Publications on the Panola Mountain Research Watershed

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# In Review/Submitted

# In Press

# 2018

Aulenbach, B.T., and Peters, N.E., 2017, Quantifying climate-related interactions in shallow and deep storage and evapotranspiration in a forested, seasonally water-limited watershed in the Southeastern United States, Water Resources Research, 25 p. doi:10.1002/2017WR020964, [IP-086326]

# 2017

Aulenbach, B.T., 2017, Data for estimating monthly water budgets at Panola Mountain Research Watershed, Stockbridge, Ga., water years 1986-2015. U.S. Geological Survey data release, doi: [10.5066/F7XS5SNV](https://doi.org/10.5066/F7XS5SNV). [IP-085355]

Aulenbach, B.T., and Peters, N.E., 2017, The roles of shallow and deep storage on drought at a small forested, water-limited watershed near Atlanta, Georgia [abs.]. Abstract presented at the Georgia Water Resources Conference, Athens Georgia, April 19–20, 2017. [IP-083755]

# 2016

Aulenbach, B.T., Burns, D.A., Shanley, J.B., Yanai, R.D., Bae, K., Wild, A., Yang, Y., and Yi, D., 2016, Approaches to stream solute load estimation for solutes with varying dynamics from five diverse small watersheds. *Ecosphere*. 7(6):22 p. doi:10.1002/ecs2.1298 [IP-065579]

Aulenbach, B.T., and Peters, N.E., 2016, The Roles of Shallow and Deep Groundwater Storage During Drought at Panola Mountain Research Watershed, Georgia, U.S.A [abs.]. Abstract presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec. [IP-078369]

Ghosh, D.K., Wang, D., and Zhu, T., 2016. On the transition of base flow recession from early stage to late stage. Advances in Water Resources. 88:8–13. <http://dx.doi.org/10.1016/j.advwatres.2015.11.015>

Riley, J.W. and Aulenbach, B.T., 2016, Event Water Balance and Recharge at the Panola Mountain Research Watershed, Georgia, U.S.A. [abs.]. Abstract presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec. [IP-078490]

# 2015

Appels, W.M., Graham, C.B., Freer, J.E., and McDonnell, J.J. 2015, Factors affecting the spatial pattern of bedrock groundwater recharge at the hillslope scale. *Hydrological Processes* 29(21):4594–4610. DOI: 10.1002/hyp.10481.

Aulenbach, B.T., and Huntington, T.G., 2015, Hydrologic and Climatic Variability in and Modeling of Streamwater Sulfate Concentrations at Panola Mountain Research Watershed, Georgia, U.S.A. [abs.]. Abstract H33F-1686 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. [IP-067849]

Aulenbach, B.T., Peters, N.E., and Freer, J.E. 2015, Monthly water budgets at Panola Mountain Research Watershed, Georgia with some implications for climatic change [abs.]. Georgia Water Resources Conference, April 28–29, 2015, Athens, Georgia. [IP-062486]

Aulenbach, B.T., Peters, N.E., and Freer, J.E. 2015, Water-Limiting Conditions Based on Monthly Water Balances and Potential Evapotranspiration at Panola Mountain Research Watershed, Georgia, U.S.A. [abs.]. Fifth Interagency Conference on Research in the Watersheds, March 2–5, 2015, Charleston, South Carolina. [IP-060928]

McKee, A. and Aulenbach, B.T., 2015, Dendrochronological assessment of drought severity indices for Panola Mountain Research Watershed, Georgia, U.S.A. [abs.]. Abstract GC41A-1064 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. [IP-067555]

Riley, J.W. and Aulenbach, B.T., 2015, Evaluation of Soil Moisture, Storm Characteristics, and Their Influence on Storm Runoff and Water Yield at the Panola Mountain Research Watershed, Georgia, U.S.A. [abs.]. Abstract H43I-1662 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. [IP-067847]

Saraceno, J. Shanley, J., and Aulenbach, B., 2015, Contrasting dissolved organic carbon dynamics at two forested catchments interpreted from high-frequency optical sensor measurements. [abs.]. Abstract B11F-0498 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. [IP-069914]

Shanley, J., Saraceno, J., Aulenbach, B., Mast, A., Clow, D., Hood, K., Walker, J, Murphy, S, Torres-Sanchez, A, Aiken, G., and McDowell, W., 2015, Comparing stream DOC fluxes from sensor- and sample-based approaches. [abs.]. Abstract B11F-0499 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. [IP-XXXXXX]

van Meerveld, H.J., Seibert, J., and Peters, N.E. 2015, Hillslope–riparian-stream connectivity and flow directions at the Panola Mountain Research Watershed. *Hydrol. Process.* 29(16):3556–3574. DOI: 10.1002/hyp.10508

# 2014

Aulenbach, B.T., Saraceno, J.F., and Shanley, J.B. 2014, Variability and hysteresis in streamwater dissolved organic carbon during hydrologic events and its implications on hydrologic flow paths at Panola Mountain Research Watershed, Georgia, U.S.A. [abs.]. Abstract B33F-0251 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec. [IP-058807]

Peters, N.E., Burns, D.A., and Aulenbach, B.T. 2014, [Evaluation of high-frequency mean streamwater transit-time estimates using groundwater age and dissolved silica concentrations in a small forested watershed](https://www.researchgate.net/publication/258698095_Evaluation_of_High-Frequency_Mean_Streamwater_Transit-Time_Estimates_Using_Groundwater_Age_and_Dissolved_Silica_Concentrations_in_a_Small_Forested). *Aquatic Geochemistry* 20:183-202. DOI 10.1007/s10498-013-9207-6.2013 [IP-049194]

Rice, K.C., Scanlon, T.M., Lynch, J.A., and Cosby, B.J. 2014, Decreased atmospheric sulfur deposition across the Southeastern U.S.: When will watersheds release stored sulfate? *Environ. Sci. Technol.*, 48, 10071–10078.

Saraceno, J.F, Shanley, J.B., and Aulenbach, B.T. 2014, Multi-site field verification of laboratory derived FDOM sensor corrections: The good, the bad and the ugly [abs.]. Abstract H11B-0870 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec. [IP-XXXXXX]

Shanley, J.B., Saraceno, J.F., Dornblaser, M.M., Aulenbach, B.T., Mast, M.A., Clow, D.W., Walker, J.F., Hood, K., Wickland, K.P., Pellerin, B.A., Aiken, G.R., Crawford, and J., Striegl, R. 2014, Making sense of sensors: stream carbon flux determination at the five USGS WEBB watersheds [abs.]. Abstract B44D-08 presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec. [IP-XXXXXX]

# 2013

Appels, W.M., Graham, C.B., and McDonnell, J.J. 2013, Groundwater recharge patterns on hillslopes: exploring the role of soil depth, bedrock permeability, and lateral flow [abs.]. Abstract H32D-05 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Aulenbach, B.T., Burns, D.A., Shanley, J.B., Yanai, R.D., Bae, K., Wild, A., Yang, Y., and Dong, Y. 2013, Uncertainty of streamwater solute fluxes in five contrasting headwater catchments including model uncertainty and natural variability (Invited) [abs.]. Abstract B24B-03 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec. [IP-050308]

Hooper, R.P. 2013, Examining the concept of baseflow using end-member mixing analysis (Invited) [abs.]. Abstract H23N-08 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Peters, N.E., Burns, D.A., and Aulenbach, B.T. 2013, Evaluation of high-frequency mean streamwater transit-time estimates using groundwater age and dissolved silica concentrations in a small, forested watershed [abs.]. Abstract H52F-07 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Shanley, J.B., Saraceno, J.F., Pellerin, B.A., Dornblaser, M.M., Clow, D.W., Aulenbach, B.T., Walker, J.F., and Aiken, G.R. 2013, Interpreting organic carbon cycling from high-frequency stream FDOM, turbidity, and CO2 measurements at the USGS WEBB watersheds [abs.]. Abstract H53H-1526 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Walker, J.F., Hunt, R.J., Aulenbach, B.T., Clow, D.W., Murphy, S.F., Shanley, J.B., Scholl, M.A., Hay, L.E., Regan, R.S., and Markstrom, S.L. 2013, Simulating the hydrologic effects of climate change in 5 research watersheds using a distributed-parameter watershed model [abs.]. Abstract H13H-1443 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Wang, D. and Ghosh, D.K. 2013, Long-term climate controls on base flow recession behavior at the event scale [abs.]. Abstract H11A-1150 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

# 2012

Aulenbach, B.T., Peters, N.E. and Freer, J.E. 2012, Watershed storage-baseflow relations and monthly water balances at Panola mountain Research Watershed, Georgia, U.S.A. [abs.]. Abstract H13D-1363 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.

Wu, L. and Wang, D. 2012, Dominant Controls on Early and Late Stages of Base Flow Recession at the Watershed Scale [abs.]. Abstract H43F-1447 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.

# 2011

McNamara, J.P., Tetzlaff, D., Kevin Bishop, K., Soulsby, C., Seyfried, M. Peters, N.E., Aulenbach, B.T. and Hooper, R.P. 2011, [Storage as a metric of catchment comparison](http://pubs.er.usgs.gov/publication/70034532). *Hydrological Processes* 25:3364-3371.

Peters, N.E. and Aulenbach, B.T. 2011, [Water storage at the Panola Mountain Research Watershed, Georgia, USA](http://pubs.er.usgs.gov/publication/70032296). *Hydrological Processes* 25:3878-3889, doi: 10.1002/hyp.8334.

# 2010

Reaney, S.M. and Hopp, L. 2010, Optimal sampling of soil depth variability for the prediction of hydrological response [abs.]. Abstract H33E-1185 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.

# 2009

Clark, M., Rupp, D., Woods, R., Tromp-van Meerveld, H.J., Peters, N.E., and Freer, J., 2009, Consistency between hydrological models and field observations: linking processes at the hillslope scale to hydrological responses at the watershed scale. *Hydrological Processes* 23(2): 311-319. DOI: 10.1002/hyp.7154. [IP-004196]

Hooper, R.P. and Rudolph B. 2009, Interpreting hysteresis in concentration-discharge models using a mixing approach. USGS Unpublished report.

