

Curriculum Vitae

MICHAEL O'DRISCOLL

Associate Professor, Department of Coastal Studies
204 Graham Building, East Carolina University,
Greenville, North Carolina 27858
Ph: 252.328.5578 • odriscollm@ecu.edu

EDUCATION

Ph.D. Forest Resources, 2004
The Pennsylvania State University, University Park, PA
Stream-Groundwater Interactions in a Carbonate Watershed, Central PA, USA

M.S. Geosciences, 2000
The Pennsylvania State University, University Park, PA
Methods for Determining Wetland Recharge Sources in the Vicinity of a Wastewater Irrigation Site

M.E.P.C. (Environmental Pollution Control), 1999
The Pennsylvania State University, University Park, PA
The Effects of Cold Temperatures on the Slow-Rate Land Application of Wastewater

B.S. Geology (Cum Laude), 1996
University of Connecticut, Storrs, CT
The Correlation of West Rock Sill with the Mesozoic Flows and Dikes of the Hartford Basin, CT

PROFESSIONAL EXPERIENCE

2018-present Associate Professor, Coastal Studies, East Carolina University
2018-present Adjunct Associate Professor, Geological Sciences, East Carolina University
2018-present Adjunct Visiting Associate Professor of Water Resources, Nicholas School of the Environment, Duke University
2016-2018 Visiting Assistant Professor of Water Resources, Nicholas School of the Environment, Duke University
2013-2016 Director, Coastal Water Resources Center, East Carolina University
2012- 2013 Deputy Director, Coastal Water Resources Center, East Carolina University
2011-2018 Associate Professor, Geological Sciences, East Carolina University
2010-2014 Director, Hydrogeology & Environmental Geol. Certificate, East Carolina University
2005- 2011 Assistant Professor, Geological Sciences, East Carolina University
2004 Instructor, Geological Sciences, East Carolina University
2003 Instructor, Environmental Geology, The Pennsylvania State University, Harrisburg, PA
1997 Hygenix, Inc. (Stamford, CT), Environmental Consultant
1990-1994 US Navy, USS America CV-66 (Norfolk, VA), Petty Officer 3rd Class (E-4)/ Aviation Structural Mechanic. Honorable Discharge. Awarded the National Defense Service Medal, Southwest Asia Service Medal with 3 Bronze Stars, Navy Unit Commendation, Armed Forces Expeditionary Medal, Sea Service Deployment Ribbon with 2 Bronze Stars, and the Kuwait Liberation Medal

PUBLICATIONS

Refereed Journal Articles and Book Chapters

2018 Iverson, G., Humphrey, C., O'Driscoll, M., Sanderford, C., Jernigan, J., Serozi, B. Nutrient exports from watersheds with varying septic system densities in the North Carolina Piedmont. *Journal of Environmental Management*. Vol. 211: 206-217.

- 2018 Humphrey, C. Blackmon, J., Kelley, T., **O'Driscoll, M.**, and Iverson, G. Environmental health threats associated with drainage from a coastal urban watershed. *Environment and Natural Resources Research*; Vol. 8, No. 1; 52-60.
- 2017 Iverson, G., Humphrey, C., Postma, M., **O'Driscoll, M.**, Manda, A. and Finley, A.J. Influence of sewer versus septic systems on watershed exports of *E. coli*. *Water, Air, and Soil Pollution* 228: 237.
- 2017 Humphrey, C., Iverson, G., and **O'Driscoll, M.** Nitrogen treatment efficiency of a large onsite wastewater system in relation to water table dynamics. *Clean Soil Air Water*, Vol. 45, No. 12; DOI: 10.1002/clea.201700551.
- 2016 Humphrey, C., Jernigan, J., Iverson, G., Serozi, B., **O'Driscoll, M.**, Pradhan, S., and Bean, E. Field evaluation of nitrogen treatment by conventional and single-pass sand filter onsite wastewater systems in the North Carolina Piedmont. *Water, Air, and Soil Pollution* 227:255.
- 2016 Humphrey, C., Jernigan, J., Iverson, G., Serozi, B., **O'Driscoll, M.**, Pradhan, S., and Bean, E. Phosphate treatment by onsite wastewater systems in nutrient sensitive watersheds of North Carolina's Piedmont. *Water Science and Technology*: 74(7):1527-1538.
- 2015 Humphrey, C., **O'Driscoll, M.**, and Harris, J. **Chapter 12:** Spatial distribution of fecal indicator bacteria in groundwater beneath two large on-site wastewater treatment systems. P. 297-322. In: *Water Treatment in Developed and Developing Nations: An International Perspective*. Ed. V. Monsalvo.
- 2015 Humphrey, C., Pradhan, S., Bean, E., **O'Driscoll, M.**, and Iverson, G. Preliminary evaluation of a permeable reactive barrier for reducing groundwater nitrate transport from a large onsite wastewater system. *American Journal of Environmental Sciences* 11(4):216-226.
- 2015 Iverson, G., **O'Driscoll, M.**, Humphrey, C., Manda, A., and Anderson-Evans, E. Wastewater nitrogen contributions to coastal plain watersheds, North Carolina, USA. *Water, Air, and Soil Pollution* Oct.:226-325.
- 2015 Humphrey, C., Finley, A., **O'Driscoll, M.**, Manda, A. and Iverson, G. Groundwater and stream *E. coli* concentrations in Coastal Plain watersheds served by onsite wastewater and a municipal sewer treatment system. *Water Science and Technology* doi:10.2166/wst.2015.411.
- 2015 Humphrey, C., Anderson-Evans, E., **O'Driscoll, M.**, Manda, A., and Iverson, G. Comparison of phosphorus concentrations in Coastal Plain watersheds served by onsite wastewater treatment systems and a municipal sewer treatment system. *Water, Air, and Soil Pollution* 226:1-18.
- 2015 Schneeberger, C., **O'Driscoll, M.**, Humphrey, C., Henry, K., Deal, N., Seiber, K., Hill, V. and Zarate-Bermudez, M. Fate and transport of enteric microbes from septic systems in a coastal watershed. *Journal of Environmental Health* 77(9):22-30.
- 2014 **O'Driscoll, M.**, Humphrey, C., Deal, N., Lindbo, D. and Zarate-Bermudez, M. Meteorological influences on nitrogen dynamics of a coastal onsite wastewater treatment system. *Journal of Environmental Quality* 43(6):1873-85.
- 2014 Humphrey, C., Chaplinski, N., **O'Driscoll, M.**, and Richards, S. Nutrient and *E. coli* attenuation in a constructed stormwater wetland in the North Carolina Coastal Plain. *Environment and Natural Resources Research* 4(3):12-22.
- 2014 Del Rosario, K., Mitra, S., Humphrey, C., and **O'Driscoll, M.** Detection of pharmaceuticals and other personal care products in groundwater beneath and adjacent to onsite wastewater treatment systems in a coastal plain shallow aquifer. *Science of the Total Environment* 487:216–223.
- 2014 Humphrey, C., **O'Driscoll, M.**, and Harris, J. Spatial distribution of indicator microorganisms in groundwater beneath two large on-site wastewater systems. *Water* 6:602-619.
- 2014 Del Rosario, K., Humphrey, C., Mitra, S., **O'Driscoll, M.** Nitrogen and carbon dynamics beneath onsite wastewater treatment systems in Pitt County, North Carolina. *Water Science and Technology* 69(3):663-671.
- 2014 Humphrey, C., **O'Driscoll, M.**, Deal, N., and Lindbo, D. Fate and transport of phosphate from an on-site wastewater system in Beaufort County, North Carolina. *Journal of Environmental Health* 76(6):28-33.

- 2013 Humphrey, C., **O'Driscoll, M.**, Deal, N., Lindbo, D., and Zarate-Bermudez, M. On-site wastewater system nitrogen contributions to groundwater in coastal North Carolina. *Journal of Environmental Health* 76(5):16-22.
- 2013 Harris, J., Humphrey, C., and **O'Driscoll, M.** Transport of indicator microorganisms from an onsite wastewater system to adjacent stream. *Universal Journal of Environmental Research and Technology* 3(3):423-426.
- 2012 Humphrey, C., **O'Driscoll, M.**, Armstrong, M. Onsite wastewater system nitrogen loading to groundwater in the Newport River watershed, North Carolina. *Environment and Natural Resources Research* 2(4):70-79.
- 2012 **O'Driscoll, M.** The 1909 North Carolina Drainage Act and agricultural drainage effects in eastern North Carolina. *Journal of the North Carolina Academy of Science* 128 (3/4): 59-73.
- 2012 Humphrey, C., Harris, J., and **O'Driscoll, M.** Evaluation of water table dynamics in relation to soil morphological indicators of seasonal wetness. *Universal Journal of Environmental Research and Technology* 2(4): 286-292.
- 2011 Humphrey, C. and **O'Driscoll, M.** Biogeochemistry of groundwater beneath on-site wastewater systems in a coastal watershed. *Universal Journal of Environmental Research and Technology* 1(3): 320-328.
- 2011 Humphrey, C., and **O'Driscoll, M.** Cumulative saturation of low chroma soil colors and shallower depths: Implications for on-site wastewater system design. *International Journal of Soil Science* 6(4):249-258.
- 2011 Humphrey, C., and **O'Driscoll, M.** Evaluation of soil colors as indicators of the seasonal high water table in coastal North Carolina. *International Journal of Soil Science* 6 (2): 103-113.
- 2011 Humphrey, C., **O'Driscoll, M.**, and Zarate, M. Evaluation of on-site wastewater system E. coli contributions to shallow groundwater in coastal North Carolina. *Water Science and Technology* 63(4):789-795.
- 2010 Humphrey, C., **O'Driscoll, M.**, and Zarate, M. Controls on groundwater nitrogen contributions from on-site wastewater systems in coastal North Carolina. *Water Science and Technology* 62(6):1448-55.
- 2010 **O'Driscoll, M.**, Clinton, S., Jefferson, A., Manda, A., and McMillan, S. Urbanization effects on watershed hydrology and in-stream processes in the southern United States. *Water* 2: 605-648.
- 2010 **O'Driscoll, M.**, Johnson, P., and Mallinson, D. Geological controls and effects of floodplain asymmetry on river-groundwater interactions in the southeastern coastal plain, USA. *Hydrogeology Journal* 18: 1265-1279.
- 2010 Harnsberger, D. and **O'Driscoll, M.** The influence of urban channel incision and water table decline on floodplain groundwater nitrogen dynamics; Greenville, NC. *Journal of Environmental Hydrology* 18 (6):1-22.
- 2010 **O'Driscoll, M.**, and DeWalle, D. Seeps regulate stream nitrate concentration in a forested Appalachian catchment. *Journal of Environmental Quality* 39:420-431.
- 2009 **O'Driscoll, M.**, Soban, J., and Lecce, S. Stream channel enlargement response to urban land cover in small Coastal Plain watersheds, North Carolina. *Physical Geography* 30(6): 528-555.
- 2009 Hardison, E., **O'Driscoll, M.**, DeLoatch, J., Howard, R. and Brinson, M. Urban land-use, channel incision, and riparian water table decline along Inner Coastal Plain streams, North Carolina. *Journal of the American Water Resources Association* 45(4):1032-1046.
- 2008 **O'Driscoll, M.** and Parizek, R. Geological controls on seasonal pool hydroperiod in a karst setting. *Wetlands* 28 (4): 1004–1017.
- 2006 **O'Driscoll, M.** and DeWalle, D. Stream-air temperature relations to classify stream-ground water interactions in a karst setting, central Pennsylvania, USA. *Journal of Hydrology* 329:140-153.
- 2005 **O'Driscoll, M.**, DeWalle, D., McGuire, K.J., and Gburek, W.J. Seasonal ¹⁸O variations and groundwater recharge for three landscape types in central Pennsylvania, USA. *Journal of Hydrology* 303:108-124.
- 2003 **O'Driscoll, M.** and Parizek, R.R. The hydrological catchment area of a chain of karst wetlands in central Pennsylvania. *Wetlands* 23 (1):171-179.

Conference Proceedings

- 2010 Humphrey, C., Deal, N., **O'Driscoll, M.**, and Lindbo, D. Characterization of on-site wastewater nitrogen plumes in shallow coastal aquifers, North Carolina. *World Environmental and Water Resources Congress 2010*: 949-958.
- 2008 **O'Driscoll, M.** and DeWalle, D.R. Groundwater seepage and dissolved organic carbon flux in an Appalachian Catchment. American Water Resources Association Conference. *Riparian Ecosystems and Buffers: Working at the Water's Edge*: 361-366.
- 2006 **O'Driscoll, M.**, S.R. Riggs, D.V. Ames, M. M. Brinson, D.R. Corbett, and D. J. Mallinson. Geomorphic, ecologic, and hydrologic dynamics of Merchants Millpond, North Carolina. The American Society of Agricultural and Biological Engineers. *International Conference on Hydrology and Management of Forested Wetlands*: 423-431.
- 2005 DeWalle, D.R., Buda, A.R., Eismeier, J.A., Sharpe, W.E., Swistock, B.R., Craig, P.L., and **O'Driscoll, M.** Nitrogen cycling on five headwater forested catchments in mid-Appalachians of Pennsylvania. International Association of Hydrological Sciences Conference. *Dynamics and Biogeochemistry of River Corridors and Wetlands*: 29-36.
- 2002 **O'Driscoll, M.** and DeWalle, D. Episodic stream/aquifer interactions in a Pennsylvania urban/agricultural watershed. American Water Resources Association Conference. *Ground Water/Surface Water Interactions*: 535-540.

Web-Based Publications

- 2010 Hardison, E.C., **O'Driscoll, M.**, DeLoatch, J.P., Howard, R.J. and Brinson, M.M. US Environmental Protection Agency: The Causal Analysis/Diagnosis Decision Information System (CADDIS) webpage. CADDIS Volume 2: Sources, Stressors & Responses: Urbanization & riparian hydrology module. at: http://www.epa.gov/caddis/ssr_urb_rip3.html
- 2004 **O'Driscoll, M.**, and DeWalle, D. Stream-air temperature relationships as indicators of ground water inputs. *Watershed Update* 2 (6). at: <http://www.awra.org/committees/techcom/watershed/watershed.html>

Reports

- 2018 **O'Driscoll, M.**, Skibieli, C., Hillman, I. and Humphrey, C. Existing Data for Evaluating Coastal Plain Ecological Flows in the Albemarle-Pamlico National Estuary Partnership (APNEP) Region. Albemarle-Pamlico National Estuary Partnership.
- 2016 D'Amato, V., and US EPA, Chesapeake Bay Onsite Wastewater Nutrient Attenuation Expert Review Panel (16 authors including **O'Driscoll, M.**). Nutrient Attenuation in Chesapeake Bay Watershed Onsite Wastewater Treatment Systems. US EPA, Chesapeake Bay Program Office.
- 2016 **O'Driscoll, M.**, Watson, J., Trevisan, A., Skibieli, C., Hall, N., and Paerl, H. Investigation of nutrient fluxes and sources in Long Lake watershed. Meher Spiritual Center, Myrtle Beach, SC.
- 2015 Humphrey, C., **O'Driscoll, M.**, Bean, E., Jernigan, J., Serozi, B., et al. Onsite Wastewater System Nutrient Contributions to Water Resources in the Piedmont of North Carolina., submitted to NC Department of Health and Human Services.
- 2015 Bean, E., **O'Driscoll, M.**, & Humphrey, C., Greens Mill Run Water Quality Monitoring., submitted to Hazen and Sawyer and City of Greenville.
- 2015 Bean, E., **O'Driscoll, M.**, & Humphrey, C., Swift Creek Water Quality Monitoring., submitted to WK Dickson and the City of Greenville.
- 2013 Humphrey, C., **O'Driscoll, M.**, Mallinson, D., and Hardison, S. Geophysical and water quality characterization of on-site wastewater plumes. North Carolina Water Resources Research Institute Report. 86 p.
- 2013 Humphrey, C., **O'Driscoll, M.**, and Manda, A. On-site wastewater and centralized sewer system nutrient loadings to surface waters in Pitt County, North Carolina. Report to the North Carolina Department of Environment and Natural Resources. 154 p.
- 2012 **O'Driscoll, M.**, Walker, M., Humphrey, C., Jacobs-Deck, H., and Bean, E. Water quality restoration for Meeting House Branch. Plan and Implementation Report to the Office of the NC Attorney General- Ecosystem Enhancement Grant Program. 212 p.
- 2011 **O'Driscoll, M.**, C. Humphrey, S. Mitra, C. Rochelle, N. Deal, D. Lindbo, V. Hill, C. Schneeberger, S. Hardison, M. Smith, R. Howard, K. Henry, and S. Thieme. Onsite

wastewater treatment adjacent to a nutrient-sensitive estuary. Report to the National Environmental Health Association and Centers for Disease Control and Prevention. 68 p.

2010 **O'Driscoll, M.**, Humphrey, C., Deal, N., Henry, K., Thieme, S., Lindbo, D. Kelley, T. Building capacity to investigate the link between wastewater, groundwater contamination, and human health. Report to the National Environmental Health Association and Centers for Disease Control and Prevention. 232 p.

2010 Seramur, K., Owens, D., Battle, D., **O'Driscoll, M.**, Love, A., Thacker, J., and Pomfret, J. Archival research and geoarchaeology investigation to prepare a cultural resource management plan for 12,000 acres between Wright River and the mouth of the Savannah River, Jasper County, South Carolina. Report to the Georgia Department of Transportation. 229 p.

2008 Culver, S., Bin, O., Brewer, J., Christian, R., Corbett, D., Curtis, S., Edwards, B., King, L., Long, P., Mallinson, D., Novick, L., **O'Driscoll, M.**, Riggs, S., and Rummel, J. Global warming and coastal North Carolina. A report to Sen. Marc Basnight. 32 p.

2008 **O'Driscoll, M.**, Hardison, E., Rheinhardt, R., and Brinson, M. Developing reference data to identify and calibrate indicators of riparian ecosystem condition in urban coastal plain landscapes in North Carolina. Report to the Ecosystem Enhancement Program, North Carolina Department of Environment and Natural Resources. 109 p.

2008 **O'Driscoll, M.**, Hardison, E., Brinson, M., DeLoatch, J., and Howard, R. Impervious area effects on groundwater inputs to Coastal Plain streams. North Carolina Water Resources Research Institute Research Report. 47 p.

2006 **O'Driscoll, M.**, Mallinson, D.J., and Johnson, P.K. 2006. Characterization of surface water/ground water interactions along the Tar River, NC using ground penetrating radar. North Carolina Water Resources Research Institute Research Report. 90 p.

2005 Riggs, S.R., Ames, D.V., Brinson, M.M., Corbett, D.R., Mallinson, D.J., and **O'Driscoll, M.** Geomorphic, sedimentologic, ecologic, and hydrologic dynamics of Merchants Millpond State Park: North Carolina. Report to the North Carolina Department of Environment and Natural Resources. 117 p.

Other Publications

2009 Leonard, L., Dorton, J., Culver, S., Christian, R., **O'Driscoll, M.**, et al. (16 others). Coastal and estuarine observing in North Carolina: Integrating observations and science to understand our coastal environment. White paper published by East Carolina University, Greenville, NC. 30 p.

2008 **O'Driscoll, M.** Ground water and surface water: One indivisible resource. Currents, Fall Issue, p. 7. Pamlico-Tar River Foundation. Washington, NC.

2008 **O'Driscoll, M.** Streams and sprawl: Urbanization and channel enlargement in the Coastal Plain. Cypress News 33(10):3. North Carolina Chapter - Sierra Club.

2008 **O'Driscoll, M.** Land-use effects on Coastal Plain floodplain function. Cypress News 34(1):3. North Carolina Chapter - Sierra Club.

AWARDS

2014 ECU Engagement and Outreach Scholar

2013 Pamlico-Tar River Foundation Great Blue Heron Award

2011 ECU Center for Natural Hazards Research Award

2010 ECU Research Development Award (w/ Humphrey and Mallinson)

2007 ECU Harriot College of Arts and Sciences-College Research Award

2006 ECU Research Development Award (w/ Zarate and Humphrey)

1996 John B. Lucke Award for Outstanding Senior in Geology (University of Connecticut)

GRANTS TOTAL GRANT FUNDING: \$1,879,060

2018 Moysey, S., Cooper, H., **O'Driscoll, M.**, and Humphrey, C. National Science Foundation–Hydrological Sciences- RAPID Program. Acquisition of Critical Data for the Validation of Watershed Response Models in Eastern North Carolina. \$50,000.

- 2017 Humphrey, C., Manda, A., Etheridge, R., Peralta, A., Bean, E., and **O'Driscoll, M.** NC-DEQ/US EPA 319 Grant Program. Reducing Non Point Sources of Pollution and Improving Water Quality in the Lick Creek Watershed. \$143,050.
- 2016 **O'Driscoll, M.**, Watson, J., & Humphrey, C. Understanding nutrient fluxes and sources into Long Lake watershed, South Carolina. Meher Spiritual Center, Myrtle Beach, SC. \$23,766.
- 2016 **O'Driscoll, M.**, Skibiell, C., and Humphrey, C. Action plan to compile existing data for evaluating ecological flows in the APNEP region. Albemarle Pamlico National Estuarine Partnership \$18,435.
- 2016 **O'Driscoll, M.**, Bean, E., Humphrey, C., and Peralta, A. The effects of stormwater control measures on Town Creek: Quantifying water quality improvements and stormwater reduction in an impaired urban watershed. NC-Environmental Enhancement Grant Program \$110,209.
- 2015 **O'Driscoll, M.**, Humphrey, C., and Watson, J. Investigation of nutrient fluxes and sources in Long Lake watershed, South Carolina. Meher Baba Spiritual Center, Inc. \$13,154.
- 2014 **O'Driscoll, M.**, Bean, E., and Humphrey, C. City of Greenville- Swift Creek watershed characterization. W.K. Dickson \$43,154.
- 2014 Bean, E., **O'Driscoll, M.**, and Humphrey, C. City of Greenville- Greens Mill Run watershed characterization. Hazen and Sawyer \$41,386.
- 2014 Humphrey, C., Bean, E., and **O'Driscoll, M.** Lower White Oak River – watershed restoration. NC DENR/EPA 319 Grant Program. \$101,570.
- 2014 Humphrey, C., Bean, E., and **O'Driscoll, M.** Lick Creek watershed restoration via improved wastewater management. NC DENR/EPA 319 Grant Program. \$162,000.
- 2014 **O'Driscoll, M.** A River Reborn- The history and future of Town Creek. ECU Engagement and Outreach Scholars Academy. \$5,000.
- 2014 Humphrey, C., **O'Driscoll, M.**, and Bean, E. Permeable barrier study. North Carolina Department of Health and Human Services. \$3,498.
- 2014 Humphrey, C., **O'Driscoll, M.**, and Bean, E. Nutrient transport from onsite wastewater systems in the Piedmont of North Carolina. North Carolina Department of Health and Human Services. \$21,800.
- 2014 **O'Driscoll, M.** Getting our feet wet! Improving water resources education at ECU. Teaching Grant Award. \$6,000.
- 2014 **O'Driscoll, M.**, Humphrey, C., Bean, E., and Woods, T. Electromagnetic induction to delineate wastewater migration in coastal aquifers. ECU Interdisciplinary Research Collaboration Award. \$10,000.
- 2014 Bean, E., **O'Driscoll, M.**, and Humphrey, C. Evaluating impacts of package treatment plant efficiency on coastal water quality. ECU Interdisciplinary Research Collaboration Award. \$12,000.
- 2013 Jacobs-Deck, Bean, E., **O'Driscoll, M.**, Humphrey, C. NC-Environmental Enhancement Grant 2013. Water Quality Restoration and Reduction of Stormwater Runoff via BMP installation in Greens Mill Run Watershed. \$101,485.
- 2012 Humphrey, C., **O'Driscoll, M.**, and Mallinson, D. North Carolina Water Resources Research Institute. Non-intrusive geophysical characterization of wastewater plumes in coastal North Carolina. \$30,000.
- 2011 **O'Driscoll, M.** Center for Natural Hazards Research Award. \$4,500.
- 2010 **O'Driscoll, M.**, Humphrey, C. and Mitra, S. Onsite wastewater treatment adjacent to a nutrient-sensitive estuary. Centers for Disease Control and Prevention. \$67,316.
- 2010 Humphrey, C., **O'Driscoll, M.**, and Mallinson, D. Division of Research and Graduate Studies 2010 Research Development Grant Program. Non-intrusive geophysical characterization of wastewater plumes in coastal North Carolina. \$20,000.
- 2010 Humphrey, C., **O'Driscoll, M.**, and Manda, A. North Carolina Department of Environment and Natural Resources. On-site wastewater and centralized sewer system nutrient loadings to surface waters in Pitt County, NC. \$83,473.
- 2010 **O'Driscoll, M.**, Humphrey, C., Brinson, M. NC-Environmental Enhancement Grant 2010. Water quality restoration for Meeting House Branch. \$33,073.
- 2009 **O'Driscoll, M.**, Zarate, M., Humphrey, C. and Kelley, T. Building capacity to investigate the link between wastewater, groundwater contamination, and human health. Centers for Disease

- Control and Prevention. \$90,934.
- 2009 **O'Driscoll, M.**, and Mallinson, D. Geophysical investigation of river dredge material along the Savannah River, Jasper Co., SC. Georgia DOT. \$6,000.
- 2009 Miles, R., Overton, A., Morehead, A., and **O'Driscoll, M.** East Carolina University Reach Up program for science education. Ribbon of Hope through GlaxoSmithKline. \$25,000.
- 2008 Culver, S., Riggs, S., Kruse, J., White, N., Young, R. Corbett, D., Mallinson, D., Walsh, J., **O'Driscoll, M.**, Ames, D., Clough, L., West, T., Landry, C., Johnson, J., Vogelsong, H., et al. UNC System – Competitiveness Initiative. North Carolina coastal hazards: Economic implications of severe storms and sea-level rise. \$288,694.
- 2007 **O'Driscoll, M.** and Brinson, M. North Carolina Water Resources Research Institute Program. Stable isotope tracers to quantify impervious area effects on Coastal Plain streams. \$49,910.
- 2007 **O'Driscoll, M.** The Influence of streamflow and storm runoff on nutrient transport to an estuary. Harriot College Research Award. \$6,000.
- 2007 Zarate, M., **O'Driscoll, M.**, Humphrey, C. The effects of on-site wastewater systems on shallow groundwater quality in coastal North Carolina. Division of Research and Graduate Studies 2006 Research Development Grant Program. \$25,000.
- 2006 Brinson, M.M., Rheinhardt, R.D., and **O'Driscoll, M.** Development and training for reach and watershed assessment protocols in Coastal Plain North Carolina. North Carolina Department of Environment and Natural Resources, Ecosystem Enhancement Program. \$193,220.
- 2005 **O'Driscoll, M.** and Mallinson, D.J. North Carolina Water Resources Research Institute Program. Characterization of surface water/ground water interactions along the Tar River using ground penetrating radar. \$45,129.
- 2005 **O'Driscoll, M.** East Carolina University Student Computer and Technology Fee Innovative Project. An outdoor field laboratory for hydrology at Otter Creek Natural Area and the Voice of America site. \$13,973.
- 2005 **O'Driscoll, M.** East Carolina University Research/Creative Activity Grants. Land-use effects on river-groundwater interactions in the Coastal Plain of North Carolina. \$18,331.
- 2003 **O'Driscoll, M.** and DeWalle, D.R. 2003. Stream-groundwater interactions in a carbonate watershed. College of Agricultural Science Competitive Grant Program for Graduate Students, Penn State University. \$2,000.
- 2001 **O'Driscoll, M.**, DeWalle, D.R., and Parizek, R.R. 2001. Tracers of surface water-groundwater interactions in an urban, karst watershed. Center for Environmental Chemistry and Geochemistry Research Initiation Grant, Penn State University. \$10,000.

TEACHING EXPERIENCE

Undergraduate (ECU and PSU- Harrisburg)

Dynamic Earth (ECU); Environmental Geology (ECU and PSU); Hydrogeology and the Environment (ECU); Summer Field Course in Geology (ECU); (Honors) Coastal Water Resources: Exploring Sustainable Solutions for the 21st Century (ECU)

Graduate (ECU and Duke University)

The Geologic Component of Environmental Science (ECU); Geohydrology of Drainage Basins (ECU); Landscape Hydrology (Duke University); Aquatic and Wetland Field Skills (Duke University); Hydrologic and Environmental Data Analysis (Duke University); Water Pollution (Duke University); Groundwater and the Environment (Duke University)

GRADUATE ADVISING (14 M.S., 2 M.E.M. (DUKE UNIVERSITY), AND 1 PH.D. GRADUATES)

- 2018 **Morgan Rudd.** An evaluation of water quality dynamics in High Rock Lake, NC to support nutrient criteria development. (MEM). Duke University.
- 2018 **Katie DiPrete.** Evaluating the use of periphyton as a water quality indicator in freshwater Wadeable streams in North Carolina. (MEM). Duke University.

- 2017 **Jeremy Robbins**, Geol. Sciences (M.S.). East Carolina University. Effects of Urbanization on Stream-Riparian Zone Connection along Low Order Coastal Plain Streams of North Carolina. (co-advisor w/ E. Bean)
- 2016 **Nick Mahoney**, Geol. Sciences (M.S.). East Carolina University. Nutrient and bacteria dynamics from package treatment plants in coastal Carteret County, North Carolina. (co-advisor w/ E. Bean)
- 2016 **Adam Trevisan**, Geol. Sciences (M.S.). East Carolina University. Delineating wastewater contaminant plumes from on-site wastewater treatment systems in the North Carolina Coastal Plain using electromagnetic induction.
- 2015 **Sarah Hardison**, Geol. Sciences (M.S.). East Carolina University. Geophysical characterization of onsite wastewater treatment system effects on groundwater quality, eastern North Carolina.
- 2015 **Robert Howard**, Geol. Sciences (M.S.). East Carolina University. Modeling the effects of urban land-use on stormwater runoff response in the Coastal Plain setting.
- 2013 **Matthew Smith**, Geol. Sciences (M.S.). East Carolina University. Geophysical detection of on-site wastewater plumes in the North Carolina Coastal Plain, USA (co-advisor w/ D. Mallinson)
- 2013 **Guy Iverson**, Geol. Sciences (M.S.). East Carolina University. A comparison of watershed nitrogen loading and watershed nitrogen exports from on-site wastewater treatment systems and centralized sewer systems in the North Carolina Coastal Plain.
- 2012 **Keaton Henry**, Geol. Sciences (M.S.). East Carolina University. Occurrence of *Escherichia coli* (*E. coli*) and *Enterococcus* in shallow groundwater adjacent to onsite wastewater treatment systems in Washington, North Carolina.
- 2012 **Cassandra Horton**, Geol. Sciences (M.S.), East Carolina University. Urban stream channel incision and effects on soil organic matter in the riparian zone.
- 2009 **Charles Humphrey**, Coastal Resources Management (Ph.D.), East Carolina University. Controls on wastewater treatment and shallow groundwater quality in coastal North Carolina.
- 2009 **David Harnsberger**, Geol. Sciences (M.S.), East Carolina University. Urban channel incision, water table decline, and nitrate attenuation in floodplain aquifers, Greenville, NC.
- 2009 **John DeLoatch**, Geol. Sciences (M.S.), East Carolina University. Urban channel incision effects on stream-groundwater interactions in the North Carolina Coastal Plain.
- 2007 **Kolt Johnson**, Geol. Sciences (M.S.), East Carolina University. Characterization of surface water/ground water interactions along a Coastal Plain river.
- 2007 **Jason Soban**, Geol. Sciences (M.S.), East Carolina University. Stream channel response to urban land use in the inner Coastal Plain of North Carolina.
- 2007 **Heather Hutchinson**, Geol. Sciences (M.S.), East Carolina University. Hydrologic and isotopic response of low-order Coastal Plain streams to urban land-use.

GRADUATE ADVISING (CURRENT STUDENTS)

- Guy Iverson**. Watershed nitrogen exports from on-site wastewater treatment systems. Coastal Resources Management (Ph.D.). East Carolina University. (co-advisor w/ C. Humphrey)
- Ryan Bond**. Water quality impairment and restoration of the Lower White Oak River. Geol. Sciences (M.S.). East Carolina University.
- Lori Farley**. Effects of urbanization on Coastal Plain streams. Geol. Sciences (M.S.). East Carolina University.
- Shea McMurry**. Water quality impairment and restoration of a buried urban stream, Town Creek. Geol. Sciences (M.S.). East Carolina University.
- Paul Mays**. Nutrient inputs to Long Lake, SC. Geol. Sciences (M.S.). East Carolina University.
- Isabel Hillman**. SPARROW modeling of nutrient and sediment transport to the Albemarle-Pamlico Basin. (MEM). Duke University.

INVITED TALKS

- 2018 “What’s the use? Tracking groundwater use in North Carolina. (co-presented with Craig Caldwell). North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 15.
- 2017 “Water resources data for evaluating Coastal Plain ecological flows in the Albemarle-

- Pamlico Basin” The Albemarle Pamlico National Estuarine Partnership Annual Conference, Raleigh, NC. Nov. 1.
- 2017 “Effects of wastewater and altered runoff regimes on streams and restoration efforts” Duke University, Water Resources Management Seminar. Durham, NC. Nov. 10.
- 2017 “Is onsite wastewater a hidden source of nitrogen to coastal surface waters?” North Carolina Lake Management Society Meeting. Wilmington, NC. October 19.
- 2017 “Emergent trends in water use in the North Carolina Coastal Plain” Elon University, Cape Fear River Forum. Sept. 26.
- 2017 “Water use in the North Carolina Coastal Plain” NC Department of Environmental Quality and the Albemarle Pamlico National Estuarine Partnership, Raleigh, NC. May 9.
- 2017 “Are septic systems a hidden source of nutrients to coastal waterways?” Duke University, Nicholas School of the Environment, Earth and Ocean Sciences Seminar Series. Durham, NC. Feb. 24.
- 2016 “Tracking of on-site wastewater nitrogen contributions to surface waters.” North Carolina Soil Science Society Annual Conference. Raleigh, NC. Jan. 19.
- 2015 “Climate change, sea level rise and onsite wastewater challenges in coastal communities.” 31st Annual Onsite Water Protection Conference. Raleigh, NC. October 13.
- 2015 “Septic system nutrient inputs to surface water and groundwater systems.” Urban Water Consortium. Orange Water and Sewer Authority, Carrboro, NC. September 4.
- 2015 “Septic system effects on surface and groundwater supplies.” Water Resources Summit, New Bern, NC. August 28.
- 2015 “Tracking on-site wastewater nitrogen contributions to coastal waters: from site to watershed-scale.” Trinity College, Dublin, Ireland. July 30.
- 2015 “Urbanization and the City of Greenville’s streams.” Neuse River Guardians Environmental Symposium, Greenville, NC. April 20.
- 2015 “Tracking on-site wastewater nitrogen contributions to coastal waters: from site to watershed-scale.” US Environmental Protection Agency, Chesapeake Bay Program, Annapolis, MD. Feb. 23.
- 2013 “Wastewater nitrogen exports to coastal waters.” Northeastern Environmental Health District Meeting, Greenville, NC. Oct. 25.
- 2013 “Previously used water.” Central Connecticut State University, Dept. of Physics and Earth Sciences, New Britain, CT. Feb. 28.
- 2012 “Water quality patterns in Meeting House Branch Watershed” Swift Creek Watershed Workshop, Pitt Community College, Greenville, NC. July 26.
- 2012 “Quantifying human impacts to surficial aquifers: Implications for water resources management.” Montclair State University, Passaic River Institute, Montclair, NJ. March 29.
- 2012 “Shallow aquifers and their connection to surface water: Implications for septic systems.” 28th Annual NC Onsite Water Protection Conference. Hickory, NC. Oct. 17.
- 2011 “Shallow aquifers and their connection to surface waters.” R.C. Heath Symposium- Aquifer Management in the Mid-Atlantic States. American Ground Water Trust. Greenville, NC. Oct. 3-4.
- 2011 “Streams and sprawl: Riparian groundwater response to urbanization along lowland streams of North Carolina, USA.” University College-Dublin, Dublin, Ireland. March 7.
- 2010 “Urbanization effects on low-order riparian groundwater in the Coastal Plain of North Carolina.” American Geophysical Union Fall Meeting, San Francisco, CA. Dec. 13-17.
- 2010 “Water, water everywhere, but do we have enough here in eastern North Carolina?” The Cypress Group, North Carolina Chapter of the Sierra Club and the Pamlico-Tar River Foundation. Greenville, NC. Feb. 8.
- 2009 “Urban channel incision and riparian drought along Coastal Plain streams.” US Geological Survey, Water Science Center. Raleigh, NC. Jan. 28.
- 2008 “Urban sprawl and hydrogeomorphic responses in small inner Coastal Plain catchments.” Water Resources Research Institute Annual Meeting. Raleigh, NC. Oct.8-9.
- 2008 “How does sprawl affect streams? Hydrogeomorphic responses to urbanization in the Coastal Plain.” Geography & Geology Department, UNC – Wilmington. Wilmington, NC. Nov. 7.
- 2008 “Urbanization and the hydrologic response to storm events.” NC Coastal Hazards: The

- Implications of Severe Storms and Sea Level Rise on Coastal North Carolina. UNC- Coastal Studies Institute Workshop. Jockey's Ridge State Park, NC. May 28.
- 2008 "Riparian hydrologic drought -The effects of urbanization on Coastal Plain stream/groundwater interactions." University of South Florida, Geology, Tampa, FL. April 18.
- 2007 "Vernal pools in karst terrains: A view from the subsurface." Society of Wetland Scientists Annual Meeting 2007. Sacramento, CA. June 10-15.
- 2007 "Vernal pools in karst terrains: A view from the subsurface." Department of Geology and Geography, West Virginia University. Morgantown, WV. Sept. 20.
- 2007 "Vernal pools in karst terrains: A view from the subsurface." Cooperative Wetlands Center, Pennsylvania State University, University Park, PA. Sept. 12.
- 2007 "Vernal pools in karst terrains: A view from the subsurface." Department of Geology, Bucknell University. Lewisburg, PA. Sept. 13.
- 2007 "Geologic controls on river/groundwater interactions along the Tar River. Geology Department, Appalachian State University, Boone, NC. Feb.16.
- 2007 "Subsurface geologic controls on pocosin-groundwater interactions and implications for wetland mitigation." North Carolina Geologic Survey and Department of Environment and Natural Resources. Raleigh, NC. Jan. 12.
- 2007 "Land-use effects on water resources." U.S./Central Asia Environmental Science Conference, Almaty, Kazakhstan. Nov. 14-16.
- 2006 "Coastal Plain wetlands and river/groundwater interactions. Seminar- Kustem University, Malaysia (videoconference). July 12.
- 2006 "Land-use and climate change effects on coastal water resources." Coastal Studies Institute Meeting. US Army Corps Field Research Facility, Duck, NC. Feb. 11.

CONFERENCE ACTIVITY

Presentations

- 2018 Nutrient treatment by coastal package plants. Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 16-18.
- 2018 Groundwater seeps: Portholes to observe groundwater quality and contaminant transport to streams. Universities Council on Water Resources Annual Conference. Pittsburgh, PA. June 26.
- 2018 Controls on onsite wastewater N inputs to coastal watersheds: Identifying risk factors for elevated nutrient loading. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 14.
- 2017 Freshwater in the North Carolina Coastal Plain: Emerging trends in water use. North Carolina Water Resources Research Institute Annual Conference, Raleigh, North Carolina.
- 2016 Geophysical approaches to improve the understanding of subsurface wastewater migration in coastal watersheds. Universities Council on Water Resources Annual Conference. Pensacola Beach, FL. June 21.
- 2016 Freshwater in the Coastal Plain: Exploring solutions for 21st Century challenges. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 28.
- 2016 Evaluation of bioretention and wetland retrofits for improved stormwater control within an institutional landscape. NC Water Resources Research Institute Conference. Raleigh, NC. March 28. (co-speaker with Matt Butler).
- 2015 Climate change, sea level rise and onsite wastewater challenges in coastal communities. 31st Annual Onsite Water Protection Conference. Raleigh, NC. October 13.
- 2015 Tracking on-site wastewater nitrogen contributions to surface waters: from site to watershed-scale. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 18-19.
- 2014 Geoelectrical imaging of wastewater migration in coastal surficial aquifers, North Carolina, USA. Geological Society of America Annual Conference, Vancouver, CA. Oct. 19-22.
- 2014 Mapping wastewater plumes: A non-intrusive geoelectrical approach. 30th Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 14-16.

- 2014 Quantifying subsurface wastewater migration in coastal surficial aquifers: A geoelectrical approach. North Carolina Water Resources Research Institute Annual Conference. March 19-20.
- 2014 Capacitively-coupled resistivity surveys to delineate subsurface wastewater migration in coastal surficial aquifers. Innovation In Soil Based Onsite Wastewater Treatment Conference, Soil Science Society of America, Albuquerque, NM. April 7-8.
- 2013 Meteorological controls on nitrogen dynamics in treatment beneath onsite systems in coastal North Carolina. 29th Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 8-10.
- 2013 Onsite wastewater treatment system setbacks to reduce nitrogen inputs to coastal North Carolina waters: Recent approaches based on the EPA Chesapeake Bay Onsite Model. North Carolina Water Resources Research Institute Annual Conference. March 20-21.
- 2012 Meteorological controls on onsite wastewater treatment and groundwater dynamics in coastal North Carolina. Geological Society of America Meeting, Charlotte, NC. Nov. 4-7.
- 2012 Shallow aquifers and their connection to surface water: Implications for septic systems. 28th Annual NC Onsite Water Protection Conference. Hickory, NC. Oct. 16-18.
- 2012 Onsite wastewater treatment and subsurface nitrogen dynamics adjacent to the Pamlico Estuary, North Carolina. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 27-28.
- 2011 Shallow aquifers and their connection to surface waters. R.C. Heath Symposium- Aquifer Management in the Mid-Atlantic States. American Ground Water Trust. Greenville, NC. Oct. 3-4.
- 2010 Urbanization effects on low-order riparian groundwater in the Coastal Plain of North Carolina. American Geophysical Union Fall Meeting. San Francisco, CA. Dec. 13-17.
- 2010 Stable isotopes to quantify urban alterations to stream-groundwater interactions in the Coastal Plain. North Carolina Water Resources Research Institute Annual Meeting. Raleigh, NC. March 30-31.
- 2008 Urban sprawl and hydrogeomorphic responses in small Inner Coastal Plain catchments. North Carolina Water Resources Research Institute Annual Meeting. Raleigh, NC. Oct. 8-9.
- 2008 Indicators of stream and riparian zone condition in urbanizing Inner Coastal Plain Watersheds, North Carolina. Geological Society of America National Meeting, Houston, TX. Oct. 5-9.
- 2008 Dissolved organic carbon release and retention in seepage zones and the stream channel of a headwater Appalachian catchment. Riparian ecosystems and buffers: Working at the water's edge. American Water Resources Association Conference, Virginia Beach, VA. June 30.
- 2007 Linkages between nitrate retention in headwater seepage zones and seasonal NO₃ export from an Appalachian catchment. Geological Society of America National Meeting, Denver, CO. Oct. 28-31.
- 2007 Vernal pools in karst terrains: A view from the subsurface. Society of Wetland Scientists Annual Meeting. Sacramento, CA. June 10-15.
- 2007 Geologic controls on river/ground water interactions along a Coastal Plain river. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 27-28.
- 2006 River-groundwater interactions along an asymmetrical coastal plain river system. American Water Resources Association Annual Conference. Baltimore, MD. Nov. 6-9.
- 2006 Integrated LIDAR and geoelectrical mapping of relict braidplain and dune deposits along the Tar River, North Carolina. Geological Society of America Annual Meeting. Philadelphia, PA. Oct. 22-25.
- 2006 Geomorphic, ecologic, and hydrologic dynamics of Merchants Millpond, North Carolina. The American Society of Agricultural and Biological Engineers International Conference on Hydrology and Management of Forested Wetlands. New Bern, NC. Apr. 11.
- 2005 Stream temperature as an indicator of ground water inputs to a karst stream affected by groundwater withdrawals. American Water Resources Association Annual Conference. Seattle, WA. Nov. 7-10.
- 2004 Water temperature as an indicator of surface water-ground water interactions in a karst hydrogeologic setting. Geological Society of America National Meeting, Denver, CO. Nov. 7-10.

- 2003 Soils and springs – controls on the isotope hydrology of 3 Appalachian landscapes. American Geophysical Union Fall Meeting, San Francisco, CA. Dec. 8-12.
- 2002 Stream-aquifer interactions in an urban/agricultural carbonate watershed in central Pennsylvania. American Water Resources Association Annual Conference, Philadelphia, PA. Nov. 3-7.
- 2002 Episodic stream/aquifer interactions in a Pennsylvania urban/agricultural watershed. Ground Water/Surface Water Interactions- American Water Resources Association Summer Specialty Conference. Keystone, CO. Jul. 1-3.
- 1999 Distinguishing between perched groundwater sheets vs. lenses as a cause for lateral migration of sewage effluent. Geological Society of America National Meeting, Denver, CO. Oct. 24-28.
- 1997 Electronic total station; the compass of the 21st century. Geological Society of America Northeastern Section Meeting. King of Prussia, PA. Mar. 17-19.

Abstracts (* indicates student speaker)

- 2018 Watson, J., Mays, P., **O'Driscoll, M.**, and Humphrey, C. Investigation of eutrophication issues in a chara-dominated coastal lake. Southeastern Lake Management Conference. Asheville, NC. April 16.
- 2018 *Iverson, G., Humphrey, C., Sanderford, C., and **O'Driscoll, M.** Evaluation of a bioreactor to remediate nutrients in a septic-dominated watershed in the North Carolina piedmont. NC Water Resources Research Institute Conference. Raleigh, NC. March 14-15.
- 2018 *Hillman, I., **O'Driscoll, M.**, Skibieli, C., and Humphrey, C. Evaluating ecological flows in the Albemarle-Pamlico Basin. NC Water Resources Research Institute Conference. Raleigh, NC. March 14-15.
- 2018 *Rudd, M. and **O'Driscoll, M.** Spatial and temporal water quality variations in High Rock Lake: insights to support nutrient criteria development for North Carolina lakes. NC Water Resources Research Institute Conference. Raleigh, NC. March 14-15.
- 2018 *Mays, P. and **O'Driscoll, M.** A study of eutrophication at Long Lake, SC. NC Water Resources Research Institute Conference. Raleigh, NC. March 14-15.
- 2017 *Rudd, M. and **O'Driscoll, M.** An Evaluation of High Rock Lake Water Quality Patterns to Support Nutrient Criteria Development. NC Lake Management Society Spring Meeting. Allamance Community College, Graham, North Carolina. May 4.
- 2017 C.P. Humphrey, Jr., G. Iverson, **O'Driscoll, M.** Onsite Wastewater System Nitrogen Treatment Efficiency in Response to Groundwater Fluctuations. Soil Science Society of America Conference, Tampa, FL. 22-25 October 2017
- 2017 *G. Iverson, C.P. Humphrey, Jr., **O'Driscoll, M.**, C. Sanderford, J. Jernigan. Quantifying Nutrient Concentration and Masses in Residential Septage. Soil Science Society of America Conference, Tampa, FL. 22-25 October 2017
- 2017 Rudd, M.*, and **O'Driscoll, M.** An Evaluation of High Rock Lake Water Quality Patterns to Support Nutrient Criteria Development. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.
- 2017 Humphrey, C., Lyons, N., Bond, R., Bean, E., and **O'Driscoll, M.** Implementation and Monitoring of Stormwater Control Measures in the Lower White Oak River Watershed, North Carolina. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017
- 2017 Blackmon, J., Humphrey, C., **O'Driscoll, M.**, Kelley, T., and Skibieli, C. Evaluation of the Environmental Health Risks Associated with Benzene Contamination of Water and Air near Town Creek, Greenville, NC. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.
- 2017 Bond, R., **O'Driscoll, M.**, and Humphrey, C. Stormwater Runoff and Nutrient input Reduction through Stormwater Control Measures in the Lower White Oak River Watershed. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.

- 2017 Iverson, G., Humphrey, C. and **O'Driscoll, M.** Comparison of Nutrient Exports in Piedmont Watersheds with Different Densities of Septic Systems. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.
- 2017 Robbins, J., Bean, E., and **O'Driscoll, M.** Urbanization Effects on Low-Order Coastal Plain Stream Burial and Drainage Density. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.
- 2017 Lyons, N., **O'Driscoll, M.**, Humphrey, C., and Kelley, T. Evaluation of Trends in Enterococci and E. Coli Concentrations in the Lower White Oak River Watershed in North Carolina. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.
- 2017 Sanderford, C., Humphrey, C., Iverson, G., and **O'Driscoll, M.** Fecal Indicator Bacteria Concentrations in Piedmont Streams Draining Watersheds with Varying Densities of Onsite Wastewater Systems. NC Water Resources Research Institute Conference. Raleigh, NC. March 15-16, 2017.
- 2016 Iverson, G., Humphrey, C.P., **O'Driscoll, M.**, Sanderford, C., Jernigan, J., Bean, E., Pradhan, S., and Serozi, B. Comparison of Nutrient Contributions By Wastewater Management Approach in the North Carolina Piedmont. Soil Science Society of America, Phoenix, AZ. Nov. 7, 2016.
- 2016 Humphrey, C.P., Jernigan, J., Serozi, B., Iverson, G., **O'Driscoll, M.**, Pradhan, S., and Bean, E. Nutrient Treatment By Onsite Wastewater Systems in Clayey Soils of the North Carolina Piedmont. Soil Science Society of America, Phoenix, AZ. Nov. 7, 2016.
- 2016 Bean, E., Humphrey, C., **O'Driscoll, M.**, Bond, R., and Lyons, N. Stormwater retrofits for water quality restoration in the lower White Oak River. Universities Council on Water Resources Annual Conference. Pensacola Beach, FL. June 21.
- 2016 Bean, E., Mahoney, R., and **O'Driscoll, M.** Evaluation of package treatment plants on North Carolina's coast: Influences of seasonal dynamics on nutrient and pathogen treatment performance. Universities Council on Water Resources Annual Conference. Pensacola Beach, FL. June 21.
- 2016 Trevisan, A. *, Watson, J., **O'Driscoll, M.**, Humphrey, C., Hall, N., and Paerl, H. Assessing surface and groundwater nutrient inputs to a coastal lake, Long Lake, SC. Geological Society of America SE Section Meeting. Columbia, SC. March 30.
- 2016 Bond, R. *, **O'Driscoll, M.**, Humphrey, C., & Bean, E. Reducing stormwater runoff and nutrient inputs in the lower White Oak Watershed. Freshwater in the Coastal Plain Conference. New Bern, NC. Feb. 16.
- 2016 Iverson, G. *, Humphrey, C., **O'Driscoll, M.**, Bean, E., Jernigan, J., et al. Phosphorus contributions from septic, sewer, and forested watersheds in the North Carolina Piedmont. Freshwater in the Coastal Plain. New Bern, NC. Feb. 16.
- 2016 Trevisan, A. *, **O'Driscoll, M.**, Humphrey, C., Bean, E., & Woods, T. (2016). An evaluation of electromagnetic induction as a tool to delineate wastewater-affected groundwater in the surficial aquifer. Freshwater in the Coastal Plain. New Bern, NC. Feb. 16.
- 2016 Mahoney, R. *, Bean, E., **O'Driscoll, M.**, Humphrey, C., & Manda, A. Nutrient and bacteria dynamics of package treatment plants in Coastal North Carolina. Freshwater in the Coastal Plain. New Bern, NC. Feb. 16.
- 2016 Jernigan, J. *, Humphrey, C., **O'Driscoll, M.**, & Bean, E. Preliminary evaluation of surface and subsurface discharging OWS in the Piedmont of North Carolina. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 28.
- 2016 Iverson, G. *, Humphrey, C., **O'Driscoll, M.**, Bean, E., Pradhan, S., et al. Nitrogen Contributions from Septic, Sewered, and Forested Watersheds in the North Carolina Piedmont. NC Water Resources Research Institute Conference. Raleigh, NC. March 28.
- 2016 Humphrey, C., **O'Driscoll, M.**, Bean, E., Pradhan, S., & Iverson, G. Nutrient Contributions to Water Resources from Surface and Subsurface Discharging Onsite Wastewater Systems in the

North Carolina Piedmont. NC Water Resources Research Institute Conference. Raleigh, NC. March 28.

2016 Bean, E., **O'Driscoll, M.**, & Humphrey, C. Evaluation of bioretention and wetland retrofits for improved stormwater control within an institutional landscape. NC Water Resources Research Institute Conference. Raleigh, NC. March 28.

2016 Mahoney, N.*, Bean, E., **O'Driscoll, M.**, & Humphrey, C. (2016). Nutrient and bacteria dynamics of packaged treatment plants in coastal North Carolina. NC Water Resources Research Institute Conference. Raleigh, NC. March 28.

2016 Sanderford, C.*, Humphrey, C., Iverson, G., **O'Driscoll, M.**, & Bean, E. Fecal indicator bacteria in streams draining watersheds served by onsite systems in Piedmont North Carolina. NC Water Resources Research Institute Conference. Raleigh, NC. March 28.

2016 Serozi, B.*, Humphrey, C., Jernigan, J., Iverson, G., **O'Driscoll, M.**, et al. Onsite wastewater system phosphate treatment in the North Carolina Piedmont. NC Water Resources Research Institute Conference. Raleigh, NC. March 28.

2015 Radcliffe, D., Geza, M., **O'Driscoll, M.**, and Humphrey, C. Soil and groundwater attenuation factors for nitrogen from septic systems in the Chesapeake Bay TMDL. American Geophysical Union- Annual Conference. San Francisco, CA. Dec. 14.

2015 *Jernigan, J., Humphrey, C., Serozi, B., Iverson, G., **O'Driscoll, M.**, and Bean, E., and Kelley, T. Onsite wastewater system nitrogen contributions to water resources in the Piedmont of North Carolina. Geological Society of America- Annual Conference. Baltimore, MD. Nov. 2.

2015 *Iverson, G., Humphrey, C., **O'Driscoll, M.**, and Pradhan, S. Quantifying nutrient transport from watersheds served by onsite wastewater systems, centralized sewer, and a forested area in the Piedmont of North Carolina. Geological Society of America- Annual Conference. Baltimore, MD. Nov. 4.

2015 Humphrey, C., Pradhan, S., Bean, E., and **O'Driscoll, M.** Remediation of groundwater nitrate from a large onsite wastewater system using a permeable reactive barrier. Geological Society of America- Annual Conference. Baltimore, MD. Nov. 4.

2015 Humphrey, C., and **O'Driscoll, M.** Onsite wastewater treatment system nitrogen contributions to water resources in North Carolina. National Environmental Health Association Annual Conference. Orlando, FL. July 14.

2015 Bean, E., Mahoney, N., Humphrey, C., and **O'Driscoll, M.** Evaluation of package treatment plants on North Carolina's coast. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 18-19.

2015 *Mahoney, N., Bean, E., Humphrey, C., and **O'Driscoll, M.** Seasonal nitrogen dynamics of packaged wastewater treatment plants in coastal North Carolina. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 18-19.

2015 *Trevisan, A., **O'Driscoll, M.**, Humphrey, C., Bean, E., and Woods, T. Electromagnetic induction to delineate wastewater-affected groundwater in the surficial aquifer. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 18-19.

2015 Humphrey, C. and **O'Driscoll, M.** Onsite wastewater treatment system phosphorus contributions to groundwater and surface waters in Eastern North Carolina. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 18-19.

2015 *Iverson, G. Humphrey, C., **O'Driscoll, M.**, Bean, E., and Manda, A. Tracking nitrate-nitrogen sources using ¹⁵N and ¹⁸O in nitrate in coastal plain surface and ground waters. North Carolina Water Resources Research Institute Annual Conference. Raleigh, NC. March 18-19.

2014 Humphrey, C. and **O'Driscoll, M.** Onsite wastewater treatment systems and nitrogen in coastal watersheds. 30th Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 14-16.

2014 Mitra, S., Humphrey, C. and **O'Driscoll, M.** Factors affecting pharmaceutical and personal care product fate and transport in onsite wastewater systems. 30th Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 14-16.

2014 Humphrey, C., Harris, J., and **O'Driscoll, M.** Spatial distribution of wastewater microbial indicators in groundwater beneath two large onsite wastewater systems. Innovation In Soil Based Onsite Wastewater Treatment Conference, Soil Science Society of America, Albuquerque, NM. April 7-8.

- 2014 Humphrey, C., **O'Driscoll, M.**, and Harris, J. Evaluation of fecal indicator bacteria in groundwater beneath and down-gradient from three on-site wastewater treatment systems. North Carolina Water Resources Research Institute Annual Conference. March 19-20. Raleigh, North Carolina.
- 2014 Humphrey, C., **O'Driscoll, M.**, Iverson, G., and Anderson-Evans, E. Groundwater transport of nitrogen and phosphorus from four onsite wastewater systems in the Coastal Plain of North Carolina. 57th Annual Meeting of the Soil Science Society of North Carolina. Raleigh, NC. Jan. 21-22.
- 2013 Bean, E., and Coastal Ecological Flows Work Group (CEFWG). Ecological flows framework for North Carolina coastal streams. Southeast Tidal Creeks Summit. Wilmington, NC. Dec. 16-17.
- 2013 Humphrey, C., Anderson-Evans, E., **O'Driscoll, M.**, Manda, A., and Iverson, G. Comparison of groundwater and surface water phosphorus in watersheds served by onsite wastewater and municipal sewer. 29th Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 8-10.
- 2013 Iverson, G., **O'Driscoll, M.**, Humphrey, C., and Manda, A. Comparison of groundwater and surface water nitrogen in watersheds served by onsite wastewater and municipal sewer. 29th Annual NC Onsite Water Protection Conference. Raleigh, NC. Oct. 8-10.
- 2013 *DelRosario, K., Mitra, S., Humphrey, C., and **O'Driscoll, M.** Detection of pharmaceuticals and other personal care products in groundwater beneath and adjacent to onsite wastewater treatment systems. Carolinas Society of Environmental Toxicology and Chemistry Meeting, Raleigh, NC.
- 2013 Humphrey, C., **O'Driscoll, M.**, Manda, A., Iverson, G., and Anderson-Evans, E. Stream nutrient loadings in watersheds served by onsite wastewater systems in comparison to centralized sewer systems in Pitt County, NC. North Carolina Water Resources Research Institute Annual Conference. March 20-21. Raleigh, North Carolina.
- 2012 *Booth, C., Humphrey, C., **O'Driscoll, M.**, Ardon-Sayao, M. Evaluation of periphyton as an indicator of wastewater influence on streams. North Carolina Undergraduate Research and Creativity Symposium, Durham, NC, Nov. 17, 2012.
- 2012 Humphrey, C., and **O'Driscoll, M.** Controls on phosphorus transport from onsite wastewater systems to groundwater and adjacent surface waters in coastal North Carolina. Geological Society of America National Meeting 2012, Charlotte, NC. GSA Abstracts with Programs Vol. 44, No. 7.
- 2012 *Hardison, S., Humphrey, C., and **O'Driscoll, M.** Geophysical delineation and groundwater characterization of a contaminant plume from a residential on-site wastewater system in Pitt County, North Carolina. Geological Society of America National Meeting 2012, Charlotte, NC. GSA Abstracts with Programs Vol. 44, No. 7.
- 2012 *Iverson, G., **O'Driscoll, M.**, Humphrey, C., Manda, A., and Spruill, R. Influence of watershed wastewater management approach on shallow groundwater and surface water nitrogen loading, Pitt County, NC. Geological Society of America National Meeting 2012, Charlotte, NC. GSA Abstracts with Programs Vol. 44, No. 7.
- 2012 *Smith, M., **O'Driscoll, M.**, Mallinson, D., and Humphrey, C. Geophysical and water quality characterization of on-site wastewater treatment system effluent plumes at two schools in the North Carolina Coastal Plain. Geological Society of America National Meeting 2012, Charlotte, NC. GSA Abstracts with Programs Vol. 44, No. 7.
- 2012 *Supler, K., Mitra, S., Humphrey, C., and **O'Driscoll, M.** Detection of pharmaceuticals and other personal care products in groundwater beneath and adjacent to onsite wastewater treatment systems. Geological Society of America National Meeting 2012, Charlotte, NC. GSA Abstracts with Programs Vol. 44, No. 7.
- 2012 Humphrey, C., Finley, A., **O'Driscoll, M.**, Iverson, G., Anderson-Evans, E., Manda, A., and Postma, H. Biochemistry of groundwater and surface water in suburban watersheds served by onsite wastewater systems in comparison to centralized sewer. 28th Annual NC Onsite Water Protection Conference, Hickory, NC. October 16-18, 2012.
- 2012 *Supler, K., Mitra, S., Humphrey, C., and **O'Driscoll, M.** Groundwater transport of pharmaceutical and personal care products from onsite wastewater systems in Pitt County,

- North Carolina. 28th Annual NC Onsite Water Protection Conference, Hickory, NC. October 16-18.
- 2012 *Smith, M., **O'Driscoll, M.**, Mallinson, D., and Humphrey, C. Evaluation of geophysical techniques for delineating on-site wastewater treatment system effluent plumes. 28th Annual NC Onsite Water Protection Conference, Hickory, NC. October 16-18.
- 2012 *Iverson, G., **O'Driscoll, M.**, Humphrey, C., Manda, A., and Spruill, R. The influence of watershed wastewater management approach on shallow groundwater and surface water nitrogen loading, Pitt County, NC. 28th Annual NC Onsite Water Protection Conference, Hickory, NC. October 16-18, 2012.
- 2012 *Anderson-Evans, E., Humphrey, C., **O'Driscoll, M.**, and Manda, A. Groundwater and surface water phosphorus concentrations and loading in residential watersheds served by onsite wastewater systems and municipal sewer systems. 28th Annual NC Onsite Water Protection Conference, Hickory, NC. October 16-18.
- 2012 Humphrey, C.P., **O'Driscoll, M.**, Deal, N.E., Lindbo, D.L., and Zarate, M. 2012. Fate and transport of onsite wastewater treatment system derived nitrogen in coastal North Carolina. National Environmental Health Association Conference, San Diego, CA. June 28-30.
- 2012 *Postma, M. H., Humphrey, C., and **O'Driscoll, M.** 2012. Evaluating the effects of watershed impervious surface on stream biochemistry. Research and Creative Activities Week, East Carolina University, Greenville, NC.
- 2012 *Supler, K., Mitra, S., Humphrey, C., and **O'Driscoll, M.** Evaluation of pharmaceutical and personal care products in groundwater adjacent to onsite wastewater systems in eastern North Carolina. North Carolina Water Resources Research Institute Annual Conference. March 27-28.
- 2012 *Smith, M., **O'Driscoll, M.**, Mallinson, D., and Humphrey, C. 4-D geophysical and water quality characterization of on-site wastewater treatment system effluent plumes in eastern North Carolina. . North Carolina Water Resources Research Institute Annual Conference. March 27-28.
- 2012 *Postma, H., Finley, A. J., Iverson, G., Humphrey, C., and **O'Driscoll, M.** Evaluating the effects of watershed impervious surfaces on stream biochemistry. North Carolina Water Resources Research Institute Annual Conference. March 27-28.
- 2012 *Iverson, G., **O'Driscoll, M.**, Humphrey, C., & Manda, A. Differences in nitrogen loading between on-site wastewater treatment system and centralized sewer system watersheds in Pitt County, NC. North Carolina Water Resources Research Institute Annual Conference. March 27-28.
- 2012 *Harris, J., Humphrey, C., and **O'Driscoll, M.** Accuracy of soil colors as indicators of the seasonal high water table. North Carolina Water Resources Research Institute Annual Conference. March 27-28.
- 2012 Humphrey, C. and **O'Driscoll, M.** Onsite wastewater system phosphorus contributions to groundwater in coastal North Carolina. North Carolina Water Resources Research Institute Annual Conference. March 27-28.
- 2011 Humphrey, C.P., **O'Driscoll, M.A.**, Thieme, S.C., Deal, N.E., Lindbo, D.L., and Zarate, M.A. Nutrient transport from on-site wastewater systems to ground and surface waters in Washington, NC. 27th Annual NC Onsite Water Protection Conference, Raleigh, NC. October 11-13.
- 2011 *Smith, M. **O'Driscoll, M.**, Mallinson, D.J., and Hardison, S. Non-intrusive geophysical characterization of on-site wastewater treatment systems and effluent plumes. 27th Annual NC Onsite Water Protection Conference, Raleigh, NC. October 11-13, 2011.
- 2011 *Hardison, S. E., Humphrey, C., Smith, M., **O'Driscoll, M.**, and Mallinson, D. 2011. Characterizing on-site wastewater plumes with electrical resistivity surveys. Research in the Capital, Raleigh, North Carolina.
- 2011 Deal, N., Lindbo, D., **O'Driscoll, M.**, Humphrey, C., Kelley, T., and Zarate, M. Site selection considerations and septic tank system performance studies. National Environmental Health Association Annual Conference - 2011, Columbus, Ohio.

- 2011 Hill, V., Humphrey, C., **O'Driscoll, M.**, Henry, K., Deal, N., Lindbo, D. and Zarate, M. Fate and transport of enteric microbes from septic systems in coastal watersheds. National Environmental Health Association Annual Conference - 2011, Columbus, Ohio.
- 2011 Humphrey, C., **O'Driscoll, M.**, Thieme, S., Deal, N., and Lindbo, D. Groundwater transport of onsite wastewater treatment system derived nitrogen in coastal Washington, North Carolina. National Environmental Health Association Annual Conference - 2011, Columbus, Ohio.
- 2011 Zarate, M., **O'Driscoll, M.**, Humphrey, C., Deal, N., & Lindbo, D. Evaluating performance of onsite wastewater systems in Coastal North Carolina to enhance its' public health perspective. National Environmental Health Association Annual Conference - 2011, Columbus, Ohio.
- 2011 Humphrey, C., **O'Driscoll, M.**, Thieme, S., Deal, N., Lindbo, D., Zarate, M. Subsurface transport of nitrogen from an on-site wastewater treatment system to the Pamlico Estuary, North Carolina. North Carolina Water Resources Research Institute Annual Conference, Raleigh, North Carolina.
- 2011 *Hardison, S. E., Humphrey, C., Smith, M., **O'Driscoll, M.**, and Mallinson, D. Characterizing on-site wastewater plumes with electrical resistivity surveys. ECU Research and Creative Achievement Week, Greenville, North Carolina.
- 2010 Humphrey, C. and **O'Driscoll, M.** Evaluation of soil morphological Indicators of the seasonal high water table in coastal North Carolina. On-Site Water Conference. NCSU, Raleigh, NC October 18-20.
- 2010 Humphrey, C., **O'Driscoll, M.**, and Zarate, M. Evaluation of groundwater quality beneath on-site wastewater systems in coastal North Carolina: