

JERAD D. BALES

U.S. Geological Survey
3915 Sunset Ridge Road
Raleigh, North Carolina 27607

Phone: 919-571-4048
Fax: 919-571-4041
email: jdbales@usgs.gov

EDUCATION

- Ph.D. Civil Engineering (Water Resources Engineering), University of Texas, Austin; December 1986
- M.S. Civil Engineering (Environmental Engineering), University of Tennessee, Knoxville; August 1978
- B.S. Civil Engineering, University of Tennessee, Knoxville; March 1977

PROFESSIONAL EXPERIENCE

- Jan. 2007 – present: Director, U.S. Geological Survey North Carolina Water Science Center
- Aug. 1998 – Jan. 2007: Hydrologist, U.S. Geological Survey, Raleigh, NC
- Mar. 1998 – Aug 1998: Sr. Water Resources Engr., Dewberry & Davis, Raleigh, NC
- Sept. 1986 – Feb 1998: Hydrologist and Supervisory Hydrologist, U.S. Geological Survey, Raleigh, NC
- Sept. 1990 – Aug 1996: Adjunct Prof., Dept. of Geography, University of North Carolina, Chapel Hill
- Sept. 1988 - Dec. 1988: Visiting Asst. Prof., Forestry and Envr. Studies, Duke University, Durham, NC
- Aug. 1981 - Aug. 1986: Research Assistant, Dept. of Civil Engineering, University of Texas, Austin
- Aug. 1978 - Aug. 1981: Civil Engineer, Water Systems Development Branch, TVA, Norris, TN
- Jan. 1981 - Mar. 1981: Lecturer, Dept. of Civil Engineering, University of Tennessee, Knoxville
- Mar. 1977 - Aug. 1978: Res. Asst. and Lab Instructor, Dept. of Civil Engrng., Univ. of Tennessee

OVERVIEW

Jerad Bales is the Director of the U.S. Geological Survey North Carolina Water Science Center in Raleigh, NC. Concurrent with his position with the USGS, he has served as Adjunct Professor at the Department of Geography at the University of North Carolina at Chapel Hill, and Visiting Assistant Professor in Forestry and Environmental Studies at Duke University, Durham. He is a registered Professional Engineer in North Carolina, and a member of the American Geophysical Union, the Estuarine Research Federation, and the American Water Resources Association. He has served on the Hydraulic Engineering Technical Oversight, Hydraulic Measurements and Experimentation, Tidal Hydraulics, and Environmental Hydraulics Technical Committees for the American Society of Civil Engineers.

Dr. Bales has been principal investigator or CO-PI on numerous studies which have been funded by USGS, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, NOAA, and numerous state and local agencies. He is experienced in the use of a wide variety of hydrologic, hydraulic, and surface-water-quality models. He has served as a member of numerous interagency model review panels, including reviews of Florida Bay hydrodynamic modeling, Charleston Harbor transport modeling, Salton Sea thermal modeling and Onondaga Lake water-quality modeling. In addition to his work in North Carolina, Dr. Bales has participated in and provided consultation on water-resources investigations in about 20 states, as well in India. He was responsible for the rivers component of the interagency National Monitoring Network, and was previously a member of the USGS National Streamflow Information Program design team. Dr. Bales has authored more than 120 articles and technical reports, and has received numerous awards for his government service with USGS, including the U.S. Department of the Interior Superior Service Award in 1992.

REGISTRATION

- Registered Professional Engineer, State of North Carolina, Cert. No. 13580

HONORS AND AWARDS

- U.S. Department of the Interior Superior Service Award, 1992
- STAR Award, USGS
 - National Streamflow Information Prog. Report, 2000
 - NC District Science Plan, 2002
 - SE Region Modeling Specialist, 2004
 - National Water Quality Assessment Program, 2005
 - North Dakota District, 2005
- Sustained Outstanding Performance Award, USGS, 1988, 1993, 1995, 2001, 2003, 2006
- On-The-Spot Award, USGS Southeastern Region, 2003
- USGS Best Report Award for the North Carolina District, 1992
- Graduate Student Research Grant, Univ. of Texas, 1983
- Engineering Foundation Fellowship, Univ. of Texas, 1981
- Member of Tau Beta Pi, Chi Epsilon, Phi Kappa Phi, and Phi Eta Sigma Honor Societies
- Academic Scholarships, Univ. of Tennessee, 1972-1975

PROFESSIONAL MEMBERSHIPS

- American Water Resources Association
- Estuarine Research Federation
- American Geophysical Union

COMMITTEES and EXTERNAL ACTIVITIES

U.S. Geological Survey

- Eastern Region Ocean Science Team, 2005 – present
- USGS representative to Committee for Design of National Monitoring Program 2004 – 2006.
- Team lead for USGS *Rivers* Future Science Directions report, 2001 – 2004.
- Committee for the Design of the National Streamflow Information Program, 1998-99
- Transition Team Subcommittee for Mid-Level Scientists, 1993-94.
- Review teams
 - CO District Surface-Water Review Team; lead reviewer for interpretive programs, 2001.
 - CA District Surface-Water Review Team; lead reviewer for interpretive programs, 1999
- USGS Mentor program participant, 2002.
- USGS Water representative to NOAA Coastal Risk Atlas workgroup, 2001.
- USGS Office of Water Quality Surface Water Modeling Interest Group Board of Directors, 1999 – 2003
- North Carolina District Quality-Assurance Committee Chair, 2000 – 2002
- Southeastern Region Long Range Planning Committee 1998-99
- Southeastern Region Policy Committee, 1996
- Water Resources Division Computer Policy Advisory Committee, 1995-98; Chair 1998
- Ad Hoc Committee for Reorganization of Office of Prog. Coordination and Tech. Support, 1994
- Planning Committee, Workshop on Unsteady Flow & Transport Modeling in Rivers & Estuaries, 1990-91

COMMITTEES and EXTERNAL ACTIVITIES (continued)

U.S. Geological Survey (continued)

- Research Grade Peer Review Panel Member, Surface Water, 1989

American Society of Civil Engineers

- Hydraulic Engineering Technical Oversight Committee, 1994-95
- Hydraulic Measurements and Experimentation Technical Committee
Corresponding Member, 1991-92, 1997- 2003; Control Member, 1992-96; Chair 1994-95
- Tidal Hydraulics Technical Committee, Corresponding Member, 1990 – 98
- Environmental Hydraulics Technical Committee, Corresponding Member, 1988 - 2003
- Advisory Committee, 2nd ASCE Specialty Conf. on Estuarine and Coastal Modeling, 1990-91

Academic Committees

- UNC Water Resources Research Institute Director Search Committee 2008.
- UNC Water Resources Research Institute Technical Committee and Advisory Committee 2005 - present
- Duke University Department of Civil Engineering, Undergraduate Advisory Board, 2002 – present
- Mock Interviewer, Duke University Coastal Environmental Management Program, 2002.
- Ph.D. (ground-water modeling), Dept. of Civil Engineering, Duke University, 1987 – 93
- M.S. (nonpoint-source hydrologic modeling), Dept. of Geography, Univ. of North Carolina, 1988-89
- M.S. (created and natural wetlands), Dept. of Geography, Univ. of North Carolina, 1991 – 93
- Advisory Board, Environmental Policy and Studies Center, Catawba Valley Community College, Hickory, NC, 1992-94.

Selected Consultation on Hydrodynamic and Water Quality Modeling

- Mahanadi River, India, 2004 – 2008.
- Sutlej River, India, 2004 – 2008.
- Minnesota River, MN, 2005.
- Devils Lake, North Dakota, 2000, 2003 - 2008.
- Pueblo Reservoir, Colorado, 2005.
- Red River of the North, North Dakota and Minnesota, 2004-2007.
- Kansas River, Kansas, 2002
- Mobile River, Alabama, 2001
- J.B. Converse Lake, Alabama, 2000 – 2004
- Three Mile Creek, Alabama, 2000 – 2004
- Caloosahatchee River, Florida, 200.
- Everglades National Park, 2000 – 2001.
- Suwannee River, Florida, 1999 – 2005.
- Catawba River, South Carolina, 1998 – 2001.
- Table Rock Lake, Missouri, 1999 – 2000.
- Mangrove Lagoon, Benner Bay, and Jessup Bay, U.S. Virgin Islands, 2000.
- Modeling review committees:
 - South Florida Natural System Model (2007)
 - Onondaga Lake (NY) Water Quality Model Peer Review team (2004-08)
 - Salton Sea (CA) Hydrodynamic and Thermal Modeling Review Team (2005)
 - Florida Bay Hydrodynamic Modeling Independent Review Panel Member, 2002

COMMITTEES and EXTERNAL ACTIVITIES (continued)

- Modeling review committees (*continued*)
 - Seneca River (NY) Model Review Team (2002 – 2004)
 - Cooper River (SC) Model Review Workgroup (1998-99)

North Carolina Interagency Committees

- North Carolina Endocrine Disruptors Workgroup 2008
- NC Water Quality Workgroup, 1999 – 2002, North Carolina State University and NC Department of Environment and Natural Resources.
- Bi-State Catawba River Task Force, 1995-98
- Cape Fear River Water-Quality Technical Committee, 1994-98
- North Carolina Nonpoint-Source Working Group, North Carolina Div. of Envr. Mgmt., 1994 – present
- Federal Interagency Coastal America Advisory Committee, North Carolina, 1992-98
- Triangle J Regional GIS Committee, 1987-88
- Chair, Physical Processes Working Group, EPA Albemarle-Pamlico Estuarine Study, 1986-88
- Land-Water Interface Working Group, EPA Albemarle-Pamlico Estuarine Study, 1986-88