Hopp, L., and McDonnell, J.J. 2009, Connectivity at the hillslope scale: Identifying interactions between storm size, bedrock permeability, slope angle and soil depth. *Journal of Hydrology* 376:378-391. doi:10.1016/j.jhydrol.2009.07.047

Jana, R.B. and Mohanty, B.P. 2009, Physical Controls of Soil Hydraulic Parameter Scaling [*abs.*]. *EOS Transactions of the American Geophysical Union*, 90(52), Fall Meet. Suppl., Abstract H33G-0970.

Leibowitz, S.G, McDonnell, J.J., Sayama, T., Hopp, L., and Reaney, S.M. 2009, Spatial and Temporal Influences on Hydrologic Connectivity: A Mathematical Formalization [*abs.*]. *EOS Transactions of the American Geophysical Union*, 90(52), Fall Meet. Suppl., Abstract H32A-02.

Peters, N.E., and Aulenbach, B.T. 2009, Flowpath contributions to stream fluxes of weathering products at the Panola Mountain Research Watershed, Georgia. In: Webb, R.M. and Semmens, D.J. (eds.) Planning for an uncertain future – Monitoring, integration, and adaption, *Third Interagency Conference on Research in the Watersheds,* September 8-11, 2008, U.S. Geological Survey Scientific Investigations Report 2009-5049: 177-185.

Peters, N.E., and Aulenbach, B.T. 2009, Hydrologic pathway contributions to stream fluxes of weathering products at the Panola Mountain Research Watershed, Georgia. In: *Proceedings of the 2009 Georgia Water Resources Conference,* University of Georgia, Athens, Georgia. [IP-010054]

Tromp van Meerveld, I. and McDonnell, J.J. 2009, Assessment of Multi-frequency Electromagnetic Induction for Determining Soil Moisture Patterns at the Hillslope Scale [*abs.*]. *EOS Transactions of the American Geophysical Union*, 90(22), Jt. Assem. Suppl., Abstract H11C-02.

# 2008

El Tabach, E., Tchiguirinskaia, I., and Schertzer, D.J. 2008, Modelling and managing runoff processes in peri-urban area [*abs.*]. *EOS Transactions of the American Geophysical Union*, 89(53), Fall Meet. Suppl., Abstract H13D-0965.

Tromp-van Meerveld, H.J. and Weiler, M. Hillslope dynamics modeled with increasing complexity. *Journal of Hydrology* 361:24-40. doi:10.1016/j.jhydrol.2008.07.019

Tromp-van Meerveld, H.J., James, A.L., McDonnell, J.J., and Peters N.E. 2008, A reference data set of hillslope rainfall-runoff response, Panola Mountain Research Watershed, United States. *Water Resources Research* 44, W06502, doi: 10.1029/2007WR006299.

Tromp-van Meerveld, H.J., Peters, N.E., and McDonnell, J.J. 2008, The Effects of Hillslope Scale Variations in Soil Depth on Soil Moisture and Transpiration Responses to Rainfall Events [*abs.*]. *EOS Transactions of the American Geophysical Union*, 89(53), Fall Meet. Suppl., Abstract H23G-03.

Shanley, J.B., Mast, M.A., Campbell, D.H. Aiken, G.R. Krabbenhoft, D.P., Hunt, R.J., Walker, J.F., Schuster, P.F., Chalmers, A., Aulenbach B.T., Peters N.E., Marvin-DiPasquale, M.,Clow, D.W., and Shafer, MM. 2008, [Comparison of total mercury and methylmercury cycling at five sites using the small watershed approach](http://pubs.er.usgs.gov/publication/70031938). *Environmental Pollution* 154(1): 135-154, doi:10.1016/j.envpol.2007.12.031.

Spaaks, J.H., Bouten, W., Nieuwe Achtergracht, and McDonnell, J.J. 2008, Nonlinearity in Subsurface Stormflow Generation: Comparison of an Explicitly Nonlinear Model to a Darcy Equation Based Approach [*abs.*]. *EOS Transactions of the American Geophysical Union*, 89(53), Fall Meet. Suppl., Abstract H31E-0922.

# 2007

Carroll, K.P., Rose, S., Peters, N.E. 2007. Concentration/discharge hysteresis analysis of storm events at the Panola Mountain Research Watershed, Georgia, USA In: *Proceedings of the 2007 Georgia Water Resources Conference,* University of Georgia, Athens, Georgia, Poster paper 14, 1-5 (http://cms.ce.gatech.edu/gwri/uploads/proceedings/2007/8.14.pdf).

Shanley, J.B., Peters, N.E., Campbell, D.H., Clow, D.W., Walker, J.F., and Hunt, R.J. 2007, Monitoring: a vital component of science at USGS WEBB sites [*abs.*]. *EOS Transactions of the American Geophysical Union*, 88(52), Fall Meet. Suppl., Abstract GC33A-0951.

Tromp-van Meerveld, H.J., Peters, N.E., and McDonnell, J.J. 2007, Effect of bedrock permeability on subsurface stormflow and the water balance of a trenched hillslope at the Panola Mountain Research Watershed, Georgia, USA. *Hydrological Processes* 21∫(6):750–769, DOI: 10.1002/hyp.6265

# Woods, R., Clark, M., Rupp, D., Tromp van Meerveld, I., Peters, J., and Freer, J. 2007, Consistency between hydrological models and field observations: Linking processes at the hillslope scale to hydrological responses at the watershed scale [*abs*.]. *EOS, Transactions of the American Geophysical Union,* 88(52), Fall Meet. Suppl., Abstract H11G-04.

# 2006

Aulenbach, B.T. and Hooper, R.P. 2006, [The composite method: an improved method for streamwater solute load estimation](http://pubs.er.usgs.gov/publication/70028134). *Hydrological Processes* 20(14):3028-3047, DOI: 10.1002/hyp.6147.

James, A.L., McDonnell, J.J., and Tromp-van Meerveld, H.J. 2006, Visualization of the Links Between Rainfall, Soil Water, Groundwater and Subsurface Stormflow: A Physics-Based 3-D Simulation Approach [*abs*.]. *EOS, Transactions of the American Geophysical Union,* 87(52), Fall Meet. Suppl., Abstract H31H-04.

Keim, R.F., Tromp-van Meerveld, H.J., and McDonnell. J.J. 2006. A virtual experiment on the effects of evaporation and intensity smoothing by canopy interception on subsurface stormflow generation. *Journal of Hydrology* 327:352-364. doi:10.1016/j.jhydrol.2005.11.024

Peters, N.E., Shanley, J.B., Aulenbach, B.T., Webb, R.M., Campbell, D.H., Hunt, Randall, Larsen, M.C., Stallard, R.F., Troester, J.W., and Walker, J.F. 2006, [Water and solute mass balance of five small, relatively undisturbed watersheds in the U.S.](http://pubs.er.usgs.gov/publication/70030443) *Science of the Total Environment* 358:221-242, doi:10.1016/j.scitotenv.2005.04.044

Tromp-van Meerveld, H.J. and McDonnell, J.J. 2006, On the interrelations between topography, soil depth, soil moisture, transpiration rates and species distribution at the hillslope scale. *Advances in Water Resources* 29: 293-310, doi:10.1016/j.advwatres.2005.02.016

Tromp-van Meerveld, H.J., and McDonnell, J.J. 2006, Threshold relations in subsurface stormflow: 1. A 147-storm analysis of the Panola hillslope, *Water Resources Research* 42, W02410, doi:10.1029/2004WR003778.

Tromp-van Meerveld, H.J., and McDonnell, J.J. 2006, Threshold relations in subsurface stormflow: 2. The fill and spill hypothesis, *Water Resources Research* 42, W02411, doi:10.1029/2004WR003800.

# 2005

Aulenbach, B.T. and Hooper, R.P. 2005, [Improving stream solute load estimation by the composite method: a comparative analysis using data from the Panola Mountain Research Watershed](http://ga.water.usgs.gov/pubs/other/gwrc2005/pdf/GWRC05_Aulenbach.pdf). In: *Proceedings of the 2005 Georgia Water Resources Conference*, April 25–27, 2005, K.J. Hatcher (ed.), Institute of Ecology, The University of Georgia, Athens, Georgia, 5 p., (CD-ROM).

Graham, C.B., McDonnell, J.J., and Frey, M. 2005, Moisture and Energy Conditions Within a Sloping Soil Mass During Drainage: Hewlett and Hibbert 1963 Revisited [*abs*.]. *EOS, Transactions of the American Geophysical Union,* 86(52), Fall Meet. Suppl., Abstract H23C-1434.

Peters, N.E., Freer, J., Tromp-van Meerveld, H.G., Beven, K.J., and McDonnell, J.J. 2005, Streamflow generation at the Panola Mountain Research Watershed, Georgia — Inferences derived from model results with varying time scales [*abs.*]. *Geophysical Research Abstracts*, Vol. 7, 05695.

Toteva, T.D. and Long, L.T. 2005, Semblance-based imaging of shallow scatterers [*abs*.]. *EOS, Transactions of the American Geophysical Union,* 86(52), Fall Meet. Suppl., Abstract S23B-0256.

Toteva, T.D. and Long, L.T. 2005, A Scattering Inversion Experiment to Identify Fractures on a Granite Outcrop [*abs*.]. *EOS, Transactions of the American Geophysical Union,* 86(18), Jt. Assem. Suppl., Abstract S41A-04.

Uchida, T., Tromp-van Meerveld, I. and McDonnell, J.J., 2005, The role of lateral pipe flow in hillslope runoff response: an intercomparison of non-linear hillslope response. *J. Hydrol*., 311(1-4): 117-133

White, A. F., Schulz, M. S., Lowenstern, J. B., Vivit, D. V., and Bullen, T. D., 2005, The ubiquitous nature of accessory calcite in granitoid rocks: Implications for weathering, solute evolution, and petrogenesis: *Geochimica et Cosmochimica Acta* 69: 1455-1471.

# 2004

Freer, J., Peters, N.E., and Beven, K.J. 2004, Investigating spatial processes using dynamic TOPMODEL at Panola Mountain Research Watershed (PMRW) [*abs.*]. *Geophysical Research Abstracts*, Vol. 6, 05832.

