 1996. Quantifying changes in soil physical properties from soil and crop management. *Transactions of the ASAE* 39(6): 2065-2074.
  48. **Mankin, K.R.** and R.P. Fynn. 1996. Nutrient uptake response of New Guinea Impatiens to light, temperature, and nutrient solution concentration. *J. Amer. Soc. Hort. Sci.* 121(5): 826-830.
  49. **Mankin, K.R.** and R.P. Fynn. 1996. Modeling individual nutrient uptake by plants: Relating demand to microclimate. *Agricultural Systems J.* 50(1): 101-114.
  50. **Mankin, K.R.** and P.N. Walker. 1988. Comparison of water-cooled and air-cooled high pressure sodium lamps for lettuce production. *Transactions of the ASAE* 31(3): 867-874.
- Underline: Research Associate under my direct supervision.

*In journal review:*

1. Lee, M.C., and **K.R. Douglas-Mankin**. (submitted). Environmental equivalents for water quality trading: Fundamentals and analysis. *Transactions of the ASABE*. #SW-08732-2010
2. Sheshukov, A.Y., C.B. Siebenmorgen, and **K.R. Douglas-Mankin**. (submitted). Impacts of Climate Change on Watershed Response Using Ensemble of Global Circulation Models. *Transactions of the ASABE*. #SW-09092-2011
3. Sheshukov, A.Y., **K.R. Douglas-Mankin**, P. Daggupati, and S. Sinnathamby. (submitted). Pasture BMP Effectiveness using a HRU-based Subarea Approach in SWAT. *J. Environmental Management*. JEMA-S-11-00696
4. Gali, R.K., **K.R. Douglas-Mankin**, X. Li, and T. Xu. (submitted). Assessing NEXRAD P3 Data Effects on Stream Flow Simulation using SWAT Model in an Agricultural Watershed. *Hydrological Processes*. HYP-11-0142
5. Daggupati, P., **K.R. Douglas-Mankin**, A.Y. Sheshukov, and P.L. Barnes. (submitted). Field-scale conservation practice targeting, funding, and assessment using SWAT. *J. Soil Water Conserv.*
6. Sheshukov, A.Y., C.B. Siebenmorgen, **K.R. Douglas-Mankin**, and B.N. Wilson. (to be submitted). Impacts of Climate Change on Watershed Response Using Ensemble of Global Circulation Models. *Climatic Change*.

*Invited Presentations*

1. **Douglas-Mankin, K.R.** 2011. Invited lectures – American Week. Ecole Superieure d’Agriculture de Purpan – Toulouse, France. 21-25 March.
  - a. Watershed Hydrologic Processes (3 hours)
  - b. Hydrologic Impacts of Climate Change (1.5 hours)
  - c. Overview of Gulf of Mexico Hypoxia (1.5 hours)
2. **Douglas-Mankin, K.R.** 2011. Invited presentation – VFS Function and Design. Agro-ecosystems Conference. Ecole Superieure d’Agriculture de Purpan – Toulouse, France. 23 March.
3. Devlin, D.L., **K.R. Mankin**, P.L. Barnes, T.D. Keane, M.R. Langemeier. 2011. Measuring Success of a TMDL Implementation Plan: Land, Stream, and Economic Responses to Targeted Stakeholder Actions. USDA-NIFA Integrated Research, Education and Extension Water Quality Program, Project of Excellence poster. USDA National Water Conference, Washington, D.C.
4. **Mankin, K.R.**, W.L. Hargrove, G.L. Marchin, D.L. Devlin, P.L. Barnes, J.P. Harner, J.M. DeRouchey. 2011. Sources and Abatement of Fecal Bacteria in a High Priority TMDL Watershed in NE Kansas. USDA-NIFA Integrated Research, Education and Extension Water Quality Program, Project of Excellence poster. USDA National Water Conference, Washington, D.C.
5. Sharpley, A.N., **K.R. Douglas-Mankin**. 2010. EPA Scientific Advisory Board Overview of Gulf Hypoxia: Managing Nutrients that Cross State Lines. USDA-CSREES National Water Conference, February 21-25, Hilton Head, SC. USDA, Washington, D.C.
6. **Douglas-Mankin, K.R.** 2010. Vegetative Filter Strip Field Data, Modeling, Function, and Implications for Design. *In*: Invited Session: Historical and Recent Advances in Vegetative Filter Strip Modeling. ASABE Annual International Meeting, Pittsburg, PA. ASABE, St. Joseph, MI.
7. **Douglas-Mankin, K.R.** 2010. Invited Panel Member. Invited Presentation: Calibration issues from a journal perspective. *In*: Rap Session: Standards for Calibration and Evaluation of Models. ASABE Annual International Meeting, Pittsburg, PA. ASABE, St. Joseph, MI.
8. Sharpley, A.N., T. Simpson, R. Howarth, H. Paerl, **K.R. Douglas-Mankin**. 2009. Biofuel production and water quality: Challenges and Opportunities. ASA-CSSA-SSSA Annual Meeting, November 1-5, Pittsburgh, PA.

9. **Douglas-Mankin, K.R.** 2009. Use of watershed modeling tools: SWAT for targeting and assessing BMP implementation in watersheds. USDA-CSREES Heartland Regional Water Quality Conference, October 26-28, Overland Park, KS.
10. **Douglas-Mankin, K.R.** 2009. Using SWAT to Target and Assess BMP Implementation in Watersheds. *In: From Dust Bowl to Mud Bowl: Sedimentation, Conservation Measures, and the Future of Reservoirs.* USDA-CSREES/K-State Research & Extension/SWCS, September 14-16, Kansas City, MO.
11. **Douglas-Mankin, K.R.** 2009. Where has Countryside Engineering Gone? *In: Perspectives and Innovation in Soil and Water Engineering – Part 1.* ASABE Annual International Meeting, Reno, NV. ASABE, St. Joseph, MI.
12. **Mankin, K.R.** and A.P. Nejadhashemi. 2008. Using Watershed Models to Assess Watershed Needs and Project Impacts: What Models Are, When to Use Them, Shortcomings and Strengths. USDA-CSREES Heartland Regional Workshop: Impact Assessment and Achievements in Water Quality Protection, Nebraska City, NE. June 17-19, 2008.  
<http://www.ksre.ksu.edu/waterquality/2008%20Assessment/Workshop/Presentations/Mankin3.pdf>
13. Nejadhashemi, A.P. and **K.R. Mankin.** 2008. Case Study: Using Watershed Models to Target Best Management Practices in the Pomona Lake Watershed in Kansas. USDA-CSREES Heartland Regional Workshop: Impact Assessment and Achievements in Water Quality Protection, Nebraska City, NE. June 17-19, 2008. <http://www.ksre.ksu.edu/waterquality/2008%20Assessment/Workshop/Presentations/Mankin3.pdf>
14. **Mankin, K.R.** 2008. WRAPS Adaptive Modeling. KDHE WRAPS Regional Watershed Seminar, Lawrence, KS. May 22, 2008.
15. **Mankin, K.R.** 2006. Watershed Modeling to Support WRAPS in Kansas. Kansas Environmental Leadership Program (KELP) Meeting, 5 October, Hutchinson, KS.
16. **Mankin, K.R.** 2006. Pathogen Sources and Transport in Watersheds. Environmental Engineering Seminar Series, Kansas State University. 25 August, Manhattan, KS.
17. **Mankin, K.R.** and D.L. Devlin. 2006. Watershed Modeling to Estimate Sediment Loads. Kansas Environment Conference. Kansas Department of Health and Environment, Topeka, KS. 23 August, Topeka, KS.
18. **Mankin, K.R.** 2006. Pathogen Transport in Watersheds. USDA-CSREES Heartland Regional Water Coordination Initiative, Animal Manure Management Workshop, April 4-5, Nebraska City, NE.  
<http://www.heartlandwq.iastate.edu/ManureManagement/2006workshop/session2/mankin.htm>
19. Neel, J.C. and **K.R. Mankin.** 2006. WRAPS Watershed Assessment Tools: Part 1. *Invited Presentation at Watershed Restoration and Protection Strategy (WRAPS) Workshop*, 26 January, Salina, Kansas.
20. **Mankin, K.R.** 2005. Don't Teach. Lead. *Invited Presentation at ASAE Annual International Meeting*, Tampa, FL, July 19. ASAE: St. Joseph, MI.
21. **Mankin, K.R.** 2003. Fecal Bacteria: Sources, Dieoff, Transport, and Treatment. *Invited presentation at Fecal coliform bacteria meeting, Kansas Alliance for Wetlands and Streams*, 1 October 2003, Salina, KS.  
[www.kswetlands.org](http://www.kswetlands.org) → "Hot Topics"
22. **Mankin, K.R.** 2002. Watershed Modeling to Assess Water-quality Impacts on Reservoirs. 19<sup>th</sup> Annual Water and the Future of Kansas Conference, March 5, Lawrence, KS.