Other

- Conference planning committees
 - Co-organized, with National Weather Service and NOAA Coastal Services Center, the Hurricane Flood-Mapping Applications Workshop at the 56th Interdepartmental Hurricane Conference, New Orleans, LA, March 2002.
 - Conference Planning Committee (Subcommittee on Modeling), Water Environment Federation TMDL Science Issues Conference; St. Louis, MO, March 2001.
 - Session Organizer and Chair—Nutrient and Bacteria TMDL Modeling; TMDL Science Issues Conference; St. Louis, MO, March 2001.
 - 1999 North Carolina Water Resources Research Institute Annual Conference, Raleigh, NC, 1998-99
 - 1997 Conference on Nutrients in the Neuse River: Working Toward Solutions, New Bern, NC
 - Natl. Symp. on Coastal Water Resources, AWRA, Wilmington, NC, 1987-88
- Technical Conference Session Moderator:
 - 4th International Symposium on Flood Defence, 2008
 - 2nd Federal Interagency Hydrologic Modeling Conference, 2002
 - National Water Quality Monitoring Conference, 2002
 - 1st Federal Interagency Hydrologic Modeling Conference, 1998
 - National Hydraulic Engineering Conference, ASCE, 1995
 - Natl. Symp. on Coastal Water Resources, AWRA, 1988

SELECTED FUNDED INVESTIGATIONS AT THE USGS

- Comparison of Methods for Rapid Development of Flood Inundation Maps, U.S. Geological Survey, 2007-2008.
- Review of Yadkin River / High Rock Lake Flow and Sediment Transport Models: North Carolina Division of Water Resources, 2007.
- Roanoke River Hydrodynamic and Water Quality Model Development in Support of Kerr 216 Studies: U.S. Army Corps of Engineers, 2005-08.
- Currituck Sound Monitoring and Modeling in Support of Restoration Development Planning: North Carolina Division of Water Resources and U.S. Army Corps of Engineers, 2004 – 2008.
- Real-Time Flood Inundation Mapping in the Tar River Basin—A Pilot Project: North Carolina Division of Emergency Management and the National Weather Service, 2002 – 2005.
- Development of Methods and Tools for Estimating Pesticide Concentrations in Estuaries: US EPA Office of Pesticides Programs, 2000 – 2002.
- Application of Emerging Water-Quality Techniques to Document Effects of Hurricane Floyd on North Carolina Estuaries: North Carolina Department of Environment and Natural Resources, 2000 – 2001.
- Effects of Agricultural Practices and Stream Restoration on Sedimentation, Water Chemistry, and Stream Habitat in the Piedmont of North Carolina: North Carolina Division of Soil and Water Conservation, with contributions from the North Carolina Division of Water Quality and the North Carolina Clean Water Management Trust Fund, 2002-2007.
- Enhanced Flood Prediction and Information Dissemination Pilot Project for North Carolina, funded by the USGS Center for Integrated Disaster Information, 2001.
- Delineation of High-Water Marks in the Tar River and Neuse River Basins Following Hurricane Floyd, funded by the U.S. Army Corps of Engineers, 1999.
- Recomputation of Flood Recurrence Intervals for Eastern North Carolina Streams, funded by FEMA, 1999.
- Hydrodynamics and Salt Transport in the Suwannee River, Florida; funded by the Suwannee River Water Management District, 1999-2002.
- Temperature and Dissolved-Oxygen Dynamics in the Roanoke River, North Carolina; funded by the U.S. Fish and Wildlife Service, 1997-99.
- The Relation between Reservoir Releases and Flows and Flood-Plain Inundation in the Roanoke River, North Carolina; funded by Virginia Electric Power Company and others, 1996-98.
- Development of an Unsteady Hydrodynamic and Water-Quality Model for the Lower Neuse River; funded by the North Carolina Division of Environmental Management, 1996-97.
- Water and Salt Balance of Currituck Sound; funded by the North Carolina Division of Marine Fisheries and North Carolina Division of Water Resources, 1996-97.
- Continuous, Real-Time Water-Quality Monitoring of the Neuse River Estuary; funded by the North Carolina Division of Environmental Management, 1996-continuing.
- Evaluation of Selected Features of the Natural System Model for Simulating South Florida Hydrology; funded by the U.S. Army Corps of Engineers, Jacksonville District, 1995-96.
- Long-Term Trends in Flow in the Waccamaw River at Freeland, North Carolina; funded by the North Carolina Division of Water Resources, 1995.

SELECTED FUNDED INVESTIGATIONS AT THE USGS (continued)

- Water-Quality Modeling of Mountain Island Lake; funded by the Charlotte - Mecklenburg Utility Department, 1994-98.
- Freshwater Flow and Saltwater Intrusion in the Tidal Pasquotank River; funded by the North Carolina Division of Water Resources, 1994-96.
- Barrier Island Surface-Water Drainage--Hatteras Island, NC; funded by North Carolina Division of Environmental Management and National Park Service, 1993-95.
- Nonpoint-Source Loadings to the Catawba River from Selected Urban Land Uses and for Selected Management Practices; funded by the City of Charlotte and Mecklenburg County, 1993-98.
- Hydrodynamics and Water-Quality of the Upper Catawba River Basin; funded by the Western Piedmont Council of Governments, 1992-95.
- Flows in Lower Roanoke River and Hydrodynamics of Albemarle Sound; funded by U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and Albemarle-Pamlico Estuarine Study, North Carolina Dept. of Environment, Health, and Natural Resources;,1991-93.
- Flow and Salinity in West Neck Creek, Virginia; funded by the Division of Water Resources and the Wildlife Resources Commission, North Carolina Dept. of Environment, Health, and Natural Resources, 1989-91.
- Continuous Monitoring of Estuarine Water Quality; funded by the Albemarle-Pamlico Estuarine Study, North Carolina Dept. of Environment, Health, and Natural Resources, 1989-93.
- Investigation of Flows and Flow Patterns in the Pamlico River and Neuse River Estuaries; funded by the Albemarle-Pamlico Estuarine Study, North Carolina Dept. of Environment, Health, and Natural Resources, 1988-92.
- Management of Artificial Drainage from Converted Wetlands and Estuarine Water Quality; funded by the Albemarle-Pamlico Estuarine Study and the Division of Environmental Management (EPA 319 program), North Carolina Dept. of Environment, Health, and Natural Resources, 1988-92.
- Hydrologic Characteristics and Water Quality Trends of the Albemarle-Pamlico Estuarine System; funded by the Albemarle-Pamlico Estuarine Study, North Carolina Department of Natural Resources and Community Development, 1988-89.

PUBLICATIONS

Articles and Reports

- Bales, J.D., 2007, Review of selected documents related to flooding at City of Salisbury facilities on the Yadkin River upstream from High Rock Dam, North Carolina, September 2007: U.S. Geological Survey Open File-Report 2007-1314.
- Bras, R., Bales, J., Graham, W., Gunderson, L., and Stone, P., 2007, Scientific Peer Review of the Natural System Regional Simulation Model (NSRSM) v2.0: West Palm Beach, FL, South Florida Water Mgmt. District, accessed at https://my.sfwmd.gov/pls/portal/docs/PAGE/PG_GRP_SFWMD_HESM/PORTLET_RSM_PEERREVIEW/TAB2564291/NSRSMFINALV3.PDF, 81 p.
- Buchak, E.M., Bales, J.D., and Martin, J.L., 2007, Modeling systems and their application in Martin, J.L., Edinger, J.E., Higgins, J.M., and Gordon, J., A., eds., Energy production and reservoir water quality: Reston, VA, American Society of Civil Engineers, p. 6-1 – 6-4.
- McCarthy, A.M., Bales, J.D., Cope, W.G., and Shea, 2007, Modeling pesticide fate in a small tidal estuary: Ecological Modeling, 200:149-159.
- Bales, J.D., Tomlinson, S.A., and Tillis, G., 2006, Flow and salt transport in the Suwannee River estuary, Florida, 1999 – 2000: analysis of data and three-dimensional simulations: U.S. Geological Survey Professional Paper 1656-B, 66 p.
- Nustad, R.A., and Bales, 2005, Simulation of conservative material transport in the Red River of the North Basin, North Dakota, Minnesota, and South Dakota, 2003-2004: U.S. Geological Survey Scientific Investigations Report 2005-5273, 81 p.
- Restrepo, P., and Bales, J.D., 2004, National Weather Service – U.S. Geological Survey White Paper on Forecasting Surface-Water Quality Conditions for the U.S.: Silver Spring, MD, submitted to the Director, National Weather Service, 19 p.
- Adams, E.E., Bales, J.D., Greenfield, J., Isaac, A., Mackie, G., Richards, R.P., 2003, Peer Review Evaluation of the OCDWEP/QEA water-quality model of the Three Rivers System in Central New York: Syracuse, NY, Onondaga Lake Partnership, 50 p.
- Swain, E.D., Wolfert, M.A., Bales, J.D., and Goodwin, C.R., 2003, Development of a two-dimensional model for simulation of flow and transport to Florida Bay through the Southern Inland and Coastal Systems (SICS): U.S. Geological Survey Water-Resources Investigations Report 03-4287.
- Bales, J.D., and Walters, D.A., 2003, Relations Among Floodplain Water Levels, Instream Dissolved-Oxygen Conditions, and Streamflow in the Lower Roanoke River, North Carolina, 1997 -2001: U.S. Geological Survey Water-Resources Investigations Report 03-4295, 81 p.
- Feaster, T.D., Conrads, P.A., Guimaraes, W.B, Sanders, C.L., and Bales, J.D., 2003, Simulation of temperature, nutrients, biochemical oxygen demand, and dissolved oxygen in the Catawba River, South Carolina, 1996 – 97: U.S. Geological Survey Water-Resources Investigations Report 03-4092, 123 p.
- McMahon, G., Bales, J.D., Coles, J.F., Giddings, E.M.P., and Zappia, H., 2003, Use of stage data to characterize hydrologic conditions in an urbanizing environment: J. American Water Resources Association: 39(6):1529 - 1546.
- Bales, J.D., 2003, Effects of Hurricane Floyd inland flooding on tributaries to Pamlico Sound, North Carolina, September – October 1999: Estuaries, 26(5).