Long, L.T. and Toteva, T.D. 2004, Differential Surface Wave Analysis: a Technique to Monitor Changes in Fluid Flow in Shallow Aquifers [*abs.*]. *EOS, Transactions of the American Geophysical Union* 85(17), Jt. Assem. Suppl., Abstract NS13A-05.

Peters, N.E., Freer, J., Aulenbach, B.T., and Jones. L.E. 2004, Streamflow generation and ground-water recharge of the surficial aquifer at the Panola Mountain Research Watershed, Georgia, USA. In: Guidebook 23, Methods Used to Assess the Occurrence and Availability of Ground Water in Fractured-Crystalline Bedrock: An Excursion into Areas of Lithonia Gneiss in Eastern Metropolitan Atlanta, Georgia: Georgia Department of Natural Resources, Environmental Protection Division, Atlanta, Georgia, 53-58.

Peters, N.E., Freer, J., Burns, D.A., and Beven, K.J., 2004, Investigating hydrological processes controlling streamflow generation at the Panola Mountain Research Watershed, Georgia [*abs.*]. *EOS, Transactions of the American Geophysical Union,* 85(47), Fall Meet. Suppl., Abstract H44B-02.

Peters, N.E., Freer, J., Tromp-van Meerveld, H.G., Burns, D.A., McDonnell, J.J., and Aulenbach, B.T. 2004, Understanding hillslope hydrology by cobbling together a variety of measurement and sampling schemes at the Panola Mountain Research Watershed, Georgia, USA [*abs.*]. *EOS, Transactions of the American Geophysical Union* 85(17), Jt. Assem. Suppl., Abstract H33B-01.

Peters, N.E., Shanley, J.B., Aulenbach, B.T and Webb, R.M. 2004, Processes affecting the mass balance of five small, relatively pristine watersheds in the USA. *Proceedings of the Eleventh International Conference on Water Rock Interactions*, Saratoga Springs, New York: 1371-1374

Shanley, J.B., Webb, R.M. Hjerdt, K.N., Sebestyen, S.D., Peters, N.E., Burns, D.A., Aulenbach, B.T., Campbell, D.H., Clow, D.W., Mast, M.A., Walker, J.F., Hunt, R.J., Troester, J., and Larsen, M.C. Hydrologic and biogeochemical connections between uplands and streams in contrasting landscapes [*abs.*]. *EOS, Transactions of the American Geophysical Union,* 85(17), Fall Meet. Suppl., Abstract H44B-01.

Smith. P., Beven, K., Freer, J. and Peters, N.E., 2004, The use of bounded intervals for data representation in the evaluation of uncertainties in rainfall-runoff Modelling [abs.]. *EOS, Transactions of the American Geophysical Union,* 85(47), Fall Meet. Suppl., Abstract H44B-02.

Webb, R.M., Wolock, D.M., Linard, J.I., and Wieczorek, M.E. 2004, The Water, Energy, and Biogeochemical Model (WEBMOD): A TOPMODEL application developed within the Modular Modeling System [abs.]. *EOS, Transactions of the American Geophysical Union,* 85(47), Fall Meet. Suppl., Abstract H44B-03.

# 2003

Burns, D.A., Plummer, N., McDonnell, J.J., and Peters, N.E. 2003, Chemical evolution of riparian groundwater and stream baseflow at the Panola Mountain Research Watershed, Georgia [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., Abstract H42K-05, 2003.

Burns, D.A., Plummer, N., McDonnell, J.J., Busenberg, E., Casile, G.C., Kendall, Carol, Hooper, R.P., Freer, J.E., Peters, N.E., Beven, K., and Schlosser, P. 2003, The geochemical evolution of riparian groundwater in a forested piedmont catchment. *Ground Water* 41(7): 913-925.

Freer, J. ; Peters, N.E.; Beven, K.J. 2003, An analysis of multi-response data at Panola Mountain Research Watershed (Georgia, USA): What level of model complexity is required? [*abs.*] *Geophysical Research Abstracts*, Vol. 5, 08853.

Hooper, R.P. 2003. Diagnostic tools for mixing models of stream chemistry. *Water Resources Research*, 39(3): 1055, doi:10.1029/2002WR001528.

Huntington, T.G. 2003, Climate warming could reduce runoff significantly in New England. *Agriculture and Forest Meteorology*, 117:193-201.

Peters, N.E., Freer, J., and Aulenbach, B.T. 2003, Hydrological dynamics of the Panola Mountain Research Watershed, Georgia, USA. *Ground Water* 41(7): 973-988, doi: 10.1111/j.1745-6584.2003.tb02439.x

Peters, N.E., Freer, J., and Aulenbach, B.T. 2003, Hydrometric analysis of the Panola Mountain Research Watershed, Georgia, USA: Linkage among rainfall, watershed wetness, and stormflow [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., Abstract H42G-1153, 2003.

Peters, N.E., Freer, J., Aulenbach, B.T., and Jones, L.E. 2003, Streamflow generation and ground-water recharge of the surficial aquifer at the Panola Mountain Research Watershed, Georgia, USA. In: *Guidebook 23, Methods Used to Assess the Occurrence and Availability of Ground Water in Fractured-Crystalline Bedrock: An Excursion into Areas of Lithonia Gneiss in Eastern Metropolitan Atlanta, Georgia*: Georgia Department of Natural Resources, Environmental Protection Division, Atlanta, Georgia, p. 53-58.

Peters, N.E., Freer, J., and Beven, K.J. 2003, Modeling hydrologic responses in a small forested catchment (Panola Mountain, Georgia, USA) — a comparison of the original and a new dynamic TOPMODEL. *Hydrological Processes* 17(2): 345-362, doi:10.1002/hyp.1128.

Peters, N.E., Shanley, J.B., Aulenbach, B.T., Blum, A.E., Campbell, D.H., Stallard, R.F., Troester, J.W., Walker, J.F., and White, A.F., 2003, Geochemical mass balances for watersheds of the USGS Water, Energy, and Biogeochemical Budgets (WEBB) Program, 1992-97. XXIII General Assembly of the International Union of Geodesy and Geophysics, July 30-July 11, 2003, Sapporo, Japan, HW01/10P/C26-002, B.343-344.

Tromp-van Meerveld, H.J., Peters, N.E., Bond, B.J., and McDonnell, J.J. 2003, Small scale variations in soil depth affecting the patterns and relationships between soil moisture and transpiration [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., AbstractH32C-0590, 2003.

Uchida, T., Tromp-van Meerveld, H J., and McDonnell, J.J. 2003, Simplicity from complexity: How lateral soil pipes define clear threshold relations at the hillslope scale [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., Abstract H42G-1156, 2003.

van Verseveld, W.J., Tromp-van Meerveld, H.J., Weiler, M., and McDonnell, J.J. 2003, Modeling the influence of subsurface topography on spatial and temporal variability of subsurface stormflow [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., Abstract H42D-1112, F717.

Webb, R.M., Leavesley, G.H., Shanley, J.B., Peters, N.E., Aulenbach, B.T., Blum, A.E., Campbell, D.H., Clow, M.C., Mast, M.A., Stallard, D.W., Larsen, R.F., Troester, J.W., Walker, J.F., and White, A.F., 2003, Use of the Water, Energy, and Biogeochemical Model (WEBMOD) to simulate water quality at five U.S. Geological Survey research watersheds [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., Abstract H51C-1070, 2003.

Webb, R.M., Peters, N.E., Shanley, J.B., and Aulenbach, B.T. Relations between hydrology and solute fluxes at the five Water, Energy, and Biogeochemical Budget (WEBB) watersheds of the United States Geological Survey. 2003, In: Renard, K.G., McElroy, S.A., Gburek, W.J., Canfield, H.E. and Scott, R.L. (eds.) *First Interagency Conference on Research in the Watersheds,* October 27-30, 2003.  U.S. Department of Agriculture, Agricultural Research Service: 332-339.

Weiler, M., McDonnell, J.J., Tromp-van Meerveld, H J., and Uchida, T., 2003, Nonlinearity as a linkage between lateral hydrologic and geomorphic processes and emergent space-time scaling behavior [*abs.*]. *EOS, Transactions of the American Geophysical Union* 84(46), Fall Meet. Supp., Abstract H42D-1106, F716.

# 2002

Burns, D.A., McDonnell, J.J., Hooper, R.P., Peters, N.E., and Kendall, C. 2002. Transport of solutes in groundwater through a hillslope-riparian transition during two rain events at the Panola Moutain Research Watershed, Georgia [*abs*.]. *EOS, Transactions of the American Geophysical Union* 83(47), Fall Meet. Suppl., H51D-05, 2002.

Freer, Jim; McDonnell, J.J., Beven, K.J., Peters, N.E., Burns, D.A., Hooper, R.P., Aulenbach, B.T., Kendall, C.,2002. [The role of bedrock topography on subsurface storm flow](http://pubs.er.usgs.gov/publication/70024178). *Water Resources Research* 38(12), 5-1 – 5-16. doi: 10.1029/2001WR000872.

Freer, J., Beven, K.J., and Peters, N. 2002, Multivariate seasonal and sub-period model rejection within the Generalised Likelihood Uncertainty Estimation procedure. In*: Calibration of Watershed Models*, Q. Duan, S. Sorooshian H. Gupta, A.N. Rousseau, and R. Turcotte. (eds.), AGU Monograph Water Science and Applications Series Volume 6, 69-87, doi: 10.1029/006WS05.

Peters, N.E., Meyers, T.P., and Aulenbach, B.T. 2002, [Status and trends in atmospheric deposition and emissions near Atlanta, Georgia, 1986-99](http://pubs.er.usgs.gov/publication/70024777). *Atmospheric Environment* 13(10): 1577-1588.

Peters, N.E. and Tych, Wlodzimierz, 2002, Relations between a multivariate ENSO index and atmospheric deposition near Atlanta, Georgia, 1986-2002 [*abs.*]. Proceedings of the National Atmospheric Deposition Program (NADP) Annual Technical Committee Meeting 2002, NADP Program Office, Illinois State Water Survey, Champaign, Illinois, 59.