#### **Conference Proceedings Papers**

1. Siebenmorgen, C., A.Y. Sheshukov, **K.R. Douglas-Mankin.** 2010. Impacts of Climate Change on Hydrologic Indices in a Northeast Kansas Watershed. *In: Proceedings of the 5<sup>th</sup> Conference on Watershed Management to Meet Water Quality Standards and Emerging TMDL*, November 15, Baltimore, MD. ASABE: St. Joseph, MI.
2. Gali, R.K., **K.R. Douglas-Mankin.** 2010. Assessment of NEXRAD P3 data on streamflow simulation using SWAT model in an agricultural watershed. *In: Proceedings of the 5<sup>th</sup> Conference on Watershed Management to Meet Water Quality Standards and Emerging TMDL*, November 15, Baltimore, MD. ASABE: St. Joseph, MI.
3. Daggupati, P., **K.R. Douglas-Mankin,** A.Y. Sheshukov, P.L. Barnes. 2010. Targeting BMP placement using SWAT sediment yield estimates for field-scale BMPs. *In: Proceedings of the 5<sup>th</sup> Conference on Watershed Management to Meet Water Quality Standards and Emerging TMDL*, November, Baltimore, MD. ASABE: St. Joseph, MI.
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#### *Presentations and Associated Papers*

1. Gassman, P.W., and **K.R. Douglas-Mankin**. 2011. A Review of International Opportunities for publishing Soil and Water Related Research in Agricultural Engineering Journals. ASABE Paper No. 11-xxxx. ASABE, St. Joseph, MI.
2. Nelson, N.O., **K.R. Mankin**, M.R. Langemeier, D.L. Devlin, P.L. Barnes, T.L. Selfa, and W.L. Hargrove. 2011. Assessing the Impact of a Strategic Approach to Implementation of Conservation Practices. USDA-NIFA National Integrated Water Quality Program, Conservation Effects Assessment Project (CEAP). USDA National Water Conference, Washington, D.C.
3. Siebenmorgen, C.B., A.Y. Sheshukov, and **K.R. Douglas-Mankin**. 2010. Climate Change Impacts on Hydrologic Regimes in a Northeast Kansas. 27<sup>th</sup> Annual Water and the Future of Kansas Conference, October 26, Topeka, KS.
4. Daggupati, P., **K.R. Douglas-Mankin**, A.Y. Sheshukov, and P.L. Barnes. 2010. Monitoring and Estimating Ephemeral Gully Erosion using Field Measurements and GIS. ASABE Paper No. 10-9663. ASABE, St. Joseph, MI.
5. Sheshukov, A., S. Perkins, and **K.R. Douglas-Mankin**. 2010. Evaluation of Sedimentation Sources in East-Central Kansas with SWAT. ASABE Paper No. 10-9917. ASABE, St. Joseph, MI.
6. Nelson, N.O., **K.R. Douglas-Mankin**, P.L. Barnes, D.L. Devlin. 2010. No-till effects on sediment loss in Cheney Lake Watershed: Field to watershed scale perspective. USDA-CSREES National Water Conference, February 21-25, Hilton Head, SC. USDA, Washington, D.C.
7. Sheshukov, A.Y., **K.R. Douglas-Mankin**, J. Roe, H. George, P. Daggupati. 2010. Rapid Assessment of Cost-Effectiveness of Unconfined Livestock BMP Bids. USDA-CSREES National Water Conference, February 21-25, Hilton Head, SC. USDA, Washington, D.C.
8. Sheshukov, A.Y., **K.R. Douglas-Mankin**, and P. Daggupati. 2010. Climate change and watershed assessment within the WRAPS program in Kansas. USDA-CSREES National Water Conference, February 21-25, Hilton Head, SC. USDA, Washington, D.C.
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11. Modala, N.R., **K.R. Douglas-Mankin**, P.L. Barnes, T.D. Keane. 2010. Methods to Integrate Overland, Ephemeral Gully and Stream Bank Erosion Models. USDA-CSREES National Water Conference, February 21-25, Hilton Head, SC. USDA, Washington, D.C.
12. Nelson, N.O., P. Parajuli, **K.R. Douglas-Mankin**, D.L. Devlin. 2010. Individual and cumulative impacts of historical conservation practice implementation on water quality in Cheney Lake Watershed (CEAP). USDA-CSREES National Water Conference, February 21-25, Hilton Head, SC. USDA, Washington, D.C.
13. Sheshukov, A.Y., **K.R. Douglas-Mankin**, B.N. Wilson, P. Daggupati. 2009. Watershed Restoration and Protection under Changing Climate Conditions in Kansas. Amer. Geophys. Union, Fall Meeting, 14-18 December, San Francisco, CA.



14. Daggupati, P., A. Sheshukov, **K.R. Douglas-Mankin**, P.L. Barnes, and D.L. Devlin. 2009. Field-Scale Targeting of Cropland Sediment Yields Using ArcSWAT. 5<sup>th</sup> International SWAT Conference, Boulder, CO, Aug 3-4, 2009. USDA-ARS, Washington, D.C.
15. Sheshukov, A., **K.R. Douglas-Mankin**, and P. Daggupati. 2009. Evaluating Effectiveness of Unconfined Livestock BMPs using SWAT. 5<sup>th</sup> International SWAT Conference, Boulder, CO, Aug 3-4, 2009. USDA-ARS, Washington, D.C.
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21. Barnes, P.L., T.D. Keane, D.L. Devlin, and **K.R. Douglas-Mankin**. 2009. Watershed water-quality assessment tools. USDA-CSREES National Water Conference, February 8-12, St. Louis, MO. USDA, Washington, D.C.
22. Daggupati, P. and **K.R. Mankin**. 2008. Modelling surface water-quality impacts of bioenergy crop shifts in central Kansas. Symposium on the Sustainability of Biofuels Production and Processing in the Central Plains, Manhattan, KS, September 16, 2008. (*poster*)
23. Maski, D., **K.R. Mankin**, P. Tuppad, K.A. Janssen, J.G. Arnold, G.M. Pierzynski. 2008. Model parameterization for nitrogen and phosphorous predictions in cropland tillage and fertilizer application practices. 38<sup>th</sup> Biological Systems Simulation Conference, Temple, TX. April 8-10, 2008. USDA-ARS, Washington, D.C.
24. Maski, D., **K.R. Mankin**, P. Tuppad, K.A. Janssen, J.G. Arnold, G.M. Pierzynski. 2008. Simulation modeling of runoff and sediment losses for integrated crop tillage systems. 38<sup>th</sup> Biological Systems Simulation Conference, Temple, TX. April 8-10, 2008. USDA-ARS, Washington, D.C.
25. Parajuli, P.B., N.O. Nelson, L.D. Frees, and **K.R. Douglas-Mankin**. 2008. Calibration and validation of AnnAGNPS and SWAT models in agricultural watersheds in CEAP south-central Kansas. USDA-CSREES National Water Conference, February 3-7, Sparks, NV. USDA, Washington, D.C.
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31. Lee, M.C., and **K.R. Mankin**. 2007. Site-specific water quality trading ratio analysis. ASABE Paper No. 07-2179. ASABE, St. Joseph, MI.
32. Lee, M.C., **K.R. Mankin**, and J.M. Peterson. 2007. Evaluation of potential water quality trading sites with network analysis. ASABE Paper No. 07-1091. ASABE, St. Joseph, MI.

