

Education

Ph.D., Soil Science (minor - Statistics), North Carolina State University, 1991.
M.S., Applied Statistics, Utah State University, 1987.
M.S., Soil Science (minor - Weed Science), North Carolina State University, 1980.
B.S., Agronomy, Cornell University, 1976.

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Summary of Work Experience

Director, Professor, Soil & Water Environmental Technology Center (SWETC), NCSU Water Quality Group, Department of Biological & Agricultural Engineering, North Carolina State University, Raleigh, NC.	2002 to present
Group Leader, Extension Associate Professor, Water Quality Extension Specialist, NCSU Water Quality Group, Department of Biological & Agricultural Engineering, North Carolina State University, Raleigh, NC.	1991 to present
Visiting Instructor/Water Quality Extension Specialist, NCSU Water Quality Group, Department of Biological & Agricultural Engineering, North Carolina State University, Raleigh, NC.	1984 to 1990
Statistician Senior, Morton Thiokol Corporation, Brigham City, UT.	1981 to 1984
Assistant Statistician, Department of Statistics, North Carolina State University, Raleigh, NC.	1980 to 1981
Graduate Research Assistant, Department of Soil Science, North Carolina State University, Raleigh, NC.	1976 to 1980

Dr. Jean Spooner has more than 25 years of experience in soil science, statistical analysis, and water quality issues. She is an expert in the application of statistical analyses to evaluate changes in water quality associated with non-point source (NPS) pollution controls. Dr. Spooner has also provided data analysis and technical assistance to NPS projects on water quality and land treatment monitoring designs.

Currently, serves as the Director of the Soil & Water Environmental Technology Center and Group Leader, Extension Professor, and Water Quality Extension Specialist for the NCSU Water Quality Group. Primary technical responsibilities include designing and performing statistical analyses which demonstrate significant improvements in water quality associated with nonpoint source (NPS) control programs. Provide technical assistance on water quality and land treatment monitoring design and statistical analyses to state nonpoint source control programs and water quality projects nationwide. Perform technical review of state NPS control project plans and achievements. Compile of lessons learned from federal and state NPS control project design, planning, implementation, water quality monitoring and evaluation as a basis for optimizing future water quality programs. Perform research using project monitoring results; technical analysis, synthesis, and publication of results from watershed programs such as U.S. EPA's Section 319 National Monitoring Program and the Rural Clean Water Program.

In previous positions, provided consulting services for experimental designs and statistical analyses for soil science and crop science faculty and graduate students. Extensive statistical computing in SAS and FORTRAN was performed. Conducted research concerned the field measurement of nitrous oxide evolution from poorly drained soils. Extensive gas chromatography usage and laboratory analyses were also performed. Provided quantitative analyses of heavy metals using digestion and atomic absorption techniques. Analyzed soil samples for nutrients. Performed field investigations, sampling, lab analyses for fecal coliform and heavy metal quantification, and write up of pollution complaints.

Professional Service

Member, American Statistical Association (ASA)
Member, American Society of Agronomy (ASA)
Member, American Water Resources Association (AWRA)
Member, Epsilon Sigma Phi
Member, Ground Water Professionals of North Carolina
Member, North American Lake Management Society (NALMS)
Member, North Carolina American Statistical Association
Member, North Carolina Association of Cooperative Extension Specialist (NCACES)
Member, North Carolina SAS User's Group
North Carolina Water Resources Association (NCWRA), Past-President and Treasurer
Member, Soil Science Society of North Carolina

Professional Awards

Citizens Award. North Carolina Chapters of the American Society of Landscape Architects. 2001.
NC Hugh Bennett Merit Award (for NCSU Water Quality Group), Soil and Water Conservation of NC, 2000.
American Society of Agricultural Engineers' Educational Aids Competition Blue Ribbon Award, 1996
Honored Member, National Directory Who's Who, 1996-1997
1992 Election to Full Membership in Sigma Xi (the Scientific Research Society)
1991 Kenneth R. Keller Research Award for Excellence in Doctoral Dissertation Research in the College of Agriculture and Life Science at NCSU
Phi Kappa Phi
Gamma Sigma Delta (Agricultural Honor Society)
PRO Award for Outstanding Employee for Thiokol, Inc., 1983
Hugh H. Bennett Scholarship from the NC Chapter of the Soil Conservation, Society of America (outstanding graduate student in Soil Science, N.C. State University), 1979
Outstanding Senior Agronomy Award from the Agronomy Society of America, Cornell University, 1976.

Selected Publications

Schilling, K.E. and J. Spooner. 2006. Effects of Watershed-Scale Land Use Change on Stream Nitrate Concentrations. *J. Environmental Quality* (In-Press, accepted for publication).

Doll, Barbara A., D. E. Wise-Frederick, C.M. Buckner, S.D. Wilkerson, W.A. Harman, R.E. Smith, and J. Spooner. 2002. Hydraulic Geometry Relationships for Urban Streams Throughout the Piedmont of North Carolina. *Journal of the American Water Resources Association* 38(3):641-651.

- Line, D.E., D.L. Osmond, L.A. Lombardo, G.L. Grabow, D.E. Wise-Frederick, J. Spooner, and K. Hall. 2002. Nonpoint Sources. *Water Environment Research* 41 (published via www at <http://www.wef.org/periodicals/>).
- Line, D.E., D.L. Osmond, R.A. McLaughlin, L.L. Lombardo, G.L. Grabow, D. Wise-Frederick, and J. Spooner. 2001. Nonpoint Sources. *Water Environment Research* 73(5):898-920.
- Davenport, T.E., J. Spooner, L.A. Lombardo, and G.L. Grabow. 2001. National Nonpoint Source Monitoring Program: Document Water Quality Improvements from Best Management Practices Through Long-Term Monitoring Projects. Proceedings: WEF and ASIWPCA TMDL Science Issues Conference, March 2001, St. Louis, Missouri.
- Davenport, T.E., J. Spooner, L.A. Lombardo, and G.L. Grabow. 2001. Documenting Water Quality Improvements Through Long-Term Urban Watershed Projects. Proceedings: ASCE / EPA conference Linking Stormwater BMP Designs and Performance to Receiving Water Impacts Mitigation in Snowmass, CO in August, 2001.
- Lombardo, L.A., G.L. Grabow, D.E. Line, J. Spooner, and D.L. Osmond 2001. 2001 Summary Report: Section 319 National Monitoring Program Projects, National Nonpoint Source Watershed Project Studies, NCSU Water Quality Group, Biological and Agricultural Engineering Department, North Carolina State University, Raleigh, NC.
- Spooner, J., L.A. Lombardo, G.L. Grabow, D.E. Line, and D.L. Osmond. 2001. National Nonpoint Source Monitoring Program: Long-Term Monitoring Projects Document Water Quality Improvements from Best Management Practices. Proceedings: 9th National Nonpoint Source Monitoring Workshop: Monitoring and Modeling Nonpoint Source Pollution in Agricultural Landscapes, Indianapolis, Indiana, August 2001 (In Press).
- Spooner, J., L.A. Lombardo, G.L. Grabow, D.E. Line, Greg Jennings, and D.L. Osmond. 2001. National Nonpoint Source Monitoring Program: Water Quality Improvements from Best Management Practices Documented by Long-Term Monitoring Projects. Proceedings: 5th International Conference on Diffuse/Nonpoint Pollution and Watershed Management, June, 2001, Milwaukee, WI.
- Spooner, J., Line, D.E., Grabow, G.L., Lombardo, L.A., Tweedy, K.L., Humenik, F.J., and Osmond, D.L. Contributions and successes of long-term watershed programs in the United States: the rural clean water program and the section 319 national monitoring program. In: Proceedings of the International Conference on Diffuse Pollution, 'Solutions Innovations.' May 16-20, 1999, Western Australia.
- Lombardo, L.A., G.L. Grabow, J. Spooner, D.E. Line, D.L. Osmond, and G.D. Jennings. 2000. Section 319 Nonpoint Source National Monitoring Program: Successes and Recommendations.
- Line, D.E., D.L. Osmond, R.A. McLaughlin, W.A. Harman, K.L. Tweedy, L.A. Lombardo, and J. Spooner. 2000. Nonpoint Sources. *Water Environment Research* 72(5):898-920.