PUBLICATIONS (continued)

Articles and Reports

- Bales, J.D., Tillis, G., and Tomlinson, S., 2001, Overview of the Suwannee River Estuary data-collection and modeling study *in* Four Rivers, Two States, One Basin: Live Oak, FL, proceedings of a Research Symposium for the Suwannee Basin, Suwannee River Water Management District, p. 16.
- Paerl, H.W., Bales, J.D., Ausley, L.W., Buzzelli, C.P., Crowder, L.B., Eby, L.A., Fear, J.M., Go, M., Peierls, B.L., Richardson, T.L., and Ramus, J.S. 2001, Ecosystem impacts of 3 sequential hurricanes (Dennis, Floyd, and Irene) on the US's largest lagoonal estuary, Pamlico Sound, NC: Proc. National Academy of Sciences USA, Vol. 98, Issue 10, 5655-5660, May 8, 2001.
- Bales, J.D., and Pope, B.F., 2001, Identification of changes in streamflow characteristics: Journal of the American Water Resources Association, 37(1):91-104.
- Bales, J.D., Sarver, K.M., and Giorgino, M.J., 2001, Mountain Island Lake, North Carolina: Analysis of ambient conditions and simulation of hydrodynamics, constituent transport, and water-quality characteristics, 1996-97: U.S. Geological Survey Water-Resources Investigations Report 01-4138, 85 p.
- Bales, J.D., Sarver, K.M., and Giorgino, M.J., 2001, Mountain Island Lake, North Carolina: Analysis of ambient conditions and simulation of hydrodynamics, constituent transport, and water-quality characteristics, 1996-97: U.S. Geological Survey Water-Resources Investigations Report 01-4138, 85 p.
- Bales, J.D., 2001, USGS Water Programs in North Carolina: U.S. Geological Survey Fact Sheet FS-046-01, 4 p.
- Bales, J.D., Oblinger, C.J., and Sallenger, A.H., 2000, Two months of flooding in eastern North Carolina, September – October 1999: Hydrologic, water-quality, and geologic effects of Hurricanes Dennis, Floyd, and Irene: U.S. Geological Survey Water-Resources Investigations Report 00-4093, 47 p.
- Paerl, H.W., Bales, J.D., Ausley, L.W., Buzzelli, C.P., Crowder, L.B., Eby, L.A., Go, M., Peierls, B.L., Richardson, T.L., and Ramus, J.S., 2000, Hurricanes' Hydrological, Ecological Effects Linger in Major U.S. Estuary: *Eos*, Trans. Amer. Geophysical Union, 81(4):457, 459, 462.
- Bales, J.D., Weaver, J.C., and Robinson, J.B., 1999, Relation of land use to Streamflow and water quality at selected sites in the City of Charlotte and Mecklenburg County, North Carolina, 1993-98: U.S. Geological Survey Water-Resources Investigations Report 99-4180, 95 p.
- Bales, J.D., and Robbins, J.C., 1999, A water-quality modeling framework for the Neuse River Estuary, North Carolina: U.S. Geological Survey Water-Resources Investigations Report 99-4017, 35 p.
- Bales, J.D., and Giorgino, M.J., 1998, Lake Hickory, North Carolina: Analysis of ambient conditions and simulation of hydrodynamics, constituent transport, and water-quality characteristics, 1993-94: U.S. Geological Survey Water-Resources Investigations Report 98-4189, 62 p.
- International Organization for Standardization, 1998, Measurement of liquid flow in open channels—computing stream flow using an unsteady flow model: Geneva, Switzerland, Technical Report ISO/TR 11627:1998(E), 19 p.
- Bales, J.D., Fulford, J.F., and Swain, E., 1997, Review of selected features of the Natural System Model and suggestions for applications in South Florida: U.S. Geological Survey Water-Resources Investigations Report 97-4039, 42 p.
- Giorgino, M.J., and Bales, J.D., 1997, Rhodhiss Lake, North Carolina: Analysis of ambient conditions and simulation of hydrodynamics, constituent transport, and water-quality characteristics, 1993-94: U.S. Geological Survey Water-Resources Investigations Report 97-4131, 62 p.

PUBLICATIONS (continued)

Articles and Reports

- Bales, J.D., and Pope B.F., 1996, Streamflow characteristics of the Waccamaw River near Freeland, North Carolina, 1940-94: U.S. Geological Survey Water-Resources Investigations Report 96-4093, 35 p.
- Mason, R.R., and Bales, J.D., 1996, Estimating flood hydrographs for urban basins in North Carolina: U.S. Geological Survey Water-Resources Investigations Report 96-4085, 19 p.
- Garrett, R.G., and Bales, J.D., 1995, Water-quality characteristics of streams in the Treyburn development area of Falls Lake watershed, North Carolina, 1988-93: U.S. Geological Survey Water-Resources Investigations Report 95-4094, 79 p.
- Bales, J.D., Costa, J.E., Holtschlag, D.J., Lanfear, K.J., Lipscomb, S., Milly, P.C., Viger, R., and Wolock, D.M., 2004, Design of a National Streamflow Information Program – Report with recommendations of a committee: U.S. Geological Survey Open File Report 2004-1263, 42 p.
- Bales, J.D., Chapman, M.E., Oblinger, C.J., and Robbins, J.C., 2004, North Carolina District Science Plan, 2003 – 2008: U.S. Geological Survey Open-File Report 2004-1025, 31 p.
- U.S. Geological Survey, 1999, Streamflow Information for the Next Century: A Plan for the National Streamflow Information Program of the U.S. Geological Survey: U.S. Geological Survey Open-File Report 99-456, 13 p.
- Costa, J.E., Bales, J., Holtschlag, D., Lanfear, K., Lipscomb, S., Milly, P.C.D., Viger, R., and Wolock, 1999, An Initiative for a U.S. Geological Survey National Streamflow Information Program: *in* Reducing flood losses in the 21st century, Proceedings, Association of State Floodplain Managers, Portland, OR, May 24-28, 1999, p. 263-267.
- Bales, J.D., and Giorgino, 1998, Dynamic modeling of water-supply reservoir physical and chemical processes *in* Subcommittee on Hydrology of the Interagency Advisory Committee on Water Data, Proceedings of the First Federal Interagency Hydrologic Modeling Conference, p. 2-61 – 2-67.
- Bales, J.D., and Childress, C.J.O., 1996, Aftermath of Hurricane Fran in North Carolina--preliminary data on flooding and water quality: U.S. Geological Survey Open-File Report 96-499, 6 p.
- Bales, J.D., and Robbins, J.C., 1995, Simulation of hydrodynamics and solute transport in the Pamlico River estuary, North Carolina: U.S. Geological Survey Open-File Report 94-454, 85 p.
- Robbins, J.C., and Bales, J.D., 1995, Simulation of hydrodynamics and solute transport in the Neuse River estuary, North Carolina: U.S. Geological Survey Open-File Report 94-511, 85 p.
- U.S. Geological Survey, 1995, Water--before a bridge is built, before a well is dug, before a fish is caught, the USGS is there: U.S. Geological Survey Open-File Report 95-276.
- Bales, J.D., and Newcomb, D.J., 1995, North Carolina wetland resources, *in* National water summary 1992--93--hydrologic events and wetland resources: U.S. Geological Survey Water-Supply Paper 2425, p. 297-302.
- Bales, J.D., Swain, E.D., and DeLong, L.L., 1995, Review and evaluation of selected features of the Natural System Model, South Florida, *in* Florida Bay Science Conference--a report by principal investigators: Gainesville, Florida, University of Florida, p. 75-76.
- Robinson, J.B., Bales, J.D., and Young, W.S., 1995, Advanced instrumentation for the collection, retrieval, and processing of urban stormwater data, *in* Espey, W., ed., Water resources engineering '95: New York, American Society of Civil Engineers, p. 1081-1085.

PUBLICATIONS (continued)