33. Lee, M.C., **K.R. Mankin**, and J.M.S. Hutchinson. 2007. WQTIPS: Water Quality Trading Information Platform System. ASABE Paper No. 07-2021. ASABE, St. Joseph, MI.
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40. Maski, D., **K.R. Mankin**, K.A. Janssen, and P. Tuppad. 2006. Modeling no-till runoff and sediment yield using SWAT. ASABE Paper No. 06-2236. ASABE: St. Joseph, MI.
41. **Mankin, K.R.** and W.L. Hargrove. 2006. Can we use TMDLs to clean water and restore environmental services in managed agricultural ecosystems? ASABE Paper No. 06-7033. ASABE: St. Joseph, MI.
42. Lee, M.C., **K.R. Mankin**, and J.M.S. Hutchinson. 2006. GIS structure for water quality trading. Paper No. MC06-4102. Presented at ASABE Mid-Central Conference, Manhattan, KS. ASABE: St. Joseph, MI.
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45. Hargrove, W.L. and **K.R. Mankin**. 2006. Watershed Restoration in Kansas: What does it mean and can we do it? 23<sup>rd</sup> Annual Water and the Future of Kansas Conference, March 16, Topeka, KS.
46. Lee, M.C., P. Tuppad, P. Parajuli, and **K.R. Mankin**. 2005. Integration of Watershed Modeling with GIS. Geospatial Research Showcase, 17 November, GISSAL-GIS Spatial Analysis Lab, Geography Department, Kansas State Univ., Manhattan, KS.
47. Parajuli, P., **K.R. Mankin**, and P.L. Barnes. 2005. Calibration and Validation of SWAT/Microbial Sub-model for Fecal Coliform Bacteria Prediction on a Grazed Watershed. ASAE Paper No. 05-2126. ASAE: St. Joseph, MI.
48. Parajuli, P., **K.R. Mankin**, and P.L. Barnes. 2005. Evaluating Bacteria Removal From Land Application of Manure Using SWAT. Paper No. MC05-203. Presented at ASAE Mid-Central Conference, St. Joseph, MO. ASAE: St. Joseph, MI.
49. Lee, M.C., **K.R. Mankin**, J. Peterson, J.C. Leatherman. 2005. Water-quality trading issues in Kansas. Paper No. MC05-306. Presented at ASAE Mid-Central Conference, St. Joseph, MO. ASAE: St. Joseph, MI.
50. Leatherman, J., J. Peterson, **K.R. Mankin**. 2005. Is Water Quality Trading a Policy Option for Kansas? 22<sup>nd</sup> Annual Water and the Future of Kansas Conference, March 17, Topeka, KS.
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52. Anand, S., **K.R. Mankin**, and K.A. Janssen. 2004. Comparing field-scale runoff predictions for curve-number based models. AWRA GIS and Water Resources Specialty Conference, May 17-19, Nashville, TN. AWRA: Middleburg, VA.
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- Mankin**. 2004. Wild Design: Tomorrow's Habitat for Sunset Zoo's Snow Leopards. Poster presentation at Kansas State University Engineering Open House, April 2-3. Manhattan, KS.
54. Ngandu, D.M., **K.R. Mankin**, C.J. Barden, W.A. Geyer, and S.L. Hutchinson. 2003. Field assessment of water quality impacts of a grass and shrub riparian buffer in Kansas. Paper No. 03-2041. Presented at ASAE International Meeting, Las Vegas, NV. ASAE: St. Joseph, MI.
55. **Mankin, K.R.** and C. Okoren. 2003. Field evaluation of bacteria removal in a VFS. Paper No. 03-2150. Presented at ASAE International Meeting, Las Vegas, NV. ASAE: St. Joseph, MI.
56. Wang, L., **K.R. Mankin**, and G.L. Marchin. 2003. Kinetic model for *E. coli* transport through sand column. Paper No. 03-2151. Presented at ASAE International Meeting, Las Vegas, NV. ASAE: St. Joseph, MI.
57. **Mankin, K.R.** and P.A. Clark. 2003. Treatment Wetland Water Balance: Seepage, ET, and Batch Management. Paper No. 03-2180. Presented at ASAE International Meeting, Las Vegas, NV. ASAE: St. Joseph, MI.
58. Clark, P.A. and **K.R. Mankin**. 2003. Batch-reactor wetland for dairy wastewater treatment: Monitoring system and preliminary performance. AWRA Agricultural Hydrology and Water Quality Conference, May 12-14, Kansas City, MO. AWRA: Middleburg, VA.
59. Anand, S., **K.R. Mankin**, K.A. McVay, G.M. Pierzynski, and D.L. Regehr. 2003. Calibration of ADAPT and SWAT models for field-scale water quality response to management practices. AWRA Agricultural Hydrology and Water Quality Conference, May 12-14, Kansas City, MO. AWRA: Middleburg, VA.
60. Tuppad, P., **K.R. Mankin**, J.M.S. Hutchinson, J.A. Harrington, and J.K. Koelliker. 2003. Targeting Watershed Improvement Efforts Using AGNPS-GIS Modeling Results. AWRA Agricultural Hydrology and Water Quality Conference, May 12-14, Kansas City, MO. AWRA: Middleburg, VA.
61. Ngandu, D.M., **K.R. Mankin**, C.J. Barden, W.A. Geyer, and S.L. Hutchinson. 2003. Riparian buffer system removal of sediment, N, P from runoff. AWRA Agricultural Hydrology and Water Quality Conference, May 12-14, Kansas City, MO. AWRA: Middleburg, VA.
62. Wang, L., **K.R. Mankin**, and G.L. Marchin. 2003. *E. coli* transport through silt loam soil column. AWRA Agricultural Hydrology and Water Quality Conference, May 12-14, Kansas City, MO. AWRA: Middleburg, VA.
63. **Mankin, K.R.**, G.L. Marchin, L. Wang, C. Okoren, and L. Molder. 2003. Fecal Bacteria: Sources, Dieoff, Transport, and Treatment. 20<sup>th</sup> Annual Water and the Future of Kansas Conference, March 5, Manhattan, KS.
64. Barden C.J., **K.R. Mankin**, D. Devlin, and W. Geyer. 2002. Assessing Riparian Buffer Effectiveness. Presented at 3<sup>rd</sup> Natural Resource Extension Professionals Conference, June 2002, Naples, FL. (poster – *Bronze Medal Award for outstanding poster*)
65. Barden C.J., **K.R. Mankin**, W. Geyer, and D. Devlin. 2002. Assessing the effectiveness of various riparian buffer vegetation types. Presented at 2002 Society of American Foresters National Convention, Oct. 5-9, Winston-Salem, NC.
66. Molder II, L.M. and **K.R. Mankin**. 2002. Fecal bacteria removal in batch-type constructed wetlands: An assessment. ASAE Paper No. 02-2262. Presented at 2002 ASAE International Meeting, Chicago, IL. ASAE: St. Joseph, MI.
67. Cundiff, J.S. and **K.R. Mankin**. 2002. Modeling Examples in a New Biological Systems Engineering Textbook: Is Modeling Needed for Undergraduate Engineers? ASAE Paper No. 02-4099. Presented at 2002 ASAE International Meeting, Chicago, IL. ASAE: St. Joseph, MI.
68. Wang, L. and **K.R. Mankin**. 2002. Fecal bacteria survival in animal manure. ASAE Paper No. 02-4099. Presented at 2002 ASAE International Meeting, Chicago, IL. ASAE: St. Joseph, MI.
69. Clark, P. and **K.R. Mankin**. 2002. Comparison of wastewater disposal options for small Kansas dairies. Paper No. MC02-301. Presented at ASAE Mid-Central Conference, St. Joseph, MO. ASAE: St. Joseph, MI. (no paper)
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71. Snethen, D. and **K.R. Mankin**. 2002. Fecal bacteria response to barnyard management – Literature review. Paper No. MC02-304. Presented at ASAE Mid-Central Conference, St. Joseph, MO. ASAE: St. Joseph, MI. (no paper)
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19. **Mankin, K.R.** and D.H. Rogers. 1999. What is ET? Kansas State University Cooperative Extension Service, MF-2389. 2 pp. [www.ksre.ksu.edu/library/ageng2/mf2389.pdf](http://www.ksre.ksu.edu/library/ageng2/mf2389.pdf).
20. Schrock, M.S., **K.R. Mankin**, and R. Lamond. 1999. Controlling Saline Seeps. Kansas State University Agricultural Experiment Station and Cooperative Extension Service, MF-2391. 4 pp. [www.ksre.ksu.edu/library/crpsl2/mf2391.pdf](http://www.ksre.ksu.edu/library/crpsl2/mf2391.pdf).
21. Powell, G.M., B.L. Dallemand, **K.R. Mankin**. 1998. Rock-plant Filter Design and Construction for Home Wastewater Systems. Kansas State University Cooperative Extension Service, MF-2340. 12 pp. [www.ksre.ksu.edu/library/h20ql2/mf2340.pdf](http://www.ksre.ksu.edu/library/h20ql2/mf2340.pdf).
22. Powell, G.M., B.L. Dallemand, **K.R. Mankin**. 1998. Rock-plant Filter Operation, Maintenance, and Repair. Kansas State University Cooperative Extension Service, MF-2337. 4 pp. [www.ksre.ksu.edu/library/h20ql2/mf2337.pdf](http://www.ksre.ksu.edu/library/h20ql2/mf2337.pdf).