White, A.F., Blum, A.E., Schulz, M.S., Huntington, T.G., Peters, N.E., and Stonestrom, D.A. 2002, [Chemical weathering of the Panola Granite: solute and regolith elemental fluxes and the weathering rate of biotite](http://ga.water.usgs.gov/publications/GCA-Whiteetal-2001.pdf). In: *Water-Rock Interactions, Ore Deposits, and Environmental Geochemistry: A Tribute to David A. Crerar*, R, Hellmann and S.A. Wood (eds.), The Geochemical Society, Special Publication 7:37-59.

# 2001

Aulenbach, B.T. and Hooper, R.P. 2001, Removing climatic effects from trends in streamwater load estimates. In: J.J. Warwick (ed.), *Proceedings of the AWRA Conference on Water Quality Monitoring and Modeling, April 30-May 2, 2001, San Antonio, Texas*: 47-52.

Burns, D.A., McDonnell, J.J., Hooper, R.P., Peters, N.E., Freer, J.E., Kendall, Carol, and Beven, Keith, 2001, Quantifying contributions to storm runoff through end-member mixing analysis and hydrologic measurements at the Panola Mountain Research Watershed (Georgia, USA). *Hydrological Processes* 15(10), 1903-1924.

Hjerdt, K.N., McGlynn, B., Tromp-van Meerveld, I., McDonnell, J.J., and Hooper, R.P., 2001, Thresholds in subsurface flow generation: an intercomparison of three different headwater catchments [*abs.*]. *EOS, Transactions of the American Geophysical Union* 82(47), Fall Meet. Suppl., Abstract H41A-0266, 2001.

Hooper, R.P. 2001, Applying the scientific method to small catchment studies: A review of the Panola Mountain experience. *Hydrological Processes* 15(10), 2039-2050.

Hooper, R.P., McDonnell, J.J., Hjerdt, K.N., and McGlynn, B.L., 2001, Towards an objective model of catchment hydrology [*abs.*]. *EOS, Transactions of the American Geophysical Union* 82(47), Fall Meet. Suppl., Abstract H21E-08, 2001, and Proceedings of the AGU Chapman Conference on State-of-the-Art in Hillslope Hydrology, 8-12 October 2001, Sunriver, Oregon.

Hooper, R.P., McGlynn, B.L., Njerdt, K.N., and McDonnell, J.J. 2001, A multivariate approach for comparing and classifying streamwater quality [*abs.*]. *EOS, Transactions of the American Geophysical Union* 82(20), Fall Meet. Suppl., Abstract H31A-03, 2001.

Lawrence, S.J., 2001, Monitoring Coliform Bacteria in a Piedmont River Arising from the Appalachian Region of Northern Georgia [*abs.*]. Proceedings of USGS Appalachian Workshop, held in Gatlinburg, TN, October 22-24, 2001.

McGlynn, B.L., McDonnell, J.J., Hooper, R.P., Shanley, J.B., and Hjerdt, K.N., 2001, Hillslope versus riparian zone runoff contributions in headwater catchments: a multi-watershed comparison [*abs.*]. *EOS, Transactions of the American Geophysical Union* 82(47), Fall Meet. Suppl., Abstract H41A-0264, 2001.

Peters, N.E., Aulenbach, B.T., and Meyers, T.P. 2001, Composition and changes in atmospheric deposition near Atlanta, Georgia, 1986-99. In:K.J. Hatcher (ed.), *Proceedings of the 2001 Georgia Water Resources Conference,* University of Georgia, Athens, Georgia; 483-487.

Peters, N.E., Freer, J., and Beven, K.J. 2001, Modeling hydrologic responses in a small forested watershed by a new dynamic TOPMODEL (Panola Mountain, Georgia, USA). In: S. Uhlenbrook, C. Leibundgut, and J.J. McDonnell (eds.), *Runoff Generation and Implications for River Basin Modeling, Freiburger Schriften zur Hydrologie*, *Band* 13, 318-325.

Schroeder, P.A., Melear, N.D., Bierman, Paul, Kashgarian, Michaele, and Caffee, M.W. 2001, Apparent gibbsite growth ages for regolith in the Georgia Piedmont. *Geochimica et Cosmochmicia Acta* 65(3): 381-386.

Shanley, J.B., Peters, N.E., Aulenbach, B.T., Blum, A.E., Campbell, D.H., Clow, D.W., Larsen, M.C., Mast, M.A., Stallard, R.F., Troester, J.W., Walker, J.F., Webb, R.M., and White, A.F., 2001, Biogeochemical process comparison of the five USGS Water, Energy, and Biogeochemical Budget (WEBB) sites [*abs.*]. *EOS, Transactions of the American Geophysical Union* 82(47), Fall Meet. Suppl., Abstract H41A-0259, 2001.

Tromp-van Meerveld, H.J., McDonnell, J.J., Aulenbach, B.T., and Freer, J. 2001, Threshold effects on hillslope flux: examination of 261 storms from the Panola trench site [*abs.*]. Proceedings of the AGU Chapman Conference on State-of-the-Art in Hillslope Hydrology, 8-12 October 2001, Sunriver, Oregon

Webb, R.M., Leavesley, G.H., Shanley, J.B., Peters, N.E., Aulenbach, B.T., Blum, A.E., Campbell, D.H., Clow, M.C., Mast, M.A., Stallard, D.W., Larsen, R.F., Troester, J.W., Walker, J.F., and White, A.F. 2001, Using multiple tracers to verify model simulations of solute transport at the five USGS Water, Energy, and Biogeochemical Budget (WEBB) sites [abs.]. *EOS, Transactions of the American Geophysical Union* 82(47), Fall Meet. Suppl., Abstract H41A-0260, 2001.

White, A.F., Bullen, T.D., Schulz, M.S., Blum, A.E., Huntington, T.G., and Peters, N.E., 2001, Differential rates of feldspar weathering in granitic regoliths. *Geochimica et Cosmochimica Acta* 65(6), 847-869.

# 2000

Baedecker, M.J. and Friedman, L.C., 2000, [Water, energy, and biogeochemical budgets, a watershed research program](http://pubs.usgs.gov/fs/fs-165-99/). *U.S. Geological Survey Fact Sheet* 165-99.

Baedecker, M.J., Friedman, L.C., Webb, R.M., Reddy, M.M., Shanley, J.B., Peters, N.E., and White, A.F. 2000, Water, Energy, and Biogeochemical Budgets (WEBB) Program of the U.S. Geological Survey [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), Fall Meet. Suppl., Abstract H51B-07, 2000.

Freer, J., Beven, K.J., and Peters, N.E. 2000, Evaluating objective functions within the Generalised Likelihood Uncertainty Estimation (GLUE) procedure: An assessment using Dynamic TOPMODEL applied to the Panola Mountain Research Watershed (PMRW) [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), F477.

Freer, J., Peters, N.E., and Beven, K.J.2000, Developing and testing spatial model responses using spatial data sets at Panola Mountain Research Watershed (PMRW): the flexibility of the new Dynamic TOPMODEL [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), F482.

Huntington, T.G. 2000, The potential for calcium depletion in forest ecosystems of southeastern United States: Review and analysis. *Global Biogeochemical Cylces* 14(2), 623-638.

Huntington, T.G., Hooper, R.P., Johnson, C.E., Aulenbach, B.T., Cappellato, R., and Blum, A.E. 2000, [Calcium depletion in a southeastern United States forest ecosystem](http://pubs.er.usgs.gov/publication/70022483). *Soil Science Society of America Journal* 64(5), 1845-1858.

Peters, N.E., Aulenbach, B.T., Beven, K.J., Bullen, T., Burns, D.A., Cappellato, R., Drake, E.H., Freer, J., Hooper, R.P., Huntington, T.G., Kendall, C., McDonnell, J.J., Shanley, J.B., and While, A.F. 2000, The Panola Mountain Research Watershed (PMRW), Georgia: a field site of the USGS Water, Energy, and Biogeochemical Budgets Program [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), Fall Meet. Suppl., Abstract H51B-15, 2000.

Peters, N.E., Freer, J., Aulenbach, B.T., and Beven, K.J. 2000, Groundwater dynamics at the Panola Mountain Research Watershed (PMRW), Georgia, USA [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), Fall Meet. Suppl., Abstract H71E-07, 2000.

Peters, N.E., Freer, J., and Beven, K.J. 2000, Modeling hydrologic responses in a small forested watershed by a new dynamic TOPMODEL (Panola Mountain, Georgia, USA) [*abs.*]. In: *Runoff Generation and Implications for River Basin Modelling,* International Workshop 9-12 October 2000, Freiburg, Germany,37-38.

Peters, N.E., Hooper, R.P., Huntington, T.G., and Aulenbach, B.T. 2000, [Panola Mountain Research Watershed – Water, Energy, and Biogeochemical Budgets Program](http://pubs.usgs.gov/fs/fs-162-99/). *U.S. Geological Survey Fact Sheet* 162-99.

Peters, N.E., and Meyers, T.P. 2000, Composition and changes in atmospheric deposition at a forested site near Atlanta, Georgia from 1985 to 1999 [*abs.*]. Proceedings of the National Atmospheric Deposition Program (NADP) Technical Committee Meeting 2000, NADP Program Office, Illinois State Water Survey, Champaign, Illinois, 72.

Peters, N.E., Shanley, J.B., Aulenbach, B.T., Blum, A.E., Campbell, D.H., Clow, D.W., Larsen, M.C. Mast, M.A., Stallard, R.F., Walker, J.F., and While, A.F. 2000, Geochemical mass balances for watersheds of the USGS Water, Energy, and Biogeochemical Budgets (WEBB) Program [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), Fall Meet. Suppl., Abstract H51B-10, 2000.

Webb, R.M., Peters, N.E., and Leavesley, G.H. 2000, Relationships between flow generation mechanisms and net chemical fluxes at the five Water, Energy, and Biogeochemical Budgets (WEBB) sites of the U.S. Geological Survey [*abs.*]. *EOS, Transactions of the American Geophysical Union* 81(48), Fall Meet. Suppl., Abstract H51B-08, 2000.

# 1999

Bullen, T.D., White, A.F., Huntington T.G. and Peters, N.E. 1999, A new approach for determining the 87Sr/86Sr ratio of the "granitod" weathering component. In: H. Armannsson (ed), Proceedings of the 5th International Symposium on *Geochemistryof the Earth's Surface*, Balkema, Rotterdam. p. 369-372.