Articles and Reports

- Ziegler, C.K., Bales, J.D., Blumberg, A.F., and Robbins, J.C., 1994, Comparative analysis of estuarine circulation simulation using laterally-averaged and vertically-averaged hydrodynamic models, *in* Spaulding, M.L., Bedford, K., Blumberg, A., Cheng, R., and Swanson, C., eds., Estuarine and coastal modeling III: New York, American Society of Civil Engineers, p. 447-460.
- Robbins, J.C., and Bales, J.D., 1994, The effects of channel configuration and alignment on circulation in adjacent wind-driven estuaries in North Carolina, *in* Spaulding, M.L., Bedford, K., Blumberg, A., Cheng, R., and Swanson, C., eds., Estuarine and coastal modeling III: New York, American Society of Civil Engineers, p. 105-118.
- Strickland, A.G., and Bales, J.D., 1994, Simulation of unsteady flow in the Roanoke River from near Oak City to Williamston, North Carolina: U.S. Geological Survey Water-Supply Paper 2408-A. Hydrodynamics and solute transport in North Carolina estuaries, 34 p.
- Bales, J.D., and Skrobialowski, S.K., 1994, Flow and salinity in West Neck Creek, Virginia, 1989-92, and salinity in North Landing River, North Carolina, 1991-92: U.S. Geological Survey Water-Resources Investigations Report 94-4067, 36 p.
- Bales, J.D., and Garrett, R.G., 1994, Salinity and dissolved-oxygen dynamics in a wind-driven estuary, *in* Cotroneo, G.V., and Rumer, R.R., eds., Hydraulic engineering '94: New York, American Society of Civil Engineers, p. 1311-1315
- Bales, J.D., 1994, Some effects of development on hydrology and water quality, *in* Ohrel, R.L., ed., Integrated coastal wastewater management in North Carolina: Wilmington, North Carolina Coastal Federation, p. 35-38.
- Bales, J.D., 1993, The role of models in evaluating water quality *in* Proceedings of the Conference on Water Issues in the 1990's: Hickory, NC, Environmental Policy Studies Center, Catawba Valley Community College, p. 1-2.
- Bales, J.D., and Skrobialowski, S.K., 1993, Salt transport in a tidal canal, *in* Shen, H.W., and others, eds., Hydraulic engineering '93: New York, American Society of Civil Engineers, p. 1422-1427.
- Bales, J.D., Strickland, A.G., and Garrett, R.G., 1992, An interim report on flows in the lower Roanoke River, and water quality and hydrodynamics in Albemarle Sound, North Carolina, October 1989 - April 1991: U.S. Geological Survey Open-File Report 92-123, 134 p.
- Treece, M.W., and Bales, J.D., 1992, Hydrologic and water-quality data in selected agricultural drainages in Beaufort and Hyde Counties, North Carolina, 1988-90: U.S. Geological Survey Open-File Report 92-498, 89 p.
- Giese G.L., and Bales, J.D., 1992, Circulation modeling in a wind-driven estuary, *in* Spaulding, M.L., ed., Estuarine and coastal modeling: New York, American Society of Civil Engineers, p. 607-619.
- Strickland, A.G., and Bales, J.D., 1992, Modeling flow and flood-plain storage in a tidally affected river, *in* Jennings, M., and Bhowmik, N.G., eds., Hydraulic engineering--saving a threatened resource; in search of solutions: Baltimore, Maryland, American Society of Civil Engineers, p. 1130-1135.
- Bales, J.D., and Newcomb, D.J., 1991, Application of a geographic information system to estuarine hydrodynamic modeling, *in* Shane, R.M., Hydraulic engineering '91: New York, American Society of Civil Engineers, p. 870-875.

PUBLICATIONS (continued)

Articles and Reports

- Bales, J.D., and Holley, E.R., 1991, Field and numerical studies of tracer gas transport and surface gas transfer in laterally uniform, partially stratified estuaries: Austin, Texas, CRWR Technical Report 208, Center for Research in Water Resources, The University of Texas, 233 p.
- Garrett, R.G., and Bales, J.D., 1991, Water-quality data from continuously monitored sites in the Pamlico and Neuse River estuaries, North Carolina, 1989-90: U.S. Geological Survey Open-File Report 91-465, 151 p.
- Bales, J.D., 1990, Data-collection program for Pamlico River estuary model calibration and validation, *in* Spaulding, M.L., ed., Estuarine and coastal modeling: New York, American Society of Civil Engineers, p. 492-501.
- Bales, J.D., 1989, Land drainage and estuarine salinity response, *in* Ports, M., ed., Hydraulic engineering: New Orleans, Louisiana, American Society of Civil Engineers, p. 200-205.
- Copeland, B.J., Paerl, H.W., Bales, J.D., Stanley, D.W., Kuenzler, E.J., and Klimek, A., 1989, Water quality, *in* Copeland, B.J., ed., Albemarle-Pamlico Sounds--preliminary technical analysis of the status and trends: Raleigh, North Carolina, Report No. 89-13A, North Carolina Department of Environment, Health, and Natural Resources, p. 99-195.
- Bales, J.D., and Nelson, T.M., 1988, Bibliography of hydrologic and water-quality investigations conducted in or near the Albemarle-Pamlico Sounds, North Carolina: U.S. Geological Survey Open-File Report 88-480, 146 p.
- Bales, J.D., and Holley, E.R., 1988, Sand transport in Texas tidal inlet: *Journal of Waterway, Port, Coastal, and Ocean Engineering*, v. 115, no. 4, p. 427-443.
- Treece, M.W., Bales, J.D., and Moreau, D.H., 1988, North Carolina water supply and use, *in* National water summary 1987--hydrologic events and water supply and use: U.S. Geological Survey Water Supply Paper 2350, p. 393-400.
- Bales, J.D., and Holley, E.R., 1988, Fractional-step method for two-dimensional estuarine transport, *in* Abt, S.R., ed., Hydraulic engineering: Colorado Springs, Colorado, American Society of Civil Engineers, p. 1182-1187.
- Bales, J.D., 1988, Review of concepts and data relevant to hydrodynamic and water-quality modeling of the Albemarle-Pamlico Sounds, North Carolina, *in* Duffy, M.A., ed., Proceedings of the workshop on hydrodynamic and water quality models for the Albemarle-Pamlico estuarine study: Raleigh, North Carolina, Report No. 87-03, Department of Natural Resources and Community Development, p. 13-28.
- Bales, J.D., and Holley, E.R., 1987, Estuarine tracer-gas transport and desorption, *in* Ragan, R.M., ed., Hydraulic engineering: Williamsburg, Virginia, American Society of Civil Engineers, p. 974-979.
- Bales, J.D., and Holley, E.R., 1986, Flume tests on hydrocarbon reaeration tracer gases: *Journal of Environmental Engineering*, v. 112, no. 4, p. 695-700.
- Bales, J.D., and Holley, E.R., 1985, Evaluation of existing conditions and possible design alternatives at Rollover Fish Pass, Texas: Austin, Texas, Technical Report 210, Center for Research in Water Resources, University of Texas, 199 p.
- Bales, J.D., and Holley, E.R., 1985, Tidal inlet sand transport in Rollover Pass, Texas, *in* Waldrop, W.R., ed., Hydraulics and hydrology in the small computer age: Orlando, Florida, American Society of Civil Engineers, p. 271-276.

PUBLICATIONS (continued)

Articles and Reports

- Bales, J.D., and Betson, R.P., 1982, The curve number as a hydrologic index, in Singh, V.P., ed., Rainfall-runoff relationship: Littleton, Colorado, Water Resources Publications, p. 371-386.
- Pratt, H.E., and Bales, J.D., 1981, User's guide to TVA daily flow analysis program: Norris, Tennessee, Report No. WR28-3-550-106, Water Systems Development Branch, Tennessee Valley Authority, 24 p.
- Pratt, H.E., and Bales, J.D., 1981, User's guide to TVA storm hydrograph analysis program: Norris, Tennessee, Report No. WR28-3-550-105, Water Systems Development Branch, Tennessee Valley Authority, 18 p.
- Betson, R.P., and Bales, J.D., 1981, Procedures for the validation of TVA-HYSIM: Norris, Tennessee, Report No. WR28-1-550-107, Water Systems Development Branch, Tennessee Valley Authority, 20 p.
- Gottfried, P.K., Bales, J.D., and Precious, T., 1981, The influence of coal surface mining on the aquatic environment of the Cumberland Plateau: Chattanooga, Tennessee, Water Quality Branch, Tennessee Valley Authority.
- Betson, R.P., Bales, J.D., and Deane, C., 1981, Methodologies for assessing surface mining impacts: Norris, Tennessee, Report No. WR28-1-550-108, Water Systems Development Branch, Tennessee Valley Authority, 99 p.
- Olem, H., Longnaker, J.J., Liner, J.E., and Bales, J.D., 1981, Big Creek Utility District reclamation project--environmental effects of initial reclamation efforts including the treatment and draining of acid water impoundments: Chattanooga, Tennessee, Division of Water Resources, Tennessee Valley Authority.
- Betson, R.P., Bales, J.D., and Pratt, H.E., 1980, User's guide to TVA-HYSIM: Cincinnati, Ohio, Report No. EPA-600/70-80-048, Industrial Environmental Research Laboratory, U.S. Environmental Protection Agency, 81 p.
- Bales, J.D., 1979, TVA strip mine assessment model--hydrologic component, *in* Stanley, S.B., ed., Proceedings of the symposium on surface mining hydrology, sedimentology, and reclamation: Lexington, Kentucky, p. 265-270.
- Milligan, J.D., Betson, R.P., Bales, J.D., and Bittman, R., 1979, Transport and partitioning of mercury in sediment of the North Fork Holston River--1978: Chattanooga, Tennessee, Report No. WR-57-1-1, Division of Water Resources, Tennessee Valley Authority, 40 p.
- Overton, D.E., and Bales, J.D., 1978, Subcritical kinematic streamflow, *in* Verification of mathematical and physical models in hydraulic engineering: College Park, Maryland, Proceedings of the Hydraulics Division Specialty Conference, American Society of Civil Engineers, p. 599-604.

PUBLICATIONS (continued)

Posters

- Bales, J.D. and M.R. Nardi. 2006. The sensitivity of whole-stream metabolism calculations to measurement uncertainty. Presented at the 5th National Monitoring Conference, National Water Quality Monitoring Council, San Jose, CA, May 7-11. [abstract] [poster].
- Asante, K., Bales, J.D., Terziotti, S., and Verdin, J., 2005, Integration of hydrologic and geographic models with remotely sensed data for real time flood mapping applications: U. S. Geological Survey Conference, Port Angeles, Washington.
- Bales, J.D., Weaver, J.C., and Robbins, J.C., 2003, The Drought of 1998 – 2002: North Carolina Experiences: National Surface Water Meeting, U.S. Geological Survey, San Antonio, TX, Nov. 17 – 21, 2002.
- Bales, J.D., 2002, Continuous Monitoring of Nitrate and Chlorophyll a in North Carolina Estuaries, Alabama Water Resources Conference, Orange Beach, AL, September 5, 2002.