23. Rogers, D.H., G.A. Clark, F.R. Lamm, and **K.R. Mankin**. 1997. Efficiencies and water losses of irrigation systems. Kansas State University Agricultural Experiment Station and Cooperative Extension Service, MF-2243. 6 pp. [www.ksre.ksu.edu/library/ageng2/mf2243.pdf](http://www.ksre.ksu.edu/library/ageng2/mf2243.pdf).
24. **Mankin, K.R.** 1995. The language of risk. *Kansas State Agriculturalist*, 40(2): 9.

## Funded Projects

*Total extramural amount: \$13,812,951 (73)*

1. Simmons, C. (MSU Lead), M. Caldas (KSU Lead), KSU CoPIs: W. Dodds, J. Smith, J. Peterson, B. Shaw, H. Peterson, R. Marston, S.L. Hutchinson, **K.R. Douglas-Mankin**. 2010. Globalization - Socio-economic, Political, and Environmental Interdependence: A Collaborative, Multi-Disciplinary, Multi-Cultural Education Exchange between the United States and Brazil (U.S. Lead: Michigan State Univ.; U.S. Partner: Kansas State Univ., Univ. Northern Iowa; Brazil Lead: Federal Univ. Para; Brazil Partner: Federal Univ. Bahia, Universidade de Sao Paulo-Bauru). U.S. Dept of Educ., Fund for the Improvement of Postsecondary Education (FIPSE). \$249,288 (4 years).
2. Devlin, D.L., A.Y. Sheshukov, **K.R. Douglas-Mankin**. 2009. Kansas Baseline Sediment Source Assessment. Kansas Water Resources Institute, \$50,000 (2 years).
3. Nelson, R.N., S. Staggenborg, D. Wang, M. Langemeier, and **K.R. Douglas-Mankin**. 2009. Investigation/Simulation of Environmental Impacts and Economic Impacts and Economic Feasibility for Sweet Sorghum as a Sustainable Bioenergy Crop in South Central United States to Help Meet EISA Goals. South Central Region Sun Grant Program. \$60,952 (2 years).
4. Rezak, M., **K.R. Mankin**, J.M. Peterson, P.H. Pfromm. 2009. From crops to commuting: integrating the social, technological, and agricultural aspects of renewable and sustainable biorefining (I-STAR). NSF Integrative Graduate Education and Research Traineeship (IGERT) Program, \$3,199,996 (5 years).
5. Rezak, M., **K.R. Mankin**, J.M. Peterson, P.H. Pfromm. 2009. *Matching support for*: From crops to commuting: integrating the social, technological, and agricultural aspects of renewable and sustainable biorefining (I-STAR). Kansas Bioscience Authority, \$781,000 (5 years); KSU Deans of Agriculture and Engineering, \$410,000 (5 years).
6. Devlin, D.L., **K.R. Mankin**, P.L. Barnes, R. Graber, R. Schlender, C. Smith, J. James, and W.L. Hargrove. 2008. Scientifically-Targeted Locations, Social Strategies, and Market-Based Incentives to Reduce Sediment Transport from Agricultural Lands. USDA-NRCS Conservation Innovation Grant, \$450,000 (3 years).
7. Nejadhashemi, A.P., C. Smith, J. Williams, **K.R. Mankin**, B. Golden. 2008. An Analysis of Sedimentation Reduction Strategies for Tuttle Creek Lake. Kansas Water Resources Institute Competitive Grants Program, \$89,436 (3 years).
8. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, A.P. Nejadhashemi, and W.L. Hargrove. 2008. Cottonwood River Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$81,021 (18 months).
9. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, A.P. Nejadhashemi, and W.L. Hargrove. 2008. Neosho Headwaters Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$104,270 (18 months).
10. **Mankin, K.R.**, and W.L. Hargrove. 2008. Upper Arkansas Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$76,000 (18 months).
11. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, A.P. Nejadhashemi, and W.L. Hargrove. 2008. Toronto Lake Watershed Planning Project: Kansas Watershed Restoration and Protection Strategy. KWP/KDHE, \$80,788 (1 year).
12. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, A.P. Nejadhashemi, and W.L. Hargrove. 2008. Oologah Lake – Big Hill Lake Watershed Planning Project: Kansas Watershed Restoration and Protection Strategy. KWP/KDHE, \$46,788 (1 year).
13. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, A.P. Nejadhashemi, and W.L. Hargrove. 2008. Neosho River Watershed Planning Project: Kansas Watershed Restoration and Protection Strategy. KWP/KDHE, \$195,575 (1 year).
14. Nejadhashemi, A.P., **Mankin, K.R.** 2008. Marmaton Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$40,000 (18 months).

