

CURRICULUM VITA – William Paul Anderson, Jr.

Assistant Professor
Department of Geology
Appalachian State University
P.O. Box 32067
Boone, NC 28608-2067 USA

Phone: 828.262.3049
FAX: 828.262.6503
Email: andersonwp@appstate.edu

EDUCATION

Ph.D. (Earth Sciences), Department of Marine, Earth & Atmospheric Sciences, North Carolina State University, Raleigh, NC, May 1999.

Adviser: David G. Evans

Dissertation: *The Hydrology of Hatteras Island, North Carolina*

M.S. (Geological Sciences), University of Maine, Orono, ME, August 1992.

Adviser: David G. Evans

Thesis: *Hydrogeologic characterization of two salt contamination sites in Maine*

B.S. (Geology), University of Dayton, Dayton, OH, April 1990.

B.C.E. (Civil Engineering), University of Dayton, Dayton, OH, April 1989.

EMPLOYMENT HISTORY

Academia

Assistant Professor, Department of Geology, Appalachian State University, Boone, NC; August 2004 - present.

Teaching duties include courses in hydrogeology, advanced environmental geology, physical geology, and environmental geology. Research duties include directing undergraduate research.

Assistant Professor, Department of Geology, Radford University, Radford, VA; August 2000 – May 2004.

Assistant Professor, Department of Geography/Geology, Illinois State University, Normal, IL; August 1998 – May 2000.

Adjunct Lecturer, Department of Geology, Appalachian State University, Boone, NC; January 1998 – May 1998.

Visiting Lecturer, Department of Geology, Duke University, Durham, NC; September 1997 - December 1997.

Research/Teaching Assistant, Department of Marine, Earth & Atmospheric Sciences, North Carolina State University, Raleigh, NC; January 1997 - May 1997.

Teaching Assistant, Department of Marine, Earth & Atmospheric Sciences, North Carolina State University, Raleigh, NC; August 1992 - December 1993.

Research Assistant, Department of Geological Sciences, University of Maine, Orono, ME;
June 1990 - August 1992.

Government/Private

Hydrogeologist III (Groundwater Modeler), Research Triangle Institute (RTI), Research Triangle Park, NC (*part-time position*); January 1997 – March 1998.

Hydrogeologist II, State of North Carolina, Department of Environment, Health, and Natural Resources, Division of Environmental Management, Groundwater Section, Raleigh, NC; January 1994 - December 1996 (*limited-term research position*).

PUBLICATIONS

Refereed Publications

Anderson, Jr., W.P., and D.G. Evans. *In press, 2007*. On the interpretation of recharge estimates from steady-state model calibrations. *Ground Water*.

Anderson, Jr., W.P. 2002. Aquifer salinization from storm overwash. *Journal of Coastal Research* **18**(3), p.413-420.

Anderson, Jr., W.P., and D.G. Evans. 2001. Comment on 'Anomalous fresh water lens morphology on a strip barrier island.' *Ground Water* **39**(6), p.804.

Anderson, Jr., W.P., D.G. Evans, and S.W. Snyder. 2000. The effects of Holocene barrier-island evolution on water-table elevations - Hatteras Island, North Carolina, USA. *Hydrogeology Journal* **8**(4), p.390-404.

Evans, D.G., W.P. Anderson, Jr., and C.F. Tsang. 1992. Borehole fluid experiments near salt contamination sites in Maine. *Ground Water Management* **13**, National Ground Water Association: Dublin, OH, p.797-807.

Manuscripts in Review

Anderson, Jr., W.P., C.M. Babyak, and C.S. Thaxton. *In review - 2006*. Baseline monitoring case study of a high-gradient urbanized stream: Boone Creek, Boone, NC. Submitted to the *ASCE – Proceedings of the 2nd National Low Impact Development Conference*.

Manuscripts in Preparation

Anderson, Jr., W.P., and G.M. Shook. *In prep – 2006*. El Nino – Southern Oscillation and its correlation with ground water availability in coastal North Carolina. To be submitted to *Ground Water*.