Abstracts

- Bales, J.D., and Nustad, R., 2008, Three-Dimensional Circulation and Transport Modeling in Devils Lake, ND: Perdido Beach, AL, 2nd USGS Modeling Conference [abs].
- Steuer, J., Giddings, E., and Bales, J., 2007, Relation of physical measures of streamflow conditions to ecological effects of urbanization in streams: Galveston, Texas, U.S. Geological Survey National Water Quality Workshop [abs].
- Bales, J.D., and Booth, N., 2007, Forty years of water-quality monitoring in the U.S.: Galveston, Texas, U.S. Geological Survey National Water Quality Workshop [abs].
- Bales, J.D., and Nardi, M.R., 2007, Software for automated stream metabolism calculations: Galveston, TX, U.S. Geological Survey National Water Quality Workshop [abs].
- Bales, J.D., 2007, Uncertainty Issues in Flood Inundation Mapping: Norfolk, VA, Association of State Floodplain Managers, 2007 Concurrent Sessions Abstracts and Biographies, p. 231.
- Bales, J.D., 2006, Nitrogen and phosphorus loadings to the Neuse and Pamlico River Estuaries, North Carolina: San Jose, CA, 2006 National Monitoring Conference [abs].
- Bales, J.D., and Wagner, C.R., 2006, Real-time flood inundation mapping in North Carolina: Reno, NV, 3rd Federal Interagency Hydrologic Modeling Conference [abs].
- Bales, J.D., and Nardi, M., 2006, Automated procedures for computing whole-stream metabolism: Joint Eighth Federal Interagency Sedimentation Conference and Third Federal Interagency Hydrologic Modeling, Reno, NV, April 2-6. [abs].
- Nardi, M., and Bales, J.D., 2005, Whole Stream Metabolism Program: Second Maryland Streams Symposium, Maryland Department of Natural Resources and Carroll Community College, Westminster, Maryland, August 10-13, [abs].
- Bales, J.D., 2004, River Flow, Floodplain Inundation, and Instream Dissolved-Oxygen Concentrations in the Lower Roanoke River, North Carolina: Raleigh, NC, Proceedings of the 2004 UNC Water Resources Research Institute Conference [abs].
- Bales, J.D., 2004, Hydrodynamics and salt transport in the Suwannee River Estuary *in* Proceedings of the Suwannee River Basin and Estuary Initiative: Integrated Science Workshop: Cedar Key, Florida, September 22-24, 2004 [abs].

PUBLICATIONS (continued)

Abstracts

- Bales, J.D., 2002, Simulation of Effects of Changes in Freshwater Inflow on Salinity Distributions in the Suwannee River Estuary, Florida: Orange Beach, AL., Proceedings Alabama Water Resources Conference, September 5 - 6, 2002 [abs].
- Bales, J.D., 2002, Stormwater quality in Charlotte, North Carolina, 1993-98, *in* Lakes, Rivers, and Streams – Waters for All, Proceedings of the Eleventh Annual Southeastern Lakes Management Conference, Winston-Salem, NC, March 18 – 20, 2002, p. 38 [abs].
- Paerl, H., Peierls, B., Fear, J., Twomey, L., and Bales, J., 2002, Ecological response of Pamlico Sound, NC to hurricanes Dennis, Floyd and Irene (Sept.-Oct. 1999): A glimpse into potential impacts of climate change on large estuaries: Honolulu, Hawaii, Ocean Sciences Meeting, American Society of Limnology and Oceanography, February 11 – 15, 2002 [abs].
- Bales, J.D., 2001, Freshwater and nutrient delivery to Pamlico Sound, North Carolina, Resulting from the 1999 hurricane season: St. Pete Beach, FL, 16th Biennial Conference of the Estuarine Research Federation, November 4 – 8, 2001, p. 9 [abs].
- Shulz, B., Hobson, B., Janet, J., Kemp, M., Moody, R., Pinnix, H., and Bales, J., 2001, Development of a micro autonomous underwater vehicle for complex 3D sensing *in* Program and Abstracts, MTS/IEEE Oceans 2001, Honolulu, Hawaii, November 5 – 8, 2001 [abs].
- Paerl, H.W., Bales, J.D., Ausley, L.W., Buzzelli, C.P., Crowder, L.B., Eby, L.A., Go, M., Peierls, B.L., Richardson, T.L., Twomey, L., and Ramus, J.S., 2001, Ecosystem impacts and lessons learned from 3 sequential hurricanes (Dennis, Floyd, and Irene) in North Carolina estuaries: An overview: St. Pete Beach, FL, 16th Biennial Conference of the Estuarine Research Federation, November 4 – 8, 2001, p. 105 [abs].
- Bales, J.D., 2001, Water-quality indices as measures of reservoir water quality in North Carolina *in* Warwick, J.J., ed., Water Quality Monitoring and Modeling—Proceedings of the AWRA Annual Spring Specialty Conference, p. 15 [abs].
- Bales, J.D., 2001, Data quality and uncertainty in reservoir water-quality modeling Carolina *in* Warwick, J.J., ed., Water Quality Monitoring and Modeling—Proceedings of the AWRA Annual Spring Specialty Conference, p. 113 [abs].
- Bales, J.D., 2001, Hydrologic and Water Quality Effects of Hurricanes Dennis, Floyd, and Irene *in* Luczkovich, J., ed., Of People, Place, and Progress: Extended Recovery on the Coastal Plain, Proceedings of a Conference at East Carolina University, accessed at <http://www.ecu.edu/hazconf/> [abs].
- Bales, J.D., 2001, Dynamic water-quality models of Catawba River Basin reservoirs, North Carolina: Knoxville, TN, NALMS 10th Annual Southeastern Lakes Conference, Final Program, p. 28 [abs].
- Bales, J.D., and Weaver, J.C., 2000, Metals and organic compounds in stormwater, Charlotte, North Carolina, 1993-98: Raleigh, NC, Institute Proceedings No. 14, University of North Carolina Water Resources Research Institute, p. 10 [abs].
- Paerl, H.W., Buzzelli, C.P., Malia, G., Luettich, R.A., Peierls, B.A., Richardson, T.L., Ramus, J.S., Crowder, L.B., Eby, L.A., Ausley, L., Overton, J., and Bales, J.D., 2000, Short-term impacts of Hurricanes Dennis, Floyd, and Irene on water quality and fisheries habitat in Pamlico Sound, North Carolina: Raleigh, NC, Institute Proceedings No. 14, University of North Carolina Water Resources Research Institute, p. 23 [abs].

PUBLICATIONS (continued)

Abstracts

- Bales, J.D., and Childress, C.J.O., 1999, Water-quality indices as measures of reservoir water quality in North Carolina: Raleigh, NC, Institute Proceedings No. 12, University of North Carolina Water Resources Research Institute, p. 7 [abs].
- Bales, J.D., 1998, Dynamic water-quality modeling of Catawba River reservoirs *in* Water resources protection: understanding and management: Raleigh, NC, Institute Proceedings Series No. 11, University of North Carolina Water Resources Research Institute, p. 23 [abs].
- Bales, J.D., 1997, Modeling estuarine effects of nitrogen loading reduction, *in* Tanner, J., ed., Nutrients in the Neuse River--Working Toward Solutions: New Bern, NC, Conference Proceedings, North Carolina State University, p. 11 [abs].
- Bales, J.D., and Mangles, J., 1997, Development of a water-quality modeling framework for the Neuse River Estuary, *in* North Carolina Department of Environment, Health, and Natural Resources, Managing the Albemarle-Pamlico Sounds, Today's Accomplishments, Tomorrow's Challenges: New Bern, NC, Proceedings of a forum to examine implementation of the Comprehensive Conservation and Management Plan (CCMP) for the Albemarle-Pamlico Sounds Region, 2 p [abs].
- Haruthunian, A., Martens, C.S., and Bales, J.D., 1997, Seasonal variations in benthic organic nitrogen regeneration in the Neuse River Estuary, NC *in* North Carolina Department of Environment, Health, and Natural Resources, Managing the Albemarle-Pamlico Sounds, Today's Accomplishments/Tomorrow's Challenges: New Bern, NC, Proceedings of a forum to examine implementation of the Comprehensive Conservation and Management Plan (CCMP) for the Albemarle-Pamlico Sounds Region, 1 p [abs].
- Bales, J.D., 1997, Modeling effects of nitrogen reductions in the Neuse River Estuary, North Carolina, *in* Abstracts of the 14th Biennial Estuarine Research Federation International Conference, Providence, Rhode Island, p. 8 [abs].
- Young, W.S., Schachte, B.R., and Bales, J.D., 1996, Customized software for model calibration and visualization of reservoir water-quality model results, *in* Babcock, C.A., ed., Proceedings 1996 USGS National Computer Technology Meeting [abs].
- Bales, J.D., and Jaynes, M.L., 1995, Dynamic modeling of circulation and water quality in a narrow Piedmont reservoir: Charlotte, North Carolina, 4th Annual Southeastern Lakes Management Conference, North American Lake Management Society [abs].
- Bales, J.D., 1995, Some observations on determination of phosphorus loadings to reservoirs: Charlotte, North Carolina, 4th Annual Southeastern Lakes Management Conference, North American Lake Management Society [abs].
- Jaynes, M.L., and Bales, J.D., 1995, Physical water-quality characteristics of Rhodhiss Lake, North Carolina: Charlotte, North Carolina, 4th Annual Southeastern Lakes Management Conference, North American Lake Management Society [abs].
- Bales, J.D., and Strickland, A.G., 1994, Discharge and velocity measurements in the Albemarle-Pamlico Sounds, North Carolina: Austin, Texas, Proceedings Annual Meeting of the American Institute of Hydrology [abs].
- Bales, J.D., 1993, U.S. Geological Survey reservoir studies in North Carolina: Chattanooga, Tennessee, 2nd Annual Southeastern Lakes Management Conference, North American Lake Management Society [abs].
- Bales, J.D., Treece, M.W., and Garrett, R.G., 1991, Salinity regime of a North Carolina tidal creek: Nashville, Tennessee, National Conference on Hydraulic Engineering, American Society of Civil Engineers [abs].

PUBLICATIONS (continued)

Abstracts

- Treece, M.W., and Bales, J.D., 1990, Hydrologic and water-quality effects of artificial-drainage control, *in* North Carolina Department of Environment, Health, and Natural Resources, Project abstracts-FY 1989 & FY 1990: Raleigh, North Carolina, Project No. 90-18, Albemarle-Pamlico Estuarine Study, p. 27 [abs].
- Treece, M.W., and Bales, J.D., 1990, Monitoring techniques for quantifying drainage from altered wetlands: Denver, Colorado, Conference on the Science of Water Resources, American Water Resources Association [abs].
- Bales, J.D., 1990, Hydrodynamics and circulation of the Pamlico and Neuse River Estuaries, *in* North Carolina Department of Environment, Health, and Natural Resources, Project abstracts--FY 1989 & FY 1990: Raleigh, North Carolina, Project No. 90-18, Albemarle-Pamlico Estuarine Study, p. 26 [abs].
- Bales, J.D., 1989, Flows and flow patterns in the Pamlico and Neuse River estuaries, *in* Holman, R.H., ed., Project abstracts for the period 1989-1990: Raleigh, North Carolina, Report No. 89/08, Albemarle--Pamlico Estuarine Study, Department of Environment, Health, and Natural Resources, p. 8 [abs].
- Bales, J.D., 1989, Off-site effects of water-control structures, *in* Holman, R.H., ed., Project abstracts for the period 1989-1990: Raleigh, North Carolina, Report No. 89/08, Albemarle-Pamlico Estuarine Study, Department of Environment, Health, and Natural Resources, p. 9 [abs].
- Bales, J.D., and Betson, R.P., 1982, Assessment of hydrologic impacts of surface mining: Pittsburgh, Pennsylvania, Conference on Water and Energy--Technical and Policy Issues, American Society of Civil Engineers [abs].
- Bales, J.D., and Betson, R.P., 1981, The curve number as a hydrologic index: Mississippi State, Mississippi, International Symposium on Rainfall-Runoff Modeling [abs].
- Hazell, W.F., and Bales, J.D., 1997, Real-time rainfall measurement in the City of Charlotte and Mecklenburg County, North Carolina: U.S. Geological Survey Fact Sheet FS-052-97, 4 p.
- Bales, J.D., Fulford, J.M., and Swain, E.D., 1996, Review and evaluation of a model for simulating the natural hydrology of south Florida: U.S. Geological Survey Fact Sheet FS-180-96, 4 p.
- U.S. Geological Survey, 1995, United States Geological Survey Programs in North Carolina: U.S. Geological Survey Fact Sheet FS-033-95, 4 p.

Published Book Reviews

- Bales, J.D., 1986, Review of *Fluvial Forms and Processes*: Earth Science Reviews, v. 22, no. 3, p. 233.
- Bales, J.D., 1985, Review of *Mathematical Modeling of Water Quality--Streams, Lakes, and Reservoirs*: Journal of Hydrology, v. 77, p. 379-380.
- Bales, J.D., 1984, Review of *Time Series Methods in Hydrosociences*: Earth Science Reviews, v. 20, p. 177.
- Bales, J.D., 1982, Review of *Advances in Hvdrosocience, Vol. 12*: Earth Science Reviews, v. 18, p. 178-179.

PUBLICATIONS (continued)

Other Publications

- Bales, J.D., 2000, Residential Contributions Add Up in Stormwater Study *in* Turning the Tide on Nonpoint Source Pollution: Columbia, S.C., South Carolina Department of Health and Environmental Control, Bureau of Water, Winter 2000, p. 1-2.
- Bales, J.D., 1990, Estuarine studies in North Carolina: OPDIN Update, v. 1, no. 2, Ocean Pollution Data and Information Network, National Oceanographic Data Center, National Oceanic and Atmospheric Administration, Washington, D.C., p. 8-9.
- Bales, J.D., 1990, Estuarine QW measurement: WRD Instrument News, Issue No. 49, U.S. Geological Survey, Stennis Space Center, Mississippi, p. 1, 6-7.
- Bales, J.D., 1986, Field and numerical studies of tracer gas transport and surface desorption in laterally uniform, partially stratified estuaries: Austin, Texas, unpublished Ph.D. dissertation, Department of Civil Engineering, University of Texas. 621 p.
- Bales, J.D., 1978, Closed form solutions of the kinematic streamflow equations: Knoxville, Tennessee, unpublished M.S. thesis, Department of Civil Engineering, University of Tennessee, 78 p.
- Overton, D.E., Troxler, W.L., and Bales, J.D., 1978, A manual for simulating design hydrographs in urban regions using kinematic wave theory and SCS curve numbers: Knoxville, Tennessee, E.P.E., Inc.

PRESENTATIONS

Invited Presentations—Conferences, Universities, and Workshops

- Drought and Water Supply in the French Broad River Basin: RiverLink French Broad River Basin Drought Forum, Asheville, NC, A-B Technical Community College, February 22, 2008.
- The Drought of 2006-08: Immaculate Conception Catholic Church Drought Forum, Durham, NC January 27, 2008.
- The Drought of 2007: Will the Water Run Out? A Nicholas School Town Hall for the Duke and Durham Communities, Duke University Nicholas School of the Environment, Durham, NC, January 8, 2008.
- Hydrologic effects of drought in the Western Piedmont COG region, North Carolina: Western Piedmont Council of Governments Drought Workshop, Hickory, NC, Lenoir-Rhyne College, November 14, 2007.
- Uncertainties in flood inundation mapping: National Weather Service Eastern Region Flood Inundation workshop, Raleigh, NC, November 13, 2007.
- The future of water in Wilkes County : Wilkes 20/20 Government Strategic Alliance workshop, Wilkesboro, NC, October 30, 2007..
- The Rivers Component of the National Monitoring Network: 2006 National Monitoring Conference, San Jose, CA, May 8, 2006.
- Hurricanes and Floods: Meredith College Women in Science and Mathematics seminar, Raleigh, NC, October 19, 2005.
- Floods and Flood Inundation Mapping: University of North Carolina Institute of Marine Sciences seminar, Morehead City, NC, October 14, 2005
- Hydrodynamic and Transport Modeling of Devils Lake, North Dakota—Some Thoughts and Options: ND Dept. of Transportation, Federal Highways, and ND Dept. of Health, Bismarck ND, November 2004.

PRESENTATIONS (continued)

Invited Presentations—Conferences, Universities, and Workshops

- A Water Resources Vision for the National Weather Service: Meeting of the Subcommittee on Water Availability and Quality, Reston, VA, October 2004 (co-authored with Pedro Restrepo, NWS; presented by Restrepo).
- Estimating Effects of Water-Supply Alternatives on Red River of the North Water-Quality Conditions: Bismarck, ND, August 2004 (co-authored with Rochelle Nustad, ND District, presented by Nustad).
- U.S. Geological Survey Programs in North Carolina: National Environmental Modeling and Analysis Center Workshop, UNC-Asheville, Asheville, NC, May 2004.
- Water Quality Modeling in High Rock Lake: Yadkin Pee Dee River Basin Association, Lexington, NC, August 8, 2003.
- U.S. Geological Survey Programs in North Carolina: North Carolina Water Resources Congress, Raleigh, NC, May 6, 2003.
- CUAHSI and the USGS in the Neuse River Basin: Consortium of Universities for the Advancement of Hydrologic Science, Inc. workgroup, Raleigh, NC, April 28, 2003.
- A River Science Strategy for the USGS—meeting the needs of the nation: National Research Council Committee on USGS Water Resources Research, San Juan, PR, October 17, 2002.
- Hydrology and Water Quality in North Carolina: North Carolina Conservation District Employee's Workshop, Kill Devil Hills, NC, May 15, 2002.
- Surface-Water Studies in Currituck Sound: Currituck Sound Study Advisory Committee, Elizabeth City, NC, April 4, 2002.
- North Carolina Flood Mapping Program—Real-Time Flood Inundation Mapping: 56th Interdepartmental Hurricane Conference, Hurricane Flood-Mapping Applications Workshop, New Orleans, LA, March 14, 2002.
- Watershed Hydrology and Its Influence on Water Quality: NC Division of Water Quality Workshop on Linking Land Use and Water Quality, Elizabeth City, NC, October 31, 2001.
- Hydrology and Water Quality in Eastern North Carolina: Water Quality Workshop sponsored by NC Conservation District Employees Association and the NC Division of Soil & Water Conservation, Goldsboro, NC, September 25, 2001.
- Water Quality and Coastal Floods: Lessons Learned from 1996 and 1999: H. John Heinz III Center for Science, Economics, and the Environment Committee on Human Environmental Links to Natural Disasters—Strengthening Coastal Communities, Study Committee meeting, Raleigh, NC, May 21, 2001.
- Program for Quantifying Nonpoint Source Loadings in Charlotte, NC, and Possible Approaches for Charleston, SC: Charleston, SC, Meeting of State and Local Officials developing EMPACT grant, January, 29, 2001.
- Two Months of Flooding in North Carolina—Effects of Hurricanes Dennis, Floyd and Irene: 2000 North Carolina Irrigation Conference, North Carolina State University, Raleigh, NC, November 8, 2000.
- The USGS National Streamflow Information Program: Plenary Session of the 2000 Annual Meeting and International Conference: Atmospheric, Surface and Subsurface Hydrology and Interactions, Research Triangle Park, NC, November 6, 2000.