15. Lummerzeim, M., F. Goulard, D. Boggs, W. Hargrove, **K. Mankin**, and D. Devlin. 2007. Natural Resources and Environmental Management for Sustainability: An international Joint Program. FACE (French American Cultural Exchange) Program, Partner University Fund, \$47,270 (3 years).
16. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2007. Elk City Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$68,000 (18 months).
17. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2007. Upper Verdigris River – Toronto Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$68,000 (18 months).
18. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2007. Big Hill Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$74,000 (18 months).
19. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2007. Pomona Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$75,000 (18 months).
20. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2007. Upper Arkansas River Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$86,000 (18 months).
21. Nelson, N.O., **K.R. Mankin**, M.R. Langemeier, D.L. Devlin, P.L. Barnes, T.L. Selfa, and W.L. Hargrove. 2006. Assessing the Impact of a Strategic Approach to Implementation of Conservation Practices. USDA-CSREES National Integrated Water Quality Program, Conservation Effects Assessment Project (CEAP), \$650,000 (3 years).
22. **Mankin, K.R.**, T. Keane, D.L. Devlin, P.L. Barnes, R. Marston, J. Neel, M. Christian, W.L. Hargrove. 2006. Land and Stream Sediment Process Restoration in an Agricultural Watershed. USDA-CSREES Integrated Research, Education and Extension Water Quality Program, \$595,000 (3 years). CRIS No. 0207836. Project No. KS600399.
23. Paukstelis, D. and **K.R. Mankin**. 2006. Sunset Zoo’s Water Safari. WaterLink Program, Kansas State University. \$3,373 (1 year).
24. Hargrove, W.L., J.C. Leatherman, **K.R. Mankin**, D.L. Devlin, and D. Snethen. 2006. Rapid Watershed Assessment for the (1) Upper Solomon River/Webster Lake and Kirwin Lake Watersheds, (2) Lower North Fork of the Solomon River/Waconda Lake Watershed, and (3) Lower South Fork of the Solomon River/Waconda Lake Watershed. USDA-NRCS 2006 Cooperative Conservation Partnership Initiative, \$150,000 (18 months).
25. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Big Hill Creek Watershed Development Project: Kansas Watershed Restoration and Protection Strategy. KWP/KDHE, \$31,041 (1 year).
26. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Upper Verdigris - Toronto Lake Watershed Development Project: Kansas Watershed Restoration and Protection Strategy. KWP/KDHE, \$31,041 (1 year).
27. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Elk City Lake Watershed Development Project: Kansas Watershed Restoration and Protection Strategy. KWP/KDHE, \$31,041 (1 year).
28. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Tuttle Creek Lake Watershed Development Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$95,100 (1 year).
29. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Milford Lake Watershed Development Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$95,100 (1 year).
30. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Middle Neosho Watershed Development Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$95,100 (1 year).
31. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2006. Oologah Lake Watershed Development and Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$55,175 (1 year).
32. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2006. Tuttle Creek Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$162,300 (18 months).
33. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2006. Milford Lake Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$162,300 (18 months).

34. **Mankin, K.R.**, J.C. Leatherman, D.L. Devlin, and W.L Hargrove. 2006. Middle Neosho Watershed Assessment Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$204,900 (18 months).
35. Leatherman, J.C., **K.R. Mankin**, D.L. Devlin, and W.L Hargrove. 2006. Lower Verdigris Watershed Planning Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$49,850 (1 year).
36. Devlin, D.L., S.L. Minson, **K.R. Mankin**, Leatherman, J.C., and W.L Hargrove. 2006. Smoky Hill Watershed Implementation Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$159,184 (2 years).
37. Devlin, D.L., R. Graber, **K.R. Mankin**, Leatherman, J.C., and W.L Hargrove. 2006. Little Ark Watershed Implementation Project: Kansas Watershed Restoration and Protection Strategy. EPA 319/KDHE, \$85,140 (1 year).
38. Parajuli, P. and **K.R. Mankin**. 2006. Travel Grant, ASABE International Meeting, July 9-13, Portland, OR. K-State Graduate Student Council, \$150 (1 year).
39. Devlin, D.L., **K.R. Mankin**, P.L. Barnes, T.D. Keane, M.R. Langemeier. 2005. Measuring Success of a TMDL Implementation Plan: Land, Stream, and Economic Responses to Targeted Stakeholder Actions. USDA-CSREES Integrated Research, Education and Extension Water Quality Program, \$585,000 (3 years).
40. Hargrove, W.L., **K.R. Mankin**, D.L. Devlin, J.C. Leatherman. 2005. Interdisciplinary Environmental Grant Writer position. AES (Forrest Chumley), \$150,000 (3 years; hired April 17, 2006).
41. Hargrove, W.L., D.L. Devlin, **K.R. Mankin**, J.C. Leatherman. 2005. Internal Extension Minigrants to support WRAPS implementation. CES (Daryl Buhholz), \$150,000 (3 years).
42. Koelliker, J.K., J.P. Harner, K.R. Mankin, D.F. Leikam, G.M. Pierzynski. 2005. Evaluation system for alternative technologies for feeding operations (CAFOs) to manage process wastewater and nutrients. \$213,000 (2 years).
43. Devlin, D.L., R. Graber, P.L. Barnes, **K.R. Mankin**, T.D. Keane. 2005. Little Ark WRAPS Implementation Project. EPA 319/KDHE, \$85,140. City of Wichita, \$10,000. State Conservation Commission, \$10,000. (1 year)
44. Peterson, J.M., J.C. Leatherman, T.L. Marsh, **K.R. Mankin**. 2004. Integrating Economic and Biophysical Models to Assess the Impacts of Water Quality Trading. US EPA-ORD-NCER, STAR Program, Market Mechanisms and Incentives for Environmental Management, \$157,283 (2 years).
45. Tuppard, P. and **K.R. Mankin**. 2004. Travel Grant, AWRA GIS and Water Resources Specialty Conference, May 17-19, Nashville, TN. K-State Graduate Student Council, \$200 (1 year).
46. Anand, S. and **K.R. Mankin**. 2004. Travel Grant, AWRA GIS and Water Resources Specialty Conference, May 17-19, Nashville, TN. K-State Graduate Student Council, \$200 (1 year).
47. Anand, S. and **K.R. Mankin**. 2004. Comparing field-scale water quality prediction for two curve-number based models. AWRA GIS and Water Resources Specialty Conference, May 17-19, Nashville, TN. Kansas NSF EPSCoR Graduate Student Travel Award, \$500 (1 year).
48. **Mankin, K.R.**, W.L. Hargrove, G.L. Marchin, D.L. Devlin, P.L. Barnes, J.P. Harner, J.M. DeRouchey. 2003. Sources and Abatement of Fecal Bacteria in a High Priority TMDL Watershed in NE Kansas. USDA-CSREES Integrated Research, Education and Extension Water Quality Program, \$550,000 (3 years).
49. Peterson, J., J. Leatherman, T. Marsh, **K.R. Mankin**, K.M. Boone. 2003. Assessing the feasibility of a nonpoint source water pollution trading program for Kansas: An exploration of factors influencing program effectiveness. Kansas Fertilizer Research Fund, \$61,412 (1 year).
50. Pierzynski, G.M., D. Leikam, R. Lamond, D. Sweeney, P.L. Barnes, **K.R. Mankin**. 2003. Plant nutrient source effects on surface runoff characteristics. Kansas Fertilizer Research Fund, \$219,994 (3 years).
51. Wang, L. and **K.R. Mankin**. 2003. Kinetic model for *E. coli* transport through sand columns – Travel Award. Kansas NSF EPSCoR, \$500 (1 year).
52. Murphy, J.P., J.P. Harner, P.L. Barnes, G.A. Clark, W.M. Eberle, W.L. Hargrove, S.L. Hutchinson, **K.R. Mankin**, R.V. Pope, G.M. Powell, D.H. Rogers. 2003. Waste Management Water Quality Protection Learning Center – Part 2. U.S. EPA, \$174,724 (2 years).
53. Pierzynski, G.M., **K. Mankin**, D. Devlin, D. Regehr, M. Langemeier, K. Janssen, D. Sweeney, and K. McVay. 2001. Integrated agricultural management systems for improving water quality in Kansas. USDA-CSREES Integrated Research, Education and Extension Water Quality Program, \$560,000 (3 years).
54. Hutchinson, S.L., **K.R. Mankin**, C.B. Young, C.J. Barden. 2001. Evaluation of riparian zones for controlling non-point source pollution in NE Kansas. EPA-EPSCoR, \$247,922 (2 years).

55. **Mankin, K.R.**, S.L. Hutchinson, J.P. Harner. 2001. Performance Evaluation of Wetlands in Northeast Kansas. KDHE, \$180,735 (3 years).
56. **Mankin, K.R.** 2001. Fecal bacteria response to barnyard management – Literature review. KDHE, \$2,000 (6 months).
57. **Mankin, K.R.** 2001. Clinton Lake and Horseshoe Creek Water Quality Assessment Projects – Publications. KDHE, \$2,000 (6 months).
58. **Mankin, K.R.**, J.K. Koelliker, J.A. Harrington. 2000. Kanopolis Watershed Water Quality Assessment. KDHE, \$351,553 (3 years).
59. Barden, C., **K. Mankin**, and D. Devlin. 2000. Water quality improvement of vegetated riparian areas and buffers. KDHE, \$250,472 (3 years).
60. Marchin, G.L., **K.R. Mankin**, D.W. Graham, and L.E. Erickson. 1999. An Integrated Approach to Characterize and Reduce Microbial Pathogens, Nutrients, and Sediment Transport in Runoff and Drinking Water Sources. EPA-EPSCoR, \$147,821 (2 years).
61. Marchin, G.L., **K.R. Mankin**, D.W. Graham, and L.E. Erickson. 1999. An Integrated Approach to Characterize and Reduce Microbial Pathogens, Nutrients, and Sediment Transport in Runoff and Drinking Water Sources. KTEC, \$110,865 (2 years).
62. Rice, C., J. Harner, **K. Mankin**, G. Marchin, R. Jones. 1999. Water Contaminants Evaluation Study. Kansas Dept. of Agriculture, \$146,000 (18 months).
63. **Mankin, K.R.**, P.L. Barnes. 1999. Benefits of Waterways and Ponds for Water Quality. KCARE, \$11,300 (2 years).
64. **Mankin, K.R.**, M.B. Kirkham. 1999. Vegetative Reclamation of Abandoned Swine Lagoons. KCARE, \$5,000 (2 years).
65. **Mankin, K.R.**, P.L. Barnes, J.P. Harner, G.M. Powell. 1999. Ecological Livestock Pollution Control– Performance Evaluation, KDHE, \$245,125 (3 years).
66. Nelson, R.G., **K.R. Mankin**, P.L. Barnes. 1999. Plant 1,000 to 2,000 Acres of Switchgrass in the Perry Reservoir Basin for Co-firing at the Jeffrey Energy Center and Evaluation of Environmental Benefits. Kansas Corporation Commission, \$22,694 (1 year).
67. Koelliker, J.K., G. Clark, D. Rogers, P. Kalita, **K. Mankin**. 1998. Water Resources Distance Education Program Development and Delivery. Division of Continuing Education, Kansas State University, \$52,000 (2 years).
68. Koelliker, J.K., **K.R. Mankin**. 1997. Clinton Lake Water Quality Assessment Project. KDHE, \$72,500 (2 years).
69. Kalita, P.K., **K.R. Mankin**. 1997. Horseshoe Creek Water Quality Assessment Project. KDHE, \$55,300 (2 years).
70. **Mankin, K.R.**, M. Schrock, J. Havlin (Agronomy), G. Kluitenberg (Agronomy), R. Nelson (Engineering Extension), G. Clark, and N. Zhang. 1996. Bioremediation of saline seeps. North Central Region SARE Program, USDA-CSREES, \$77,778 (2 years).
71. Powell, G.M. and **K.R. Mankin**. 1996. Rock-plant filter demonstration project evaluation and monitoring, Phase III. Labette County Health Department, \$32,500 (2 years).
72. Koelliker, J.K., P.K. Kalita, **K.R. Mankin**. 1996. Melvern Lake Water Quality Assessment Project. KDHE, \$60,000 (2 years).
73. Kalita, P.K., J.P. Harner, G.A. Clark, and **K.R. Mankin**. 1996. Reclamation of abandoned livestock production sites. KDHE, \$32,414 (2 years).

## Advising

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### *Postdoctoral Research*

Sreepathi, R., 8/1999-9/1999, Vegetative filter strips for microbial degradation  
 Zhang, Qizhi, 10/1999-4/2001, Modeling reduction of microbial pathogens in VFSs  
 Hutchinson, J.M. Shawn, 7/2000-12/2001, Remote sensing for the Kanopolis Lake watershed assessment  
 Maski, Devanand, 8/2004-12/2006, Calibration of ADAPT and SWAT for field-scale BMPs  
 Nejadhashemi, A. Pouyan, 7/2006-6/2008, Watershed Modeling Specialist  
 Sheshukov, Aleksey, 8/2008-present, Watershed Modeling Specialist

### *Ph.D. Program*

Karthikeyan, R., 2001, Experimental and modeling studies on fate and transport of petroleum contaminant in soils with plants  
 Wang, Lin, 2003, Fecal bacteria survival in cow manure and *E. coli* release and transport through porous media  
 Tuppad, Pushpa, 2006, Hydrologic modeling response to NEXRAD and raingage spatial variability and strategic watershed management  
 Parajuli, Prem, 2007, SWAT bacteria sub-model evaluation and application  
 Lee, Ming-Chieh, 2009, Assessment of environmental benefits for water quality trading  
 Daggupati, Naga Prasad, 2011\*, Modeling ephemeral gullies at the watershed scale  
 Sinnathamby, Sumathy, 2013\*, Sediment source modeling

### ***M.S. Program***

He, Qiang, 2000, Assessment and modeling of wastewater treatment using rock-plant filters  
 Ikenberry, Charles D., 2001, Batch-reactor constructed wetlands for livestock wastewater treatment  
 Okoren, Cairo G., 2002, A model of infiltration and subsurface transport of *E. coli*  
 Ngandu, Daniel M., 2004, Grass-shrub riparian buffer removal of N, P, and sediment from surface runoff  
 Anand, Shilpa, 2004, Calibration of a field-scale water quality model  
 Molder II, Larry M., 2006, Treatment of fecal bacteria in batch reactor wetlands  
 Gali, Rohith, 2010, Assessment of NEXRAD P3 data on streamflow simulation using SWAT  
 Modala, Naga Raghuvver, 2010, Methods to integrate overland, ephemeral gully and streambank erosion models  
 Siebenmorgen, Chris, 2010, Potential climate change impacts on hydrologic regimes in northeast Kansas  
 Perkins, Seth, 2011\*, Modeling Sweet Sorghum production & environmental impact as a sustainable bioenergy crop  
 \*expected