Davies, T.D., Tranter, M., Wigington, P.J. Jr., Eshleman, K.N., Peters, N.E., VanSickle, J., DeWalle, D.R., and Murdoch, P.S. 1999, Prediction of episodic acidification in the North-eastern USA: an empirical/mechanistic approach. *Hydrological Processes*, 13(8), 1181-1195.

Lawrence, G.B., and Huntington, T.G. 1999, [Soil-calcium depletion linked to acid rain and forest growth in the eastern United States](http://pubs.er.usgs.gov/publication/wri984267). *U.S. Geological Survey Water-Resources Investigation Report* 98-4267, 12p.

McIntosh, J., McDonnell, J.J., and Peters, N.E. 1999, A tracer and hydrometric study of preferential flow in large undisturbed soil cores from the Georgia piedmont. *Hydrological Processes,* 13(2), 139-155.

Schroeder, P. A., and Melear, N. D. 1999, Stable carbon isotopic signatures preserved in authigentic minerals from a forested grantic regolith: Panola Mt., Georgia, USA. *Geoderma* 91, 261-279.

White, A.F., Bullen, T.D., Vivit, D.V. Schulz, M.S., and Clow, D.W. 1999, The role of disseminated calcite in the chemical weathering of granitoid rocks. *Geochimica et Cosmochimica Acta* 63(13/14), 1939-1953.

# 1998

Becker, A., and McDonnell, J.J. 1998, Topographical and ecological controls of runoff generation and lateral flows in mountain catchments. In: K. Kovar, U. Tappeiner, N.E. Peters and R.G. Craig (eds.), *Hydrology, Water Resources and Ecology in Headwaters,* IAHS Publication 248, 199-206.

Bullen, T. D., White, A. F., Vivit, D. V. and Schulz, M. S. 1998, Granitoid weathering in the laboratory: Chemical and Sr isotope perspectives on mineral dissolution rates. *Proceedings of the 9th Symosium on Water-Rock Interaction*, Taupo, New Zealand, 383-386.

Burns, D.A., Hooper, R.P., McDonnell, J.J., Freer,J.E., Kendall, C., and Beven, K. 1998, Base cation concentrations in subsurface flow from a forested hillslope: the role of flushing frequency. *Water Resources Research*, 34(12), 3535-3544.

Cappellato, R., Peters, N.E., and Meyers, T.P. 1998, Above-ground sulfur cycling in adjacent coniferous and deciduous forests and watershed sulfur retention in the Georgia piedmont, USA. *Water, Air and Soil Pollution* 103 (1-4), 151-171.

Hooper, R.P., Aulenbach, B.T., Burns, D.A., McDonnell, J., Freer, J., Kendall, C., and Beven, K. 1998, [Riparian control of streamwater chemistry: implications for hydrochemical basin models](http://pubs.er.usgs.gov/publication/70020358). In: K. Kovar, U. Tappeiner, N.E. Peters and R.G. Craig (eds.), *Hydrology, Water Resources and Ecology in Headwaters,* IAHS Publication 248, 451-458.

Hooper, R.P. and Christophersen, Nils 1998, The use of Eigenvalue analysis to evaluate scale effects on stream chemistry [*abs.*]. *EOS, Transactions of the American Geophysical Union*, 79(45), F378.

Huntington, T.G., Hooper, R.P., Johnson, C.E., Aulenbach, B.T., Cappellato, R., and Blum, A.E. 1998, Assessment of calcium depletion in forest ecosystems of southeastern USA using a small watershed approach [*abs.*]. In: NADP Technical Committee Meeting abstracts of papers, October 26-29, 1998, St. Petersburg, FL; 21.

Kendall, C., Hooper, R.P., McDonnell, J.J., Shanley, J., Campbell, D.H., Peters, N.E., Walker, J.F., Burns, D.A., Bullen, T.D., and Michel, R.L. 1998, An isotopic perpective on how catchments "work" based on multi-year studies at USGS WEBB sites [*abs.*]. *EOS, Transactions of the American Geophysical Union* 79(17), S124*.*

McDonnell, J.J., Burns, D.A., Hooper, R.P., Freer, J.E., Kendall, C., Peters, N.E., and Beven, K. 1998, Overcoming limitations in mixing models through detailed spatial and temporal characterization of end members: an example from Panola Mountain, Georgia [*abs.*]. *EOS, Transactions of the American Geophysical Union*, 79(45), F379.

McDonnell, J.J., Zumbuhl, A., Burns, D.A., Freer, J., Hooper, R.P., Peters, N.E., Beven, K., and Kendall, C. 1998, Exploring the linkages between runoff processes, soil properties and terrain features at the Panola Mountain Research Watershed, Georgia, USA [*abs.*]. *EOS, Transactions of the American Geophysical Union*, 79(45), F241.

Peters, N.E., and Ratcliffe, E.B. 1998,Tracing hydrologic pathways using chloride at the Panola Mountain Research Watershed, Georgia, USA. *Water, Air and Soil Pollution,* 105(1/2), 263-275.

Peters, N.E., Ratcliffe, E.B. and Tranter, M. 1998, Factors controlling the mobility of Na, Si and Cl at the Panola Mountain Research Watershed, Georgia, USA [*abs.*]. *EOS, Transactions of the American Geophysical Union* 79(17), S124*.*

Peters, N.E., Ratcliffe, E.B. and Tranter, M. 1998, Tracing solute mobility at the Panola Mountain Research Watershed, Georgia, USA: variations in Na+, Cl-, and H4SiO4 concentrations. In: K. Kovar, U. Tappeiner, N.E. Peters and R.G. Craig (eds.), *Hydrology, Water Resources and Ecology in Headwaters,* IAHS Publication 248, 483-490.

Stonestrom, D.A., White, A.F., and Akstin, K.C. 1998, Determining rates of chemical weathering in soils — solute transport versus profile evolution. *Journal of Hydrology*, 209, 331-345.

Vivit, D.V., White, A.F., Bullen, T.D., Schulz, M.S., and Blum, A.E. 1998, Temperature effects on rates of chemical weathering in granitoid watersheds [*abs.*]. *EOS, Transactions of the American Geophysical Union*, 79(45), F318.

White. A.F. and Stonestrom, D.A. 1998, Comparison of short-term and long-term chemical weathering rates in granitoid rocks. Proceedings of the 9th Symposium on Water-Rock Interaction, Taupo, New Zealand, 399-402.

# 1997

Aulenbach, B.T., Hooper, R.P., and Bricker, O.P. 1997, Trends in precipitation and surface-water chemistry in a national network of small watersheds. In: N.E. Peters, O.P. Bricker and M.M. Kennedy (eds.), *Water Quality Trends and Geochemical Mass Balances,* Advances in Hydrological Processes, John Wiley and Sons, London, 27-57.

Ball, J. and Trudgill, S.T. 1997, Potentials and limitations in using geochemical tracers. In: N.E. Peters and A. Coudrain-Ribstein (eds.), *Hydrochemistry*, IAHS Publication 244, 275-289.

Freer, J., McDonnell, J., Beven, K.J., Brammer, D., Burns, D.A., Hooper, R.P., and Kendall, C. 1997, Topographic controls on subsurface storm flow at the hillslope-scale for two hydrologically distinct small catchment. *Hydrological Processes,* 11(9), 1347-1352 **doi:10.1002/(SICI)1099-1085(199707)11:9<1347::AID-HYP592>3.0.CO;2-R**

Hooper, R.P. and Aulenbach, B.T. 1997, Trend analysis of mixed-frequency water-quality time series [*abs.*]. *EOS, Transactions of the American Geophysical Union*, 78(46), F327.

Huntington, T.G., 1997, Modeling soil respiration as a function of soil temperature and moisture [*abs.*]. Annual Meeting of the Soil Science Society of America, Anaheim, California, *Agronomy Abstracts* 97, 282-283.

Huntington, T.G., and Hooper, R.P. 1997, Effects of acidic deposition on water quality and forest health in Georgia. In: K.J. Hatcher (ed.), Proceedings of the 1997 Georgia Water Resources Conference, University of Georgia, Athens, Georgia, 122-126.

Huntington, T.G. and Sharpe, J.M. 1997, Temperature Dependence of Soil Respiration in a Coniferous Forest in the Georgia piedmont [*abs.*]. *EOS, Transactions of the American Geophysical Union*, 78(17), S161.

Lange, H., Newig, J. and Wolf, F. 1997, Comparison of complexity measures for time series from ecosystem research. *Bayreuther Forum Vkologie* 52, 99-116.

McDonnell, J.J. 1997, Comment on "The changing spatial variability of subsurface flow across a hillside" by R. Woods and L. Rowe, *Journal of Hydrology (NZ)*, 36(1), 103-106.

Peters, N.E. and Ratcliffe, E.B. 1997, Tracing hydrologic pathways at the Panola Mountain Research Watershed, Georgia, USA. In: N.E. Peters and A. Coudrain-Ribstein (eds.), *Hydrochemistry*, IAHS Publication 244, 275-289.

Peters, N.E. and Ratcliffe, E.B. 1997, Tracing hydrologic pathways using solute concentration variations in a forested headwater catchment, Georgia, USA [*abs*]. *Journal of Conference Abstracts: BIOGEOMON,* 2(2), 269.

Schroeder, P.A., Crowe, D.E., and Melear, N.D. 1997, Stable carbon isotope signatures preserved in authigenic minerals from a forested granitic-regolith: Panola Mt., Georgia [*abs*]. Geological Society of America, Annual Meeting, Salt Lake City, Utah.

# 1996

Aulenbach, B.T., Hooper, R.P., and Bricker, O.P. 1996, [Trends in precipitation and surface-water chemistry in a national network of small watersheds](http://pubs.er.usgs.gov/publication/70019315). *Hydrological Processes* 10(2), 151-181. Also in: N.E. Peters, O.P. Bricker and M.M. Kennedy (eds.). 1997. Water Quality Trends and Geochemical Mass Balances. Advances in Hydrological Processes, John Wiley and Sons, London, 27-57.

Aulenbach, B.T., Hooper, R.P., Burns, D.A., Kendall, C., Freer, J.E., and McDonnell, J.J. 1996, Evolution of soil and groundwater chemistry in a hillslope, Panola Mountain Research Watershed, Georgia, USA [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F180.

Freer, J., Beven, K.J., Peters, N.E., Hooper, R.P., Aulenbach, B.T., Zumbuhl, A., McDonnell, J.J., Burns, D.A., and Kendall, C. 1996, Conceptualizing hydrological processes in a small forested catchment: developing a TOPMODEL framework using multiple data sets and uncertainty analysis [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F209.

Freer, J., McDonnell, J.J., Burns, D.A., Beven, K.J., Hooper, R.P., Aulenbach, B.T., Kendall, C., and Peters, N.E. 1996, Understanding the spatial and temporal dynamic contributions to subsurface storm runoff at the hillslope scale [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F180.

Hooper, R..P., Burns, D.A., Kendall, C., Freer, J.E., McDonnell, J.J., and Beven, K.J. 1996, Testing the end-member mixing concept at Panola Mountain Research Watershed (PMRW), Georgia, USA [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F180.

Huntington, T.G. 1996, Global warming: role of recovering North American forests in offsetting greenhouse gas emissions from the burning of fossil fuels. In: [*U.S. Geological Survey yearbook*, fiscal year 1995; understanding the Earth](http://pubs.er.usgs.gov/publication/7000092), 26-27.

Huntington, T.G.1996, Moisture dependence of soil respiration in a Georgia piedmont forest [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F214.

Huntington, T.G. 1996, Predicting watershed acidification under alternate rainfall conditions. *Water, Air and Soil Pollution* 90, 429-450.

Huntington, T.G., Hooper, R.P., Aulenbach, B.T., Cappellato, R., and Drake, E.H. 1996, Temporal trends in calcium concentration of precipitation and calcium deposition in southeastern USA [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(17), S134-S135.

Huntington, T.G., Hooper, R.P., and Murdoch, P.S. 1996, Small watershed studies: analytical approaches for understanding ecosystem response to environmental change. In: *Watershed '96 --Moving Ahead Together*, Technical Conference and Exposition, Baltimore, Maryland, June 8-12, 1996, Water and Environment Federation, Alexandria, VA, p. 783-786.

Huntington, T.G., Sharpe, J.M., and Aulenbach, B.T. 1996, Minimizing error in estimating soil respiration with the non-steady-state chamber method [*abs.*]. Annual Meeting of the Soil Science Society of America, Indianapolis, Indiana, *Agronomy Abstracts* 88, 298.

Kendall, C., Burns, D.A., Hooper, R.P., McDonnell, J.J., and Freer, J. 1996, Relations between the hydrology and chemistry of subsurface flow from a hillslope trench at the Panola Mountain Research Watershed [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F180.

McDonnell, J., Freer, J., Hooper, R., Kendall, C., Burns, D., Beven, K., and Peters, J. 1996, New method developed for studying flow on hillslopes. *EOS, Transactions of the American Geophysical Union* 77(47), 465-472.

McDonnell, J., Freer, J., Hooper, R., Kendall, C., Burns, D., Zumbuhl, A., McIntosh, J., Peters, J. and Beven, K. 1996, The downslope evolution of water and solutes at varying watershed scales [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F226.

McDonnell, J., Freer, J., Burns, D., Aulenbach, B., Hooper, R., Peters, J., Beven, K. and Kendall, C. 1996, Temporal and spatial variability of soil water potential at the hillslope scale [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F180.

Ratcliffe, E.B., Peters, N.E., and Tranter, M. 1996, Chapter 6, Short-term hydrological responses of soil water and groundwater to rainstorms in a deciduous forest hillslope, Georgia, USA. In: M.G. Anderson and S.M. Brooks (eds.), *Advances in Hillslope Processes*, Wiley, Chichester, p. 129-148.

Sharpe, J. M., Huntington, T. G., and Cappellato, R. 1996, A comparison between coniferous and deciduous soil respiration over the dormant season in a southern piedmont forest [*abs.*]. Annual Meeting of the Soil Science Society of America, Indianapolis, Ind., *Agronomy Abstracts* 88, 298.

Zumbuhl, A.T., Freer, J.E., McDonnell, J.J. 1996, Linking soil sampling strategies to hydrological modeling through topographic analysis in a piedmont catchment [*abs.*]. *EOS, Transactions of the American Geophysical Union* 77(46), F231.

Zumbuhl, A.T., Freer, J.E., McDonnell, J.J. 1996, Topographic influences on soil physical properties in a forested piedmont catchment [*abs.*]. Annual Meeting of the Soil Science Society of America, Indianapolis, Ind., *Agronomy Abstracts* 88, 264.

# 1995

Ball, J., Trudgill, S., and Ferguson, R. 1995, The importance of solute residence time in controlling catchment hydrochemistry [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 207.

Bierman, P. 1995, Estimating erosion rates and exposure ages with 36-Cl produced by neutron activation. *Geochimica et Cosmochimica Acta* 59, 3779-3798.

Bremner, J.L. and Huntington, T.G. 1995, The effects of temperature and moisture on dormant season soil respiration in a southern piedmont forest [*abs.*]. Annual Meeting of the Soil Science Society of America, St. Louis, MO, *Agronomy Abstracts* 87, 309.

Bullen, T.D., Shanley, J.B., Peters, N.E., and Hooper, R.P. 1995, Mobilization of organic carbon at two forested catchments as determined by variations in Pb isotopes [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 209.

Cappellato, R. and Peters, N.E. 1995, Dry deposition and canopy leaching rates in deciduous and coniferous forests of the Georgia Piedmont: an assessment of a regression model. *Journal of Hydrology* 169, 131-150.

Huntington, T.G. 1995, Carbon sequestration in an aggrading forest ecosystem. *Soil Science Society of America Journal* 59, 1459-1467.

Huntington, T.G., Aulenbach, B.T., Drake, E.H., Booker, D.L., and Pojunas, T.P. 1995, Suspended sediment flux in a small forested watershed in the Georgia piedmont [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(17), 134-135.

Huntington, T.G. and Bremner, J.L. 1995, Soil respiration in relation to environmental factors in a Georgia piedmont forest [*abs.*]. Annual Meeting of the Soil Science Society of America, St. Louis, MO, *Agronomy Abstracts* 87, 308.

Huntington, T.G., Sundquist, E.T., Bremner, J.L., Winston, G.C., and Shanley, J.B. 1995, Seasonal patterns in soil respiration at two forested sites [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 278.

Kendall, C., Sklash, M.G., and Bullen, T.D. 1995, Chapter 10: Isotope tracers of water and solute sources in catchments. In: S.T. Trudgill (Ed.), *Solute Modelling in Catchment Systems*, London, John Wiley and Sons, 261-303.

Larsen, M.C., Huntington, T.G., Booker, D.L., Concepcion, I.M., Parks, J.E., Pojunas, T.P., and Torres Sanchez, A.J. 1995, Suspended sediment transport in small upland humid watersheds undergoing afforestation following human disturbance: a comparison of tropical and temperate environments [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 260.

McDonnell, J.J. and Kendall, C. 1995, Isotope hydrograph separation as a means for characterizing watershed response: Does it really work? [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 255.

Peters, N.E. and Sueker, J.K. 1995, Hydrogeologic controls on surface-water chemistry in granitic watersheds [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 256.

Shanley, J.B., Peters, N.E., Bullen, T.D., and Burns, D.A. 1995, Evaluation of silica concentration as an indicator of weathering in forested catchments [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 255.

Sundquist, E.T., Winston, G.C., Shortlidge, A.B., Stephens, B.B., Huntington, T.G., Shanley, J.B., and Glynn, P.C. 1995, Diel variations in CO2 fluxes at the soil surface in contrasting environments [*abs.*]. *EOS, Transactions of the American Geophysical Union* 76(46), 256.

White, A.F. and Blum, A.E. 1995, Effects of climate on chemical weathering in watersheds. *Geochimica et Cosmochimica Acta* 59, 1729-1747.

# 1994

Aulenbach, B.T. and Hooper, R.P. 1994, Adjusting solute fluxes for climatic Influences [*abs.*]. *EOS, Transactions of the American Geophysical Union* 75(44), 233.

Christophersen, Nils, Neal, Colin, and Hooper, R.P. 1994, Modeling environmental impacts: A challenge for the scientific method. *Journal of Hydrology* 152, 1-12.

Huntington, T.G., Blum, A.E., and White, A.F. 1994, Migration of a bromide tracer in a forest soil in the Georgia piedmont [*abs.*]. *EOS, Transactions of the American Geophysical Union* 75, 150.

Huntington, T.G., Hooper, R.P., and Aulenbach, B.T. 1994, Hydrologic processes controlling sulfate mobility in a small forested watershed. *Water Resources Research* 30(2), 283-295.

Huntington, T.G, Hooper, R.P., Blum, A.E., Johnson, C.E., Aulenbach, B.T., Cappellato, R., and Drake, E.H. 1994, Sustainability of forest productivity in the Georgia piedmont [*abs.*]. Annual Meeting of the Soil Science Society of America, Seattle, WA, *Agronomy Abstracts* 86, 385.

Huntington, T.G, Markewich, H.M., Lynn, W.C., and Johnson, C.E. 1994, Erosion, transport, and deposition of soil carbon in a headwater catchment during cotton cultivation in the Georgia piedmont [*abs.*]. Annual Meeting of the Geological Society of America, Seattle, WA, Abstracts with Programs, Geological Society of America 76(7), 8310.

McDonnell, J.J. and Peters, N.E. 1994, Rapid water table response in small catchments [*abs.*]. *EOS, Transactions of the American Geophysical Union* 75, 155.

Peters, N.E. 1994, Geochemical controls on solute transport in granitic watersheds [*abs.*]. *EOS, Transactions of the American Geophysical Union* 75(44), 278.

Peters, N.E. 1994, Variations in precipitation and stream water quality in a forested piedmont catchment, Georgia, USA. In: N.E. Peters, R.J. Allan and V. Tsirkinov (eds.), *Hydrological, chemical and biological processes of transformation and transport of contaminants in aquatic environments*. IAHS Publication 219, 399-408.

Peters, N.E. 1994, Water-quality variations in a forested piedmont catchment, Georgia, USA. *Journal of Hydrology* 156, 73-90.

Ratcliffe, E.B. and Peters, N.E. 1994, Identification of solute sources in a forested piedmont hillslope [*abs.*]. *EOS, Transactions of the American Geophysical Union* 75(44), 280.

# 1993

Cappellato, R., Peters, N.E., and Ragsdale, H.L. 1993, Acidic atmospheric deposition and canopy interactions of adjacent deciduous and coniferous forests in the Georgia piedmont. *Canadian* *Journal of Forest Research* 23(6), 1114-1124.

Hooper, R.P. 1993, Catchment models and the scientific method [*abs.*]. Symposium on Ecosystem Behaviors: Evaluation of Integrated Monitoring in Small Catchments (BIOGEOMON) Program and Abstracts, pp. 128-129.

Hooper, R.P. and Aulenbach, B.T. 1993, [Managing the data explosion](http://pubs.er.usgs.gov/publication/70018218). *Civil Engineering* 63, 74-76.

Hooper, R.P. and Aulenbach, B.T. 1993, The role of sampling frequency in determining water-quality trends [*abs.*]. *EOS, Transactions of the American Geophysical Union* 74(43), 279.

Huntington, T.G. 1993, Streamwater and soil-water chemical response to rainfall variation at a small forested catchment in the Georgia piedmont [*abs.*]. *EOS, Transactions of the American Geophysical Union* 74(16), 147.

Huntington, T.G. and Cappellato, R. 1993, Carbon accumulation following forest regeneration in the Georgia piedmont [*abs.*]. Annual Meeting of the Soil Science Society of America, Cincinnati, Ohio, *Agronomy Abstracts*, 85, 336.

Huntington, T.G., Hooper, R.P., Peters, N.E., Bullen, T.D., and Kendall, C. 1993, [Water, energy, and biogeochemical budgets investigation at Panola Mountain Research Watershed, Stockbridge, Georgia--A research plan](http://pubs.er.usgs.gov/publication/ofr9355). *U.S. Geological Survey Open-File Report* 93-55.

Shanley, J.B. and Peters, N.E. 1993, Variations in aqueous sulfate concentrations at Panola Mountain, Georgia. *Journal of Hydrology* 146, 361-382.

White, A.F., Blum, A.E., Schulz, M.S., and Stonestrom, D.A. 1993, Development of chemically-induced zones of low soil permeability and their effects on infiltration and runoff [*abs.*]. *EOS, Transactions of the American Geophysical Union* 74(43), 290-291.

# 1992

Christophersen, Nils and Hooper, R.P. 1992, Multivariate analysis of stream water quality: the use of principal components for the end-member mixing problem. *Water Resources Research* 28, 99-107.

Hooper, R.P. 1992, The use of mass balances in watershed modeling [*abs.*]. *EOS, Transactions of the American Geophysical Union* 73(14), 137.

Hooper, R.P. 1992, Setting the stage: Limitations common to hydrologic and hydrochemical models [*abs.*]. *EOS, Transactions of the American Geophysical Union* 73(43), 168.

Hooper, R.P. and Christophersen, Nils 1992, Predicting future episodic stream acidification in the southeastern United States [*abs.*]. *EOS, Transactions of the American Geophysical Union* 73(14), 122.

Hooper, R.P. and Christophersen, Nils 1992, Predicting episodic stream acidification in the southeastern United States - combining a long-term acidification model and the end-member mixing concept. *Water Resources Research* 28 1983-1990.

Huntington, T.G, Hooper, R.P., Shanley, J.B., and Peters, N.E. 1992, Soil sulfate retention in relation to hydrologic conditions: Implications for watershed acidification [*abs.*]. Annual Meeting of the Soil Science Society of America, Minneapolis, MN, *Agronomy Abstracts* 84, 348.

Huntington, T.G., Aulenbach, B.T., and Hooper, R.P. 1992, Hydrologic processes controlling sulfate adsorption: A small watershed approach [*abs.*]. *EOS, Transactions of the American Geophysical Union* 73(43), 186.

Kendall, C. 1992, Temporal, spatial, and species-effects on the oxygen and hydrogen isotopic compositions of throughfall [*abs.*]. *EOS, Transactions of the American Geophysical Union* 73(43), 160-161.

Peters, N.E. 1992, Geochemical controls on solute transport in headwater watersheds underlain by relatively non-reactive bedrock in the U.S. [*abs.*]. European Network of Experimental and Representative Basins, Proceedings, pp. 188-198.

Shanley, J.B. 1992, Sulfur retention and release in soils at Panola Mountain, Georgia. *Soil Science* 153(6), 499-508.

Shanley, J.B. Hooper, R.P., and Peters, N.E. 1992, Controls on sulfate mobility in a forested watershed as inferred from annual and event mass balance [*abs.*]. *EOS, Transactions of the American Geophysical Union* 73(14), 137.

# 1991

Hooper, R.P., Christophersen, Nils, and Peters, N.E. 1991, A critical analysis of end-member mixing concept as applied to streamwater chemistry [*abs.*]. In: *International Conference on Acidic Deposition, Its Nature and Impacts*. Glasgow, 16-21 September 1990, Conference Abstracts, 247.

Meyers, T.P., Hicks, B.B., Hosker, R. P. J., Womack, J.D. and Satterfield, L.C. 1991, Dry deposition inferential measurement techniques-II. Seasonal and annual deposition rates of sulfur and nitrogen. *Atmospheric Environment* 25A, 2361-2370.

Peters, N.E., Hooper, R.P., and Huntington, T.G. 1991, The Panola Mountain Research Watershed, hydrologic and biogeochemical process research: a watershed approach [*abs.*]. In: Kelmelis, J.A. and Snow, M. (editors) [Proceedings of the U.S. Geological Survey global change research forum, Herndon, Virginia, March 18–20, 1991](http://pubs.er.usgs.gov/publication/cir1086), *U.S. Geological Survey Circular* 1086, p. 105.

# 1990

Cappellato, R., Peters, N.E., and Ragsdale, H.L. 1990, Canopy interactions with acidic atmospheric deposition in a Georgia piedmont watershed [*abs.*]. Ecological Society of America, Proceedings, 75th Anniversary Meeting, Snowbird, Utah.

Christophersen, Nils, Neal, Colin, and Hooper, R.P. 1990, Modelling streamwater chemistry as a mixture of soil-water end members-A step towards second generation acidification models. *Journal of Hydrology* 116, 307-320.

Hooper, R.P. and Christophersen, Nils 1990, The mathematical relation between end-member mixing analysis and principal component analysis [*abs.*]. *EOS, Transactions of the American Geophysical Union* 71, 1317.

Hooper, R.P., Christophersen, Nils, and Peters, N.E. 1990, Modelling streamwater chemistry as a mixture of soil-water end members-An application to the Panola Mountain watershed, Georgia, USA. *Journal of Hydrology* 116, 321-343.

# 1989

Cappellato, R. and Peters, N.E. 1989, Comparison of solute composition of precipitation and deciduous and coniferous throughfall in a piedmont watershed [*abs.*]. In: G.L. Pederson and M.M. Smith (comps.), [U.S. Geological Survey Second National Symposium on Water Quality, Orlando, Florida, November 12-17, 1989](http://pubs.er.usgs.gov/publication/ofr89409), *U.S. Geological Survey Open-File Report* 89-409, p. 8-9.

Christophersen, Nils and Hooper, R.P. 1989, The influence of flowpath on hysteresis in concentration/discharge relations for streamwater [*abs.*]. *EOS, Transactions of the American Geophysical Union* 70(43), 1123.

Herkelrath, W.N. and Peters, N.E. 1989, A computerized time-domain reflectometry system for continuous monitoring of soil moisture content [*abs.*]. *Agronomy Abstracts* 81, 187.

Hooper, R.P. and Peters, N.E. 1989, The applicability of principal components analysis for determining sources of wet deposition. IAHS Publication 179, 127-135.

Hooper, R.P., and Peters, N.E. 1989, Use of storm-based sampling to improve estimates of solute flux in small calibrated catchments [*abs.*]. *EOS, Transactions of the American Geophysical Union* 70(43), 1106.

Hooper, R.P. and Peters, N.E. 1989, Use of multivariate analysis for determining sources of solutes found in wet atmospheric deposition in the United States. *Environmental Science and Technology* 23, 1263-1268.

Hooper, R.P., Peters, N.E., and Shanley, J.B. 1989, A comparison of results from fixed-interval and event-based sampling at a calibrated watershed in the Georgia piedmont [*abs.*]. In: G.L. Pederson and M.M. Smith (comps.), [U.S. Geological Survey Second National Symposium on Water Quality, Orlando, Florida, November 12-17 1989](http://pubs.er.usgs.gov/publication/ofr89409), *U.S. Geological Survey Open-File Report* 89-409, p.39.

Peters, N.E. 1989, Atmospheric deposition of sulfur to a granite outcrop in the piedmont of Georgia, U.S.A. In: D.J. Delleur (ed.), *Atmospheric Deposition.* IAHS Publication 179, 173-181.

Peters, N.E. 1989, Effects of acid precipitation on solutes released to streamwaters in granitic terrains by mineral weathering, in Abstracts 28th International Geological Congress, July 9-19, 1989, International Geological Congress, Washington. D.C., 2, 598-599.

Peters, N.E. 1989, Geochemical processes affecting streamwater solute composition and transport in a forested piedmont watershed [*abs.*]. In: G.L. Pederson and M.M. Smith (comps.), [U.S. Geological Survey Second National Symposium on Water Quality, Orlando, Florida, November 12-17, 1989](http://pubs.er.usgs.gov/publication/ofr89409), *U.S. Geological Survey Open-File Report* 89-409, p.73.

Shanley, J.B. and Kendall, C. 1989, A comparison of intra-storm variations in chemical and isotopic composition of rainfall in the Georgia piedmont [*abs.*]. National Atmospheric Deposition Program (NADP) Technical Committee Meeting 1989, Abstracts of Papers, NADP/NTN Coordinator's Office, Colorado State University, Fort Collins, Colorado, p. 14.

Shanley, J.B., Peters, N.E., and Hooper, R.P. 1989, Factors affecting aqueous sulfate concentrations at Panola Mountain, Georgia [*abs.*]. In: G.L. Pederson and M.M. Smith (comps.), [U.S. Geological Survey Second National Symposium on Water Quality, Orlando, Florida, November 12-17, 1989](http://pubs.er.usgs.gov/publication/ofr89409), *U.S. Geological Survey Open-File Report* 89-409, p.88.

Shanley, J.B., Peters, N.E., and Murdoch, P.S. 1989, Regional differences in seasonal and episodic variations in stream sulfate chemistry [*abs.*]. *EOS, Transactions of the American Geophysical Union* 70(43), 1116.

# 1988

Cappellato, R. and Carter, M.E.B. 1988, Successional changes in a piedmont deciduous forest at Panola Mountain State Conservation Park [*abs.*]. *Association of Southeastern Biologists Bulletin* 35(2), 67.

Hooper, R.P. 1988, The role of simulation modeling in understanding hydrologic processes [*abs.*]. American Association for the Advancement of Science Annual Meeting (Boston, MA, 11-15 Feb.), p. 83.

Shanley, J.B. and Peters, N.E. 1988, Preliminary observations of streamflow generation during storms in a forested piedmont watershed using temperature as a tracer. *Journal of Contaminant Hydrology* 3, 349-365.

# 1987

Kennedy, V.C. and Peters, N.E. 1987, Establishing baseline water-quality conditions for trend analysis in surface-water systems [*abs.*]. Proceedings of an IAHS Workshop on Estimation of Natural Baseline Conditions as a Basis for Detecting Changes in Water Quality In: International Union of Geodesy and Geophysics, XIX General Assembly, Vancouver, Canada, August 9-22, 1987, Abstracts 3, 995.

Peters, N.E. 1987, Effects of acidic atmospheric deposition on stream water quality in a forested piedmont watershed [*abs.*]. Georgia Acid Rain Workshop, Governor's Task Force on Acid Rain, Georgia Forestry Center, Macon, Ga.

Peters, N.E. 1987, Hydrochemical response of a stream in the Southeast to a rainstorm. *U.S. Geological Survey Yearbook*, Fiscal Year 1986, p. 36-37.

Peters, N.E. and Kennedy, V.C. 1987, Intensive versus fixed-interval sampling for establishing baseline conditions of waters affected by acidic atmospheric deposition [*abs.*]. Proceedings of an IAHS Workshop on Estimation of Natural Baseline Conditions as a Basis for Detecting Changes in Water Quality. In: International Union of Geodesy and Geophysics, XIX General Assembly, Vancouver, Canada, August 9-22, 1987, Abstracts 3, 997.

Peters, N.E. and Shanley, J.B. 1987, Acidification of a stream in the southeastern United States by acidic atmospheric deposition [*abs.*]. *EOS, Transactions of the American Geophysical Union* 68, 271.

Peters, N.E. and Shanley, J.B. 1987, Precipitation and stream chemistry in a forested piedmont watershed [*abs.*]. Proceedings of the Third Annual Acid Rain Conference for the Southern Appalachians, by TVA, Office of Natural Resources and Economic Development, report TVA/ONRED AWR-87/15, 63-64.

Shanley, J.B. and Peters, N.E. 1987, Contributions of prestorm water to stream flow generation; preliminary observations using temperature as a tracer [*abs.*]. *EOS, Transactions of the American Geophysical Union* 68, 314.

# 1986

Peters, N.E. 1986, Hydrologic controls on surface-water acidification [*abs.*]. American Institute of Hydrology 1986 Fall Meeting, Water Problems of National Concern--Hydrologic Perspectives, Session I--Acid Rain.

Peters, N.E., and Shanley, J.B. 1986, Hydrochemical response of a stream in the Georgia piedmont to a rain event [*abs.*]. *EOS, Transactions of the American Geophysical Union* 67(16), 282-283.

Shanley, J.B. and Peters, N.E. 1986, Precipitation chemistry at Panola Mountain State Park near Atlanta, Georgia [*abs.*]. National Atmospheric Deposition Program (NADP) Technical Committee Meeting 1986, Abstracts of Papers, NADP/NTN Coordinator's Office, Colorado State University, Fort Collins, Colorado, p. 3.

# 1985

Kilpatrick, F.A., Hale, T.W., and Peters, N.E. 1985, A dual, compound weir for gaging small basins. *U.S. Geological Survey, WRD Bulletin* July-December, 37-40.

Peters, N.E. and Shanley, J.B. 1985, Field verification of dry deposition rates and effects in a small watershed: Abstract and research summary. In: Proceedings of the Second Annual Acid Rain Conference for the Southern Appalachians, by TVA, Office of Natural Resources and Economic Development, Report TVA/ONRED AWR-86/11, p. 52.

# PUBLICATIONS PRIOR TO 1985:

Bostick, P. E. 1968, The distribution of some soil fungi on a Georgia granite outcrop. *Bulletin of the Georgia Academy of Science*, 26, 149-154.

Bostick, P. E. 1971, Vascular plants of Panola Mountain, Georgia. *Castanea*, 36, 194-209.

Plummer, G.L. 1969, Fallout radioisotopes in Georgia lichens. In: Nelson, D.J. and Evans, F.C. (eds.) Symposium on Radioecology, Proceedings of the Second National Symposium, Ann Arbor Michigan, May 15-17, 1967, p. 571-577.

Ragsdale, H.L. and Harwell, M.A. 1969, A map of the island ecosystems of Panola Mountain. *Bulletin of the Georgia Academy of Science*, 27, 83.

Shure, D.J. and Ragsdale, H.L. 1977, Patterns of primary succession on granite outcrop surfaces. *Ecology*, 58, 993-1006.

# THESES

Braun, D.G. 1969, Soil factors and subannual nutrient cycling in two types of granite outcrop soil island ecosystems. Atlanta, Georgia, unpublished M.S. Thesis, Emory University, 89 p.

Bremner, J.L. 1995, The effects of temperature and moisture on dormant season soil respiration in a southern piedmont forest. Atlanta, Georgia, unpublished Senior Honors Thesis, Emory University, 35 p.

Burns, D.A., 1999, The hydrochemistry of stormflow in a forested Piedmont catchment, Ph.D. Dissertation, State University of New York, College of Environmental Science and Forestry, 193 p.

Cantrell, K.J. 1989, Role of soil organic and carbonic acids in the acidification of forest streams and soils. Atlanta, Georgia, unpublished Ph.D. Thesis, Georgia Institute of Technology, 168 p.

Carroll, Kelly, 2005, Concentration/discharge hysteresis analysis of storm events at the Panola Mountain Research Watershed, Georgia, USA. Atlanta, Georgia, unpublished senior honors Thesis, Georgia State University, Department of Geology, 113 p.

Cappellato, R. 1991, Acidic atmospheric deposition and canopy interactions of adjacent deciduous and coniferous forests in the Georgia piedmont. Atlanta, Georgia unpublished Ph.D. Thesis, Emory University.

Carter, M.E.B. 1978, A community analysis of the piedmont deciduous forest of Panola Mountain State Conservation Park. Atlanta, Georgia, unpublished M.S. Thesis, Emory University, 126 p.

Fernandez, L.R. 1989, The effects of lichens (*Parmelia conspersa*) and mosses (*Grimmia laevigata*) on throughfall rain chemistry within a granite outcrop ecosystem in the Georgia piedmont. Atlanta, Georgia, unpublished Senior Honors Thesis, Emory University.

Hebert, G. 2005, A geophysical investigation of hydraulic pathways at the Panola Mountain Research Watershed, unpublished M.S. Thesis, Georgia Institute of Technology, Geophysics, 68 p.

Holland, W. 1954, The geology of the Panola Shoals area: Dekalb County, Georgia. Atlanta, Georgia, unpublished M.S. Thesis, Emory University.

Kendall, C. 1993, Impact of isotopic heterogeneity in shallow systems on modeling of stormflow generation. College Park, Md., unpublished Ph.D. Thesis, University of Maryland, 390 p.

Mathews, J. 1941, A survey of the flora of Mount Panola. Atlanta, Georgia, unpublished M.S. Thesis, Emory University, 94 p.

McIntosh, Janice 1996, The effects of preferential flow on soil water movement and conservative solute.transport in large, intact field cores. M.S. Thesis, State University of New York, College of Environmental Science and Forestry. Syracuse, New York, 69 p.

Newig, J. 1998, Charakterisierung von Wassereinzugsgebieten durch Komplexitaetstheorie und nichtlineare Zeitreihenanalyse. Diplom thesis, Univ. of Bayreuth (in German).

Nixon, R.A. 1981, Rates and mechanisms of chemical weathering in an organic environment at Panola Mountain, Georgia. Atlanta, Georgia, unpublished Ph.D. Thesis, Emory University, 172 p.

Ratcliffe, E.B. 1996, Short-term hydrological responses of a forested hillslope during rainstorms at the Panola Mountain Research Watershed, Georgia, USA. Bristol, United Kingdom, unpublished Ph.D. Thesis, University of Bristol.

Rogers, S.E. 1971, Vegetational and environmental analysis of shrub-tree communities on a granite outcrop. Atlanta, Georgia, unpublished M.S. Thesis, Emory University.

Shanley, J.B. 1989, Factors controlling sulfate retention and transport at Panola Mountain, Georgia. Laramie, Wyoming, unpublished Ph.D. Thesis, University of Wyoming, 79 p.

Sharpe, J.M. 1996, A Comparison Between Coniferous and Deciduous Soil Respiration Over the Dormant Season in a Southern piedmont Forest. Atlanta, Georgia, unpublished Senior Honors Thesis, Emory University, 53 p.

Toteva, T.D. 2006, Semblance based imaging of scatters with an application in identifying near-surface heterogeneities, unpublished Ph.D. Thesis, Georgia Institute of Technology, Earth and Atmospheric Sciences, 151 p.

Tromp-van Meerveld, H.J. 2004, Hillslope Hydrology: From Patterns to Processes. Unpublished Ph.D. Thesis, Oregon State University, Forest Engineering, 236 p.

Zumbuhl, A.T. 1998, Spatial modeling of soil depth and landscape variability in a small, forested catchment. Syracuse, New York, unpublished M.S. Thesis, State University of New York College of Environmental Science and Forestry, 199 p.