PRESENTATIONS (continued)

Invited Presentations—Conferences, Universities, and Workshops

- Hurricane Floyd Floods and Associated Water-Quality Impacts: U.S. Department of Agriculture, Animal and Plant Health Inspection Service Seminar, Raleigh, NC, November 1, 2000.
- Nonpoint Source Contributions from Urban Areas: South Carolina Department of Health and Environmental Control Seminar, Columbia, SC, October 30, 2000.
- North Carolina Floods of September – October 1999: National Weather Service Flood Forecasting Workshop, Raleigh, NC, October 24, 2000.
- Flooding and Flood Risks in North Carolina: Meeting of the Society for Risk Analysis, Research Triangle Park, NC, September 21, 2000.
- Nonpoint Source Pollution in Charlotte: 9th Annual Bi-State Catawba River Conference, Charlotte, NC, September 20, 2000.
- Effects of Hurricanes Dennis, Floyd, and Irene on NC's Rivers, Floodplains, and Estuaries: North Carolina Statewide Watershed Conference, Salisbury, NC, June 23, 2000.
- Two Months of Flooding in Eastern North Carolina—Hydrologic Impacts of Hurricanes Dennis, Floyd, and Irene, 1999: Tar-Pamlico River Basin Regional Council, Wilson, NC, June 16, 2000.
- USGS Water Resources Programs in North Carolina and 1999 Flooding in Eastern North Carolina: Water Resources Congress, Raleigh, NC, May 31, 2000.
- Two Months of Flooding in Eastern North Carolina—Hydrologic Impacts of Hurricanes Dennis, Floyd, and Irene, 1999: Neuse River Basin Regional Council, Goldsboro, NC, March 24, 2000.
- 1999 Flooding in Eastern North Carolina: Department of Biological and Agricultural Engineering Seminar, North Carolina State University, Raleigh, NC, March 20, 2000.
- Flood Risk Mapping and Community Floodplain Management: Governor's Hurricane Conference, March 14, 2000, Sunset Beach, NC. Panelist with representatives from FEMA and NC Division of Emergency Management.
- Relation of Land Use to Water-Quality in Charlotte, NC: Bi-State Catawba River Task Force, Charlotte, NC, February 16, 2000.
- Hydrologic and Water-Quality Impacts of Hurricanes Dennis, Floyd, and Irene on Eastern North Carolina: Annual meeting of the North Carolina Chapter of the American Fisheries Society, Apex, NC, January 2000.
- Flooding in the Tar River Basin, September and October 1999: Henderson Kiwanis Club, Henderson, NC, December 1999.
- Two Months of Flooding in Eastern North Carolina—Effects of Hurricanes Dennis, Floyd, and Irene: Washington, NC, North Carolina Estuarium, November 1999.
- Salt Transport in the Suwannee River Estuary, FL: Executive Board Meeting of the Suwannee River Water Management District, Live Oak, FL, July 1999.
- Results of Urban Stormwater Investigation: City of Charlotte and Mecklenburg County, Charlotte, NC, June 1999.
- Lower Cape Fear River Water-Quality Modeling: Lower Cape Fear River Technical Committee, Wilmington, NC, March 1999.

PRESENTATIONS (continued)

Invited Presentations—Conferences, Universities, and Workshops

- Florida TMDL Surface-Water Modeling Issues: Interagency Florida TMDL Workshop, Tallahassee, FL, March 1999.
- Dynamic Water-Quality Model of Lake Hickory, North Carolina: School of the Environment, Graduate Course in Water-Quality Modeling, Duke University, Durham, NC, December 1997.
- Neuse River Estuary Salinity and Dissolved Oxygen Dynamics: Curriculum in Marine Sciences Graduate Seminar, University of North Carolina, Chapel Hill, November 1997.
- Flooding Associated with Hurricane Fran: Department of Civil Engineering Seminar, North Carolina State University, Raleigh, NC, October, 1997.
- Suggestions for Application of the Natural System Model in South Florida: U.S. Geological Survey South Florida Ecosystem Symposium, Ft. Lauderdale, FL, August 1997.
- Hurricane Fran--The Facts: Annual Meeting of the North Carolina Association of Flood Plain Managers, Asheville, NC, May 1997.
- Urban Hydrology and the Effects of Development on Flooding: Mecklenburg County Flood Plain Symposium, Charlotte, NC, April 1997.
- Catawba River Basin Water Quality: Joint meeting of the North Carolina and South Carolina Chapters of the American Fisheries Society, Charlotte, NC, 1997.
- Modeling estuarine effects of nitrogen loading reduction: Conference on Nutrients in the Neuse River--Working Toward Solutions: New Bern, NC, 1997
- Development of a water-quality modeling framework for the Neuse River Estuary: Forum to examine implementation of the Comprehensive Conservation and Management Plan for the Albemarle-Pamlico Sounds New Bern, NC, 1997
- Water-Quality Model of Lake Rhodhiss: Catawba River Study Committee. Hickory, NC, 1996.
- Trends in Waccamaw River Streamflow, 1940-94: Public Meeting, Ash, NC, 1996. Effects of Hurricane Fran on Flooding and Water Quality in Selected North Carolina Rivers: Department of Civil Engineering, Student Chapter of the American Society of Civil Engineers, Duke University, Durham. NC, 1996.
- Estuarine Field Data Collection and Hydrodynamic Modeling: Department of Civil Engineering, Duke University, Durham, NC, 1996.
- Modeling Estuarine Hydrodynamics and Water Quality: Society of American Military Engineers, Camp Lejeune, NC, 1994.
- Reservoir Transport Mechanisms--Exchange between Coves and the Mainstem: 3rd Annual Bi-State Catawba River Conference, University of North Carolina at Charlotte NC, 1994.
- Role of Models in Evaluating Water Quality: Conference on Water Issues in the 1990's: Catawba Valley Community College, Hickory, NC, 1993.
- Modeling Approaches to Nutrient-Productivity and Trophic Interactions: Cooperative Institute for Fisheries Oceanography: University of North Carolina Institute of Marine Sciences, Morehead City, NC, 1991.
- Measurement and Computation of Flows in Tidal Rivers: Graduate Civil Engineering Seminar, North Carolina State University, Raleigh, NC, 1991.

PRESENTATIONS (continued)

Invited Presentations—Conferences, Universities, and Workshops

Hydrodynamics of the Pamlico and Neuse River Estuaries: Department of Geography Colloquium Series, University of North Carolina, Chapel Hill, NC, 1990.

USGS Monitoring Activities in Albemarle-Pamlico Sounds, North Carolina: NOAA Coastal Ocean Program Observations and Predictions Workshop, Charleston, SC, 1990.

Hydrology and Salinity Regime of the Pamlico River: Conference on Wetlands and Sea-Level Rise, East Carolina University, Greenville, NC, 1989.

Invited Presentations—USGS Meetings

Three-Dimensional Circulation and Transport Modeling in Devils Lake, ND: Perdido Beach, AL—2nd USGS Modeling Workshop, February 14, 2008.

Forty years of water-quality monitoring in the U.S.: Galveston, TX—USGS National Water Quality Workshop—Opening Plenary Session, November 6, 2007.

Software for automated stream metabolism calculations: Galveston, TX—USGS National Water Quality Workshop, November 7, 2007.

Flood Inundation Modeling and Mapping: Denver, CO--USGS – Japanese NILIM/PWRI Workshop, January 30, 2007, Denver, CO.

Interdisciplinary River Science and Dams: New Orleans, LA--USGS National Water Science Meeting, January 24, 2007.

Simulation of Water Level, Flow, and Solute Transport in Devils Lake, ND for Present and Future Conditions: Menlo Park, CA--Surface Water Modeling and Measurement Workshop, January 18, 2007.

USGS – NOAA Web Services Project: Quarterly USGS – NOAA coordination meeting, Silver Spring, MD, April 28, 2005.

Estimating Reaeration Rates for NEET Metabolism Studies: NAWQA Nutrient Enrichment Effects Team meeting, Tacoma, WA, March 2004.

Circulation Modeling in Reservoirs: USGS Reservoir Workshop, Lakewood, CO, September 18, 2003.

Flood Inundation Mapping and Opportunities: USGS National Surface Water Meeting, San Antonio, TX, November 18, 2003.

Future Directions for River Science in the USGS: USGS Office of Budget All Hands meeting (via teleconference), May 2, 2003.

A River Science Strategy for the USGS: USGS Office of Surface Water All-Hands meeting, Reston, VA, January 28, 2003.

Predicting Effects of Streamflow Changes on Salinity in the Suwannee River Estuary, Florida: USGS Southeast Region Data Chiefs and Surface Water Specialists Meeting, Atlanta, GA, November 21, 2002

Update on Flood Mapping: Activities—Opportunities—Issues: USGS Southeast Region Data Chiefs and Surface Water Specialists Meeting, Atlanta, GA, November 21, 2002

Water Quality and Floods—Lessons from Floods of 1999: USGS Office of Surface Water Workshop on Indirect Methods, Front Royal, VA, May 10, 2001.

PRESENTATIONS (continued)

Invited Presentations—USGS Meetings

- Surface-Water Modeling—Status, Opportunities, and Issues: USGS Southeastern Region NAWQA and Studies Chiefs Meeting, Norcross, GA, January 17, 2001.
- Autonomous Underwater Vehicles for Environmental Data Collection: USGS National Water Quality Field Conference, New Orleans, LA, December 7, 2000.
- Continuous *in situ* Monitoring of Nitrate: USGS National Water Quality Field Conference, New Orleans, LA, December 7, 2000.
- North Carolina 1999 Flood Response and Plans for Future Flood Warning Activities: USGS Southeastern Region Surface Water Specialists and Data Chiefs Meeting, Norcross, GA, November 15, 2000.
- Surface-Water Modeling Activities and Opportunities in the Southeastern Region: USGS Southeastern Region Surface Water Specialists and Data Chiefs Meeting, Norcross, GA, November 16, 2000.
- Two Months of Flooding in Eastern North Carolina—Hydrologic Impacts of Hurricanes Dennis, Floyd, and Irene, 1999: Southeastern Region District Chiefs Meeting, Norcross, GA, March 29, 2000.
- Program Opportunities involving Surface Water Modeling: USGS Central Region Management Conference, New Orleans, LA, January 2000.
- Two Months of Flooding in Eastern North Carolina—Hydrologic Impacts of Hurricanes Dennis, Floyd, and Irene, 1999: USGS Water-Resources Seminar Series, Raleigh, NC, January 2000.
- Simulation of Nutrient and Dissolved-Oxygen Dynamics in Reservoirs: USGS National Water Quality Meeting, Costa Mesa, CA, December 1999.
- Surface-Water Modeling--Status, Opportunities, and Issues: USGS National District Chiefs Meeting, Charleston, SC, November 1999.
- Modeling Nutrient and Dissolved-Oxygen Dynamics in Lakes and Reservoirs: USGS Lakes and Reservoirs Workshop, Northborough, MA, September 1999.
- The National Streamflow Information Program: Meeting of the USGS Northeastern Region and the Ohio Division of the U.S. Army Corps of Engineers, Cincinnati, Ohio, August 1999.
- Hydrologic Modifications—Some Flow and Water Quality Issues: USGS Interdivisional Seminar on Hydrologic Modifications, Atlanta, GA, July 1999.
- A Program for Streamflow Information: Illinois State Streamgaging Cooperators Meeting, Quincy, IL, April, 1999.
- Status of Planning for the National Streamflow Information Program: SE Region District Chiefs Meeting, Norcross, GA, February 1999.
- Modeling Neuse River Estuary Water Quality: Brown Bag Seminar, North Carolina Division of Water Quality, Raleigh, NC, 1997.
- Suggestions for More Effective Estuarine Modeling Studies: USGS Southeastern Fall Management Conference, Orlando, FL, 1994.
- The USGS and It What Means to the Cape Fear River Basin: 21st Annual Meeting of the Cape Fear River Assembly, Greensboro, NC, 1994.
- Hydrodynamic and Water-Quality Studies in the Upper Catawba River Basin: Catawba River Study Committee, Hickory, NC, 1993.

PRESENTATIONS (continued)

Invited Presentations—USGS Meetings

- Proposed Basinwide Investigation of Hydrodynamics in the Catawba River Basin, North and South Carolina: Catawba-Wateree Water-Users Association, Lancaster, SC, 1993.
- Hydrodynamic and Water-Quality Modeling of Reservoirs: USGS Southeastern Region Fall Management Conference, Atlanta, GA, 1992.
- Instrumentation for Measuring Flow in Tidal Rivers: USGS Southeastern Region Tidal Gaging Workshop, Tampa, FL, 1991.
- Shore-Based Estuarine Data Collection: USGS National Workshop on Unsteady Flow and Transport Modeling in Rivers and Estuaries, Chapel Hill, NC, 1991.
- Estuarine Research Activities in North Carolina: USGS Southeast Region Fall Management Conference, Atlanta, GA, 1989.

Scientific Conference Presentations

- Simulation of Constituent Transport in the Red River of the North Basin, North Dakota and Minnesota, During Unsteady-Flow Conditions, 1977 and 2003-04: Grand Forks, ND-- Third International Water Conference, Research and Education in an International Watershed: Implications for Decision Making, March 14, 2007 (presented by Rochelle Nustad, primary author).
- Nitrogen and phosphorus loadings to the Neuse and Pamlico River Estuaries, North Carolina: 2006 National Monitoring Conference, San Jose, CA, May 9, 2006.
- Real-time flood inundation mapping in North Carolina: 3rd Federal Interagency Hydrologic Modeling Conference, Reno, NV, April 6, 2006.
- Automated procedures for computing whole-stream metabolism: 3rd Interagency Modeling Conference, Reno, NV, April 4, 2006.
- Simulation of Hydrodynamics and Solute Transport in the Suwannee River Estuary, Florida: Suwannee River Basin Interdisciplinary Science Conference: September 2004 (prepared by Bales, presented by Gary Mahon, Tallahassee, FL)
- River Flow, Floodplain Inundation, and Instream Dissolved-Oxygen Concentrations in the Lower Roanoke River, North Carolina: 2004 UNC Water Resources Research Institute Conference, Raleigh, NC, March 31, 2004.
- Simulation of Effects of Changes in Freshwater Inflow on Salinity Distributions in the Suwannee River Estuary, Florida: Alabama Water Resources Conference, Orange Beach, AL, Sept. 5, 2002.
- Simulation of Effects of Changes in Freshwater Inflow on Salinity Distributions in the Suwannee River Estuary, Florida, 2nd Federal Interagency Hydrologic Modeling Conference, Las Vegas, NV, August 1, 2002.
- Urban Stormwater Quality in North Carolina, Eleventh Annual Southeastern Lakes Management Conference, Winston-Salem, NC, March 19, 2002.
- Freshwater and nutrient delivery to Pamlico Sound, North Carolina, Resulting from the 1999 hurricane season: 16th Biennial Conference of the Estuarine Research Federation, St. Pete Beach, FL, November 2001.

PRESENTATIONS (continued)

Scientific Conference Presentations

- Water-quality indices as measures of reservoir water quality in North Carolina: AWRA Annual Spring Specialty Conference, San Antonio, TX, May 2001.
- Data quality and uncertainty in reservoir water-quality modeling, North Carolina: AWRA Annual Spring Specialty Conference, San Antonio, TX, May 2001
- Hydrologic and Water Quality Effects of Hurricanes Dennis, Floyd, and Irene: Conference on Extended Recovery on the Coastal Plain, East Carolina University, Greenville, NC, February 2001.
- Fresh Water Floods Caused by Tropical Cyclones: American Meteorological Society Meeting, Albuquerque, NM, January 18, 2001 (co-authored with Glenn Austin, NWS; presented by Austin).
- Overview of the Suwannee River Estuary data-collection and modeling study: Research Symposium for the Suwannee Basin, Suwannee River Water Management District, Live Oak, FL, 2001.
- Dynamic water-quality models of Catawba River Basin reservoirs, North Carolina: NALMS 10th Annual Southeastern Lakes Conference, Knoxville, TN, March 2000.
- Metals and Organic Compounds in Stormwater, Charlotte, North Carolina, 1993-98: 2000 Water Resources Research in North Carolina Conference, Raleigh, NC, March 30, 2000.
- Water-quality indices as measures of reservoir water quality in North Carolina: 1999 Water Resources Research in North Carolina Conference, Raleigh, NC, March 1999.
- Dynamic water-quality modeling of Catawba River reservoirs: 1998 Water Resources Research in North Carolina Conference, Raleigh, NC, March 1998.
- Bales, J.D., 1997, Modeling effects of nitrogen reductions in the Neuse River Estuary, North Carolina: 14th Biennial Estuarine Research Federation International Conference, Providence, RI, Nov. 1997.
- Dynamic modeling of circulation and water quality in a narrow Piedmont reservoir: 4th Annual Southeastern Lakes Management Conference, North American Lake Management Society, Charlotte, North Carolina, May 1995.
- Some observations on determination of phosphorus loadings to reservoirs: 4th Annual Southeastern Lakes Management Conference, North American Lake Management Society, Charlotte, North Carolina, May 1995.
- Discharge and velocity measurements in the Albemarle-Pamlico Sounds, North Carolina: Annual Meeting of the American Institute of Hydrology, Austin, Texas, March 1994.
- U.S. Geological Survey reservoir studies in North Carolina: 2nd Annual Southeastern Lakes Management Conference, North American Lake Management Society, Chattanooga, Tennessee, March 1992.
- Salinity regime of a North Carolina tidal creek: National Conference on Hydraulic Engineering, American Society of Civil Engineers, Nashville, Tennessee, August, 1991.
- Hazard Mitigation Grant Program—Local Experience in Raleigh, North Carolina: Annual Meeting of the North Carolina and South Carolina Associations of Flood Plain Managers, Myrtle Beach, SC, April 1998.
- Dynamic modeling of water-supply reservoir physical and chemical processes First Federal Interagency Hydrologic Modeling Conference, Las Vegas, NV, April 1998.

SCIENTIFIC PUBLICATION REVIEWS

Journals

- Environmental Management
- Estuarine Coastal and Shelf Science
- Journal of Hydraulic Engineering
- Journal of Environmental Engineering
- Lake and Reservoir Management
- Water Resources Bulletin/Journal of the American Water Resources Association
- Transactions of the American Fisheries Society
- Wetlands

Technical Reports

- Civil Engineering Research Foundation
- Federal Energy Regulatory Commission Permit Applications
- Government Accounting Office Technical Reports
- North Carolina Department of Environment, Health, and Natural Resources Technical Reports
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Geological Survey

Conference Proceedings

- Proceedings of the 27th International Association of Hydraulic Research Congress (1997)
- Estuarine and Coastal Modeling Conference (1990, 1992, and 1994)

PROPOSAL REVIEWS

U.S. Geological Survey

- Water Resources Research Institute Grants Program
- Water Science Center Research Program

U.S. Environmental Protection Agency

- New York Harbor National Estuary Program
- Sarasota Bay National Estuary Program

Others

- Government Accountability Office (GAO)
- U.S. Fish and Wildlife Service
- Albemarle-Pamlico National Estuarine Program
- North Carolina EPA 319(h) Nonpoint Source Grants Program
- North Carolina Water Quality Workgroup
- Lake Champlain Research Consortium
- University of New Hampshire Coastal Response Research Center