Anderson, Jr., W.P., and R.M. Lauer. *In prep – 2006*. . The control of overwash processes on mixing zone development. To be submitted to *Ground Water*.

Evans, D.G., and W.P. Anderson, Jr. *In prep – 2006*. Stochastic fractal anti-aliasing of water-table hydrographs to determine long-term recharge. To be submitted to *Water Resources Research*.

Unrefereed Manuscripts

Thaxton, C.S., W.P. Anderson, Jr., and C.M. Babyak. 2006. Kraut Creek: A summary of results from a scientific study during the summer of 2006. Unpublished, MountainKeepers' Environmental Summit II, September 2006, Appalachian State University.

Anderson, Jr., W.P. 1999. *The Hydrology of Hatteras Island, North Carolina*. Ph.D. dissertation, unpublished, North Carolina State University, Raleigh, NC. 293p.

Anderson, Jr., W.P., and H.E. Mew, Jr. 1995. *Analysis of the Buxton Woods Surficial Aquifer - Cape Hatteras, NC - Interim Report*. NC-DEHNR-DEM, Groundwater Section. 60p.

Anderson, Jr., W.P. 1992. *Hydrogeologic characterization of two salt contamination sites in Maine*. Master's Thesis, unpublished, University of Maine, Orono, ME. 156p.

Other Professional Works

Anderson, Jr., W.P. 2001. Video: *Hollow-Stem Auger Drilling Techniques*. Produced at Radford University, Radford, VA, Spring 2001. 12 minutes.

PROFESSIONAL PRESENTATIONS

Invited Presentations at Universities

Anderson, Jr., W.P. 2006. *The control of overwash processes on mixing zone development, Hatteras Island, NC*. University of North Carolina, Charlotte, Department of Geography and Earth Sciences Seminar Series, November 3, 2006.

Anderson, Jr., W.P. 2006. *Inferences from water-table hydrographs on Hatteras Island, North Carolina*. East Carolina University, Department of Geology Seminar Series, April 7, 2006.

Anderson, Jr., W.P. 2006. *Inferences from water-table hydrographs on Hatteras Island, North Carolina*. Virginia Polytechnic Institute and State University (Virginia Tech), Department of Geosciences Distinguished Lecturer Series, March 31, 2006.

Anderson, Jr., W.P. 2006. On the interpretation of recharge estimates based on steady-state model calibrations. Appalachian State University, Department of Geology Seminar Series, February 24, 2006.

Anderson, Jr., W.P. 2004. *Hurricanes, Overwash, and Groundwater Quality: An Example from Hatteras Island, NC*. Radford University Faculty Lecture Series, March 29, 2004.

Anderson, Jr., W.P. 2003. *Temporal variations in recharge in water-table aquifers: An example from Hatteras Island, North Carolina*. Appalachian State University, Department of Geology Seminar Series, March 27, 2003.

Anderson, Jr., W.P. 2002. *Temporal variations in recharge in water-table aquifers: An example from Hatteras Island, North Carolina*. Radford University, Sigma Gamma Epsilon Earth Science Honor Society Seminar Series, November 19, 2002.

Anderson, Jr., W.P. 2002. *Temporal variations in recharge in water-table aquifers: An example from Hatteras Island, North Carolina*. University of Virginia, Department of Environmental Sciences Seminar Series, November 14, 2002.

Invited Presentations at Professional Meetings

Evans, D.G., and W.P. Anderson, Jr. 1996. *The role of Holocene barrier island evolution on water-table elevations - Hatteras Island, North Carolina*. Spring Meeting of the Hubbert Quorum, Department of Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD, May 19, 1996.

Anderson, Jr., W.P., D.G. Evans, and H.E. Mew, Jr. 1995. *Stratigraphic controls on water-table variation in a barrier island setting, Hatteras Island, North Carolina*. Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists **4**. 1995 Annual Meeting, Houston, TX.

Contributed Presentations at Professional Meetings

- Evans, D.G., and W.P. Anderson, Jr. 2006. Stochastic anti-aliasing of water-table hydrographs to determine long-term recharge. *GSA Abstracts with Programs* **38**(7), 2006 GSA Annual Meeting, Philadelphia, PA.
- Anderson, Jr., W.P., and D.G. Evans. 2005. On the interpretation of recharge estimates based on steady-state model calibrations. *GSA Abstracts with Programs* **37**(7), 2005 GSA Annual Meeting, Salt Lake City, UT.
- Raymond, L.A., and W.P. Anderson, Jr. 2005. Fracture trace analysis for small domain well siting, northwestern North Carolina, USA. *GSA Abstracts with Programs* **37**(7), 2005 GSA Annual Meeting, Salt Lake City, UT.
- Anderson, Jr., W.P., and D.G. Evans. 2002. Inverse modeling to quantify recharge in unconfined aquifers. *EOS Transactions of the American Geophysical Union* **83**(47), Fall Meeting Supplement, Abstract H51C-06, American Geophysical Union 2002 Fall Meeting, San Francisco, CA.
- Anderson, Jr., W.P., and D.G. Evans. 2001. Aquifer salinization from storm overwash. *EOS Transactions of the American Geophysical Union* **82**(47), Fall Meeting Supplement, Abstract H21C-0306, American Geophysical Union 2001 Fall Meeting, San Francisco, CA.
- Anderson, Jr., W.P., and D.G. Evans. 2001. Saltwater intrusion from above: Aquifer salinization from storm overwash. *GSA Programs and Abstracts* **33**(2), Southeastern Section Meeting, Raleigh, NC.
- Anderson, Jr., W.P., and D.G. Evans. 1999. Recharge of the Buxton Woods Surficial Aquifer – Hatteras Island, North Carolina. *EOS Transactions of the American Geophysical Union* **80**. Fall Meeting Supplement, American Geophysical Union 1999 Fall Meeting, San Francisco, CA.
- Anderson, Jr., W.P., and D.G. Evans. 1999. Impact of Holocene evolution of a barrier island on water-table elevations - Hatteras Island, North Carolina. *GSA Programs and Abstracts*, North Central Section Meeting, Champaign, IL.
- Anderson, Jr., W.P., H.E. Mew, Jr., and D.G. Evans. 1996. Hydrogeologic framework of the Buxton Woods Surficial Aquifer, Cape Hatteras, North Carolina. *GSA Programs and Abstracts* **28**(2), Southeastern Section Meeting, Jackson, MS.
- Anderson, Jr., W.P., D.G. Evans, and W.H. Pedler. 1993. Inferring horizontal flow in fractures using borehole fluid electrical conductivity logs. *EOS Transactions of the American Geophysical Union* (**74**), p.305.

Contributed Presentations with Graduate Students

- Lauer, R.M., T. Burbey, and W.P. Anderson, Jr. 2006. Characterizing fractured rock aquifers of the Blue Ridge Physiographic Province using surface and downhole geophysical methods. *GSA Abstracts with Programs* **38**(7), 2006 GSA Annual Meeting, Philadelphia, PA.
- Scarpato, D.J., J.L. Sexton, W.P. Anderson, Jr., and D.G. Evans. 2002. Barrier island aquifer heterogeneities: Hatteras Island, North Carolina, USA. *GSA Abstracts with Programs* **34**(2), Combined North-Central & Southeastern Section Meeting, Lexington, KY.

Contributed Presentations with Undergraduate Students

- Anderson, J.L., W.P. Anderson, Jr., C.S. Thaxton, and C.M. Babyak. *In review – 2007*. Dynamics of episodic temperature variations in an urbanized, high-gradient stream. *Submitted to 2007 GSA Southeast Section Meeting, Savannah, GA.*
- Walker, J.M., W.P. Anderson, Jr., C. Badurek, M.J. Chapman, and B.A. Huffman. *In review – 2007*. Correlation between lineaments, outcrop fractures, and borehole fractures in the fractured amphibolites of northwestern North Carolina. *Submitted to 2007 GSA Southeast Section Meeting, Savannah, GA.*
- Penders, C., W. Benner, J.L. Anderson, C.S. Thaxton, C.M. Babyak, and W.P. Anderson, Jr. 2006. Case Study: Boone Creek Monitoring Project – Boone, NC. State of North Carolina Undergraduate Research & Creativity Symposium, Raleigh, NC, November 18, 2006.
- Shook, G.M., and W.P. Anderson, Jr. 2006. El Niño – Southern Oscillation and its correlation to recharge in coastal North Carolina. *GSA Abstracts with Programs* **38**(7), 2006 GSA Annual Meeting, Philadelphia, PA.
- Shook, G.M., and W.P. Anderson, Jr. 2006. *El Niño – Southern Oscillation and its correlation to recharge in coastal North Carolina*. Ninth Annual Celebration of Student Research and Creative Endeavors, Appalachian State University, Boone, NC, April 20, 2006.

Community Service Presentations

- Anderson, Jr., W.P. 2006. *Hydrogeology of the Blue Ridge*. High Country Municipal Association. Banner Elk, NC – November 16, 2006.
- Anderson, Jr., W.P. 2006. *Hydrogeology of the Blue Ridge*. Rotary Club of Blowing Rock. Blowing Rock, NC – October 2, 2006.
- Anderson, Jr., W.P. 2006. *Hydrogeology of the Blue Ridge*. MountainKeepers Environmental Summit II. Boone, NC – September 23, 2006.
- Anderson, Jr., W.P. 2006. *Hydrogeology of the Seven Devils Area: Regional controls on groundwater flow*. Friends of the Seven Devils Golf Course. Seven Devils, NC – August 4, 2006.
- Anderson, Jr., W.P. 2006. *Hydrogeology of the Blue Ridge: Regional controls on groundwater flow*. Saint Mary of the Hills Episcopal Church. Blowing Rock, NC – July 16, 2006.
- Anderson, Jr., W.P. 2005. *Why do we need a well-monitoring program in Watauga County?* MountainKeepers monthly meeting. Boone, NC – November 14, 2005.
- Anderson, Jr., W.P. 2005. *Water resources of Watauga County, NC*. MountainKeepers Environmental Summit. Boone, NC – September 10, 2005.

Other Presentations

- Anderson, Jr., W.P., C.M. Babyak, and C.S. Thaxton. 2006. Kraut Creek monitoring project: A scientific study May – September 2006. Presentation to Provost Stan Aeschleman, Appalachian State University, December 14, 2006.
- Anderson, Jr., W.P. 2006. *Hydrogeology of the regolith-fractured bedrock aquifer in the western North Carolina mountains – Watauga County, North Carolina*. North Carolina Department of Agriculture and Consumer Services, Meeting of the North Carolina Plant Conservation Board. Durham, NC – November 14, 2006.

Anderson, Jr., W.P., C.M. Babyak, and C.S. Thaxton. 2006. Kraut Creek monitoring project: A scientific study May – September 2006. Presentation to Dean Robert Lyman, College of Arts and Sciences, Appalachian State University, October 31, 2006.

RESEARCH FUNDING

External Funding (Pending)

Water Resources Research Institute of the University of North Carolina: “*Effects of borehole storage time and variable pumping schedules on the concentrations of arsenic in fractured bedrock aquifers,*” (\$50,000) 5/07 – 4/08. Submitted with C.M. Babyak, Department of Chemistry.

The Julian Price Family Foundation: “*A letter of inquiry to the Julian Price Family Foundation,*” (\$24,000). Spring 2007. Submitted with C. M. Babyak, Department of Chemistry, C. S. Thaxton, Department of Physics and Astronomy, and K.M. Cockerill, Program in Sustainable Development.

External Funding

Rotary Club of Blowing Rock: “*Monitoring of water-levels in the fractured bedrock aquifer in the vicinity of Blowing Rock, North Carolina,*” (\$1,900) 11/06.

The North Carolina Rural Economic Development Center: “*A proposal for the evaluation of sustainable ground-water resources for support of economic development and population growth in Avery and Watauga Counties, North Carolina: A pilot project for mountain communities,*” (\$72,700) 10/06 – 12/07. Submitted with Melinda Chapman, USGS North Carolina Water Science Center, Raleigh, NC, Keith Seramur and Loren Raymond, Department of Geology, Appalachian State University, Shuying Wang, Winston-Salem Regional Office, NCDENR DWQ Aquifer Protection Section, and Ted Campbell, Asheville Regional Office, NCDENR DWQ Aquifer Protection Section. This proposal includes \$40,000 from the Rural Center and \$32,700 from the U.S. Geological Survey.

United States Geological Survey/Appalachian State University: “*Hydrogeology of the regolith-fractured bedrock aquifer in the western North Carolina mountains, Watauga County, North Carolina,*” (\$40,000) 7/06 – 7/07. Submitted with Melinda Chapman, USGS North Carolina Water Science Center, Raleigh, NC. This proposal includes a \$20,000 match from Appalachian State University.

Thomas F. Jeffress and Kate M. Jeffress Memorial Trust: Renewal 2 of “*Collection of Water Level Data to Test New Methods for Estimating Recharge in Water-Table Aquifers,*” (\$10,000) 7/03 – 6/04.

Thomas F. Jeffress and Kate M. Jeffress Memorial Trust: Renewal 1 of “*Collection of Water Level Data to Test New Methods for Estimating Recharge in Water-Table Aquifers,*” (\$7,000) 7/02 – 6/03.

The Nature Conservancy: “*Analysis of Water-Level Time-Series Data: Orchard Bog and Quarry Bog Preserves – Shady Valley, TN,*” (Water-level data) 8/01 – 7/02.

Thomas F. Jeffress and Kate M. Jeffress Memorial Trust: “*Collection of Water Level Data to Test New Methods for Estimating Recharge in Water-Table Aquifers,*” (\$21,000) 7/01 – 6/02.

American Water Foundation Research Fellowship: "*Lab-Scale Model of the Borehole Diffusion-Dilution Method*," (\$300) 11/92 - 5/93.

Internal Funding (Pending)

General Education Task Force, Appalachian State University: "*Proposal for a new general education course – 'Water Resources: The Science Behind Water Policy'*," (\$2,000) Summer 2007. Submitted with K.M. Cockerill, Program in Sustainable Development.

Internal Funding

University Research Council Competitive Grants Program, Appalachian State University: "*Baseline monitoring, analysis, and modeling of the Boone Creek watershed, Boone, NC*," (\$4900) 11/05 – 11/06. Submitted with Carol M. Babyak, Department of Chemistry, and Christopher S. Thaxton, Department of Physics and Astronomy.

University Research Council Competitive Grants Program, Appalachian State University: "*Hydraulic properties and water-level monitoring in a fractured bedrock aquifer in northwestern North Carolina*," (\$5000) 3/05 – 3/06.

Summer Faculty Stipend Grants Program, Radford University: "*A Groundwater Modeling Textbook for Undergraduate, Graduate & Professional Hydrogeologists*," (\$4000) 6/02 – 9/02.

Innovative Teaching Grant Program, Radford University: "*The RU Educational and Experimental Wellfield – Phase II*," (\$5000) 12/01 – 5/02.

Proposal Development Awards Program, Radford University: "*Collection of Frequent Water Level Data to Test New Methods for Estimating Recharge in Water-Table Aquifers*," (\$9916) 11/00 – 4/02.

Innovative Teaching Grant Program, Radford University: "*An Educational and Experimental Wellfield for Undergraduate and Graduate Teaching and Research*," (\$5000) 11/00 – 6/01.

Center for the Advancement of Teaching, Illinois State University: "*An Educational Wellfield for Undergraduate Teaching and Research*," (\$4000) 11/98 – 6/99.

STUDENT RESEARCH ADVISEMENT

Undergraduate Research Proposal Advisees

J.L. Anderson, "*Natural and anthropogenic influences on stream temperatures in the Blue Ridge Mountains of northwestern North Carolina*," Southeast Section Geological Society of America, (\$350) 12/06 – 5/08.

J.L. Anderson, "*Using stream temperature-air temperature relationships to distinguish baseflow in urbanized and natural streams*," Undergraduate Research Grant, Helzer Honors Program, Appalachian State University, (\$750) 4/06 – 5/08.

Undergraduate Research Project Advisees

J.L. Anderson, "*Using stream temperature-air temperature relationships to distinguish baseflow in urbanized and natural streams*," Appalachian State University, Spring 2006 – present.

G.M. Shook, "*El Niño – Southern Oscillation and its correlation to recharge in coastal North Carolina*," Appalachian State University, Fall 2005 – present.

- J. Walker, “*Correlation between lineaments and joints in fractured bedrock aquifers,*” Appalachian State University, Spring – Fall 2006.
- J.R. Bolling, “*Analysis of the hydraulic properties of the RU Experimental & Educational Wellfield using slug tests,*” Radford University, Spring 2002.
- J.L. Sexton, “*Analysis of the hydraulic properties of Hatteras Island sediments,*” Radford University, Fall 2001.
- W.E. Shields, “*Analysis of core sediments from the Buxton Woods surficial aquifer, Cape Hatteras, NC,*” Illinois State University, Spring 1999 – Fall 1999.
- S. Dill, “*Ground-Penetrating Radar Applications to Geohydrology – Literature Review,*” Illinois State University, Summer 1999.

Graduate Thesis & Research Project Advisees

- D.Y. Reedy, “*Using Electrical Resistivity to Site Potential Quarries in Karst Terrains,*” Radford University, Fall 2000 – Spring 2003. (Thesis committee member)
- A.D. Slaughter, “*Dynamics of barrier-island groundwater systems,*” Radford University, Fall 2002 – Spring 2003. (Directed study adviser)
- J.D. Surber, Jr., “*Modeling the effects of bank storage on the alluvial aquifer along the New River, Radford, VA,*” Radford University, Fall 2002 – Spring 2003. (Directed study adviser)
- A.T. Fisher, “*Determination of Buxton Woods aquifer heterogeneity from permeameter tests,*” Radford University, Fall 2002. (Directed study adviser)
- J.S. LaSala, “*Site characterization of sediments at the RU Experimental & Educational Wellfield,*” Radford University, Fall 2001 – Spring 2002. (Directed study adviser)
- D.J. Scarpato, “*Geostatistical analysis of hydraulic properties of Cape Hatteras sediments,*” Radford University, Fall 2001 – Spring 2002. (Directed study adviser)
- K. Hajra, “*Freshwater Lens Dynamics - An Analysis of Generic Barrier Islands,*” Illinois State University, Fall 1999 – Fall 2001. (Thesis adviser)
- R.C. Murley, “*Wood preservatives: Issues in Radford, VA,*” Radford University, Spring 2001. (Directed study adviser)
- J.F. Thomason, “*The Geology and Geohydrology of the Starved Rock 7.5-minute Quadrangle, IL,*” Illinois State University, Fall 1998 – Spring 2000. (Thesis adviser)
- C.S. Green, “*The Effects of Urbanization on a Karst Terrain: Bowling Green, KY,*” Illinois State University, Fall 1998 – Fall 1999. (Thesis adviser)
- G.J. Stanley, “*Delineation of time-of-travel capture zones and recharge areas for the community water-supply wells of Bethany, IL,*” Illinois State University, Fall 1998. (Thesis committee member)

RESEARCH & TECHNICAL SKILLS

Groundwater Modeling

Experience with the graphical user interface Argus ONE.

Experience with the finite-element groundwater flow and solute/heat transport models SUTRA and FEFLOW.

Experience with the finite-difference groundwater flow and solute transport models MODFLOW and MT3D.

Extensive use of 1-D and 2-D analytical and finite-difference models to characterize groundwater flow and contaminant transport.

Experience with the other public-domain flow models: RESSQ, BIOPLUME II, FLOWNET. Applications have included localized contaminant transport, characterization of regional flow, and simulations of the groundwater flow systems of barrier islands.

Experience with MATLAB, Mathematica, FORTRAN, PASCAL, BASIC, QuickBASIC, MS-DOS, UNIX.

Coastal Hydrogeology

Field experience conducting pumping tests and single-well aquifer tests in unconsolidated barrier-island sediments.

Field experience with well installation, groundwater sampling, and lithologic coring.

Field experience with ground-penetrating radar (GPR) and borehole geophysical methods to characterize coastal surficial-aquifer sediments.

Fractured Bedrock Hydrology

Field experience conducting pumping tests and single-well aquifer tests in fractured bedrock aquifers.

Developed and tested borehole diffusion-dilution method for determining the hydraulic properties of discrete fractures.

Field experience with hydrophysical (fluid electrical conductivity) logging techniques for determining the hydraulic properties of discrete fractures.

Field experience with borehole geophysical logging methods, including caliper, temperature profiling, optical televiewer (OTV), acoustic televiewer (ATV), natural gamma radiation, electrical resistivity, spontaneous potential (SP), electromagnetic flowmeter logging, and heat-pulse flowmeter logging.

Lab experience with wellbore simulator to evaluate hydrophysical and borehole diffusion-dilution techniques.

Surface-Water Hydrology

Field experience establishing rating curves.

Field experience monitoring physical flow and water quality in mountain streams.

Other Technical Experience

Field experience with electrical resistivity surveys, electromagnetic surveys, refraction seismic surveys, topographic surveys, global positioning system (GPS) surveys, well sampling, gravity surveys.

SERVICE

Professional Service

Reviewer of hydrology texts for the *Prentice-Hall Book Company*.

Reviewer of geology texts for the *McGraw Hill Book Company*.

Reviewer of hydrology manuscripts for *Environmental and Engineering Geosciences*, *Environmental Geosciences*, *Ground Water*, *Hydrogeology Journal*, *Journal of Coastal Research*, and *Southeastern Geology*.

Reviewer of hydrology proposals for the *National Institute of Water Resources* and the *University of Wisconsin – Water Resources Institute*.

Reviewer of student research proposals to the Southeastern Section Student Research Grants Review Committee, *Geological Society of America*, Spring 2001 – Spring 2005.

University Service

Boone Creek Task Force, Co-convener with C.M. Babyak and C.S. Thaxton, Office of Academic Affairs, Appalachian State University, Fall 2006 – present.

Environmental Science Curriculum Committee, Member, College of Arts and Sciences, Appalachian State University, Fall 2006 – present.

Graduate Affairs Council, including Academic Course and Program Review Committee – Radford University, January 2003 – August 2003.

“Reflections on the River” Steering Committee – Radford University, Fall 2000 – May 2002.

Quest Adviser - Radford University Freshman Orientation – Radford University, Summer 2001.

Campus Judicial Board/Student Judicial Appeals Board – Radford University, October 2000 – Spring 2002.

Department Service

Seminar Coordinator – Department of Geology, Appalachian State University, January 2006 – present.

Curriculum Committee Member – Department of Geology, Appalachian State University, May 2006 – present.

Curriculum Committee Chair – Department of Geology, Appalachian State University, August 2005 – May 2006.

Departmental Personnel Committee – Department of Geology, Appalachian State University, August 2004 – present.

AWARDS

Radford University’s nominee to the State Council of Higher Education for Virginia (SCHEV) 2004 Outstanding Faculty Award competition in the “Rising Star” category – one of five finalists.

Nominated for the 2003 Radford University Donald N. Dedmon Professorial Award (Radford University’s highest faculty honor for outstanding teaching).

Nominated for the 2003 Radford University Creative Scholarship Award (Radford University’s highest faculty honor for outstanding research).

PROFESSIONAL SOCIETIES

American Geophysical Union, 1992 – present.

Geological Society of America, 1998 – present.

International Association of Hydrogeologists, 1998 - present.

National Ground Water Association, 1995 – present.

Sigma Xi, 2004 – present.

ΣΓΕ – Earth Sciences Honor Society, 2001 – 2004.

Illinois Groundwater Association, 1998 – 2000.