### ***Undergraduate Honors***

Davisson, Amy, 1999, Benefits of small ponds for water quality  
 Stromberg, Kajsia, 2000, Characterization of Narrowleaf Cattail performance in wastewater treatment of wetland cells (1<sup>st</sup> place, Mid-Central ASAE Student Paper 2000)  
 Gregory, Elizabeth, 2001, Hydraulic characterization of rock-plant filter media  
 Precht, Kimberly, 2001, Vegetative reclamation of abandoned swine lagoon soils  
 Morris, Jennifer, 2002, Design and testing of a soil tilting table to study VFS effectiveness  
 Tolle, Sean, 2006, Effects of Constructed Wetlands on Fecal Coliform Removal from Livestock Lagoon Effluent

### ***Undergraduate (1998-2010)***

Biological and Agricultural Engineering – 78 students: 36 graduated, 20 active  
 Agricultural Technology Management – 40 students: 29 graduated, 2 active

### ***Advisees Currently in Faculty Positions***

Qiang He, Assistant Professor, Civil and Environmental Engineering, University of Tennessee  
 R. (Karthi) Karthikeyan, Associate Professor, Biological and Agricultural Engineering, Texas A&M University  
 A. Pouyan Nejadhashemi, Assistant Professor, Biosystems and Agricultural Engineering, Michigan State University  
 Prem Parajuli, Assistant Professor, Agricultural and Biological Engineering, Mississippi State University

## **Courses Taught**

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### ***Active***

**Watershed Management** (or Water and Waste in the Environment) (ATM 661–3 cr), Kansas State Univ., Agricultural Technology Management Program, 2002 (*major revision*), 2003, 2004, 2006, 2007, 2009, 2010.  
**Watershed Modeling** (BAE 669/869–3 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2008 (*new course*), 2010.  
**Natural Resource Engineering II** (BAE 660–3 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2009.  
**Introduction to Biological and Agricultural Engineering and Technology** (BAE 200–2 cr, BAE 101–1 cr), Kansas State Univ., Biological and Agricultural Engineering Dept. and Agricultural Technology Management Program, 2002 (*new course*), 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010.

- Introductory Design for Biological and Agricultural Engineers** (BAE 131–1 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2007 (*new course*), 2008, 2009, 2010.
- Biological Systems Engineering Project I** (BAE 231–1 cr), Kansas State Univ., Biological and Agricultural Engineering Dept. (co-instructor), 2008 (*new course*), 2009, 2010.
- Biological Systems Engineering Project II** (BAE 331–1 cr), Kansas State Univ., Biological and Agricultural Engineering Dept. (co-instructor), 2008 (*new course*), 2009, 2010.
- Agricultural Resources and Environmental Management Introduction** (GENAG 670 [was 780B]–2 cr), Kansas State Univ. and Ecole Supérieure d’Agriculture de Purpan – Toulouse, France (team taught), 2008, 2009 (lead), 2010 (lead), 2011 (lead).
- Agricultural Resources and Environmental Management Capstone** (GENAG 870 [was 780C]–1 cr), Kansas State Univ. and Ecole Supérieure d’Agriculture de Purpan – Toulouse, France (team taught), 2008 (lead), 2009 (lead), 2010 (lead).
- Natural Resource Engineering Topics: Journal Seminar** (BAE 820–1 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2009 (*new course*), 2010.
- Natural Resources and Environmental Sciences Capstone** (DAS/DEN/GENAG 582–3 cr), Kansas State Univ., Natural Resources and Environmental Sciences Secondary Major, 1998 (team taught), 2010 (team taught).
- Former*
- Natural Treatment Systems** (BAE 761–3 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2002 (*new course*), 2004
- Hydrology** (BAE/CE 551–2 cr), Kansas State Univ., Biological and Agricultural Engineering and Civil Engineering Depts., 1995 (co-taught), 1996, 1997, 1998, 1999, 2000, 2001
- Energy in Biological Systems** (BAE 521–3 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 1996 (*new course*), 1997, 1998, 1999, 2000, 2001
- Nonpoint Pollution Engineering** (BAE 690–3 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 1999 (co-instructor)
- Soil Erosion and Sediment Pollution Control** (ATM 558–3 cr), Kansas State Univ., Agricultural Technology Management Program, 1997, 1998, 1999, 2000, 2001
- Environmental Engineering Seminar** (BAE 760/CE 760–0 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., Every Semester Fall 2004 (*new course*) to Spring 2008 (8 times)
- Watershed Modeling (SWAT–Topics Course)** (BAE 820–3 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2004 (*new course*), 2005
- Water and Waste in the Environment Seminar** (BAE 620–1 cr), Kansas State Univ., Biological and Agricultural Engineering Dept., 2002 (*new course*), 2003.
- Water Resources and Hydrology** (ATM 451–2 cr), Kansas State Univ., Distance Education (Internet Course), Agricultural Technology Management Program/Division of Continuing Education, 1999 (*new course*)
- Water Quality Management** (NR 355–3 cr), The Ohio State Univ., School of Natural Resources, 1994 (Winter, Spring)
- Engineers, Scientists, and Gender** (DEN 398–3 cr), Kansas State Univ. (*developed, but not taught*)

## Honors and Awards

- Farm Foundation; Agriculture, Food, Nutrition, and Natural Resources R&D Roundtable; Exemplary R&D Collaborations: Adoption of BMPs and Water Quality (Little Ark Watershed, KS), Case Study Selected for Special Recognition (1 of 14 selected nationally [61 nominated]) ([www.farmfoundation.org](http://www.farmfoundation.org)), 2011
- USDA-NIFA, Project of Excellence, Sources and Abatement of Fecal Bacteria in a High Priority TMDL Watershed in NE Kansas, Project Principal Investigator, 2011
- USDA-NIFA, Project of Excellence, Measuring Success of a TMDL Implementation Plan: Land, Stream, and Economic Responses to Targeted Stakeholder Actions, Project Co-Investigator, 2011
- USDA-CSREES, Mission Integration Award, K-State Integrated Watershed Restoration and Protection Strategies Team, Project Team Co-leader, 2009
- Who’s Who in Engineering Academia (<http://academickeys.com/>), 2008
- Who’sWho in America® (Marquis), 2008
- ASABE, National AEM Student Branch of the Year, Advisor, 1999, 2000, 2004, 2006, 2007.
- Faculty Leadership Recognition Award, Engineering Student Council, Kansas State University, 2006
- Making a Difference Award, Women in Engineering in Science Program, Kansas State University, 2005

NACTA, E.B. Knight Paper Award, 2004  
 Outstanding Advisor, Biological and Agricultural Engineering, Kansas State University, 2004  
 College of Agriculture Teaching Award of Excellence Honoree, Kansas State University, 2002, 2003, 2004, 2005  
 ESCOP/ACOP Leadership Development Program (*now*, LEAD21), Class 14, 2004  
 ASAE, A.W. Farrell Young Educator Award, 2003  
 ASAE, Mid-Central Conference, Young Member of the Year, 2002  
 Who's Who in Engineering Education (<http://academickeys.com/>), 2002  
 Nominated for Student Organization Advisor of the Year, Kansas State University, 2002 (1 of 15 university wide)  
 Order of the Engineer, Member, 2002  
 ASAE, Kansas Section, Young Member of the Year, 2001  
 Nominated for Advisor of the Year, Kansas State University, College of Engineering, 1999  
 Nominated for Faculty of the Semester, Kansas State University, College of Agriculture, 1998  
 Who'sWho in Science and Engineering® (Marquis), 3<sup>rd</sup> ed., 1996  
 Charles E. Thorne Memorial Associateship, 1992-1993  
 OARDC Director's Fellowship, 1990-1993  
 Phi Beta Delta, Honor Society for International Scholars, Member, 1995  
 Sigma Xi, The Scientific Research Society, Associate Member, 1994; Member, 2002  
 Phi Kappa Phi, Academic Honorary Society, Member, 1993  
 Alpha Epsilon, Professional Honorary in Agricultural Engineering, Member, 1991  
 Gamma Sigma Delta, Agricultural Honorary Society, Member, 1987

### Professional Organizations

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American Society of Agricultural and Biological Engineers (ASABE)  
     Member Engineer, since 1995  
     Student Member, 1983-87, 1990-1995  
 American Society of Engineering Education (ASEE)  
     Member, since 1998  
 American Water Resources Association (AWRA)  
     Member, since 1999  
 American Ecological Engineering Society (AEES)  
     Member, since 2001  
 Soil and Water Conservation Society (SWCS)  
     Member, since 1994  
 Institute of Biological Engineering (IBE)  
     Member, since 1998  
 International Association of Environmental Hydrology (IAEH)  
     Member, since 2002  
 Association of Graduate Students at OARDC, Wooster  
     Founding Member; Departmental Representative, 1993  
 Alpha Epsilon Honorary Society  
     President—Ohio State Univ. Chapter, 1991-1992; Active Member, since 1991

### Professional Service

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International Profession  
     Editor-in-Chief, Journal of Natural & Environmental Sciences, Academy Science Journals, 2011-present  
     Editor, Transactions of the ASABE, Soil and Water (SW) Division, 2008-present  
     Editor, Applied Engineering in Agriculture, Soil and Water (SW) Division, 2008-present  
     Special Collections (ASABE): SWAT 2010, Watershed Management 2011, SWAT 2011, Forest Hydrology 2011, Watershed Model Calibration, Validation, and Use 2012.  
 International Conference Planning Committees  
     Member, ASABE Watershed Technology, Bari, Italy, 2012  
     Member, ASABE International Symposium on Erosion and Landscape Evolution, Anchorage, AK, USA, 2011  
     Member, 2<sup>nd</sup> International SWAT-SEA Conference, Ho Chi Minh City, Vietnam, 2011  
     Member, ASABE TMDL: Watershed Management to Improve Water Quality, Baltimore, MD, USA, 2010

Proceedings Chair/Editor, ASABE 10<sup>th</sup> National Symposium on Individual and Small Community Sewage Systems, 2004

National Profession

US EPA, Science Advisory Board, Hypoxia Advisory Panel, 2006-07

Member, Universities Council on Water Resources, Carbondale, IL, 2005-09.

USDA-NRI, Watershed Processes and Water Resources Grant Review Panel, 2006 (58 proposals).

USDA-CSREES Program Review Panel, Biol. and Agric. Eng. Dept., Louisiana State Univ., 2004

USDA-NRI, Watershed Processes and Water Resources Grant Review Panel, 2003 (162 proposals).

ASABE International Society

Associate Editor, Transactions of the ASABE, Soil and Water (SW) Division, 2004-08

Nominating Committee, 2007-09

Textbooks and Monographs Group (P-515), Member, 2004-05, Chair 2005-09

Soil and Water Division, Executive (SW-01), SW-26 Rep., 2004-05, SW Div. Ed. Rep, 2008-present

Soil and Water Division, Steering (SW-02), SW-26 Rep., 2004-05, SW Div. Ed. Rep, 2008-present

Soil and Water Division, Publications Review (SW-05), Chair, 2008-present, Member, 2002-08

Soil and Water Division, Paper Awards (SW-06), Chair, 2008-present, Member, 2002-08

Countryside Engineering Section (SW-26), Chair, 2005, 2011-13; Vice-chair, 2004, 2009-11

Environmental Coordinating (T-9), Member 2007-08

Bioenergy Coordinating (T-11), Member 2007-09

Rural/Urban Resource Management Group (SW-265), Chair, 2005-06

Home Sewage Disposal Group (SW-262), Chair, 2002-04; Vice-chair, 2001; Member, 2000-05

Hydrology Group (SW-21), Member, 2000-09 (3 terms)

Soil Erosion Group/Pollution by Sediments (SW-224), Member, 1999-2011

Water Resource Structures Group (SW-25), Member, 1999-2005

Agricultural Waste Management Group (SE-412), Member, 2000-04

Student Organizations Group (P-120), Chair, 1999; Secretary, 1998

A.W. Farrell Selection Committee (M-115), Chair, 2005; Secretary, 2004; Member, 2004-06

Robert Stewart Eng. Humanities Award Selection Committee (M-122), Chair, 2009; Member 2007-10

ASABE Mid-Central Region

Conference Chair, 2002

Program Chair, 2001

Program Committee, 2000

Treasurer/Secretary, 1999

ASABE Kansas Section

Awards and Recognition Committee, 2003-05

Section Awards Committee, 2002-04

Treasurer/Secretary, 1998-99

SWCS Manhattan Chapter

Vice Chair, 2003-05, Chair, 2005-06

College of Agriculture, Kansas State University, Committees

Web Advisory, 2004-present

International Steering, 2002-present

Committee on Effective Instruction, 1997-2000

Technology in the Classroom and Distance Education Advisory Committee, 1998-2000

College of Engineering, Kansas State University, Committees

ECCOP (Engineering College Committee on Planning), 2009-present

Strategic Planning, 2008

National Society of Black Engineers, K-State Chapter, Advisor/Co-dean, 2004-present

Multicultural Engineering Program Interim Director Search Committee, Chair, 2004

Diversity, 2003-present

International Programs, 2002-present

Course and Curriculum, 2005-present

Safety, 2005-present

Professional Experience, 2002-03

Learning Effectiveness, 1998-2000



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Department of Biological and Agricultural Engineering, Kansas State University, Committees  
DCOP (Department Committee on Planning), 2009-present  
Department Head Search, 2010  
ASAE Student Branch, Co-advisor, 1997-98; Advisor, 1998-2000, 2003-04; Co-advisor, 2004-05; Advisor  
2005-06  
Open House, Advisor, 1998; Co-advisor 2000; Advisor 2001-06  
BAE Club Annual Pancake Feed Coordinator, 1999-present  
ATM Career Development Event, 1996-present  
Recruitment, Chair, 2003-present  
Undergraduate Programs Assessment, 2003-present  
Web Page, 1997-present  
Natural Resources Technical, 1997-present  
Course and Curriculum, 1997-98, 2000-03, 2005-present  
Social, Chair, 1997-2002, Member, 2003-07  
Scholarship, 1997-98  
Darby Creek Farmer Canoe Trips, Natural Resources Facilitator, Ohio State University Extension, 1994  
The Ohio State University, Ohio Agricultural Research and Development Center  
Administrative Council, OARDC, Graduate Student Representative, 1993  
Academic Affairs Committee, Department of Agricultural Engineering, Member, 1992-93  
Ohio State Fair, 4-H Agricultural Engineering Day, 1992  
Judge of Small Engines, and Lawn and Garden Equipment Divisions  
Pennsylvania State University, Department of Agricultural Engineering  
Academic Misconduct Committee, Member, 1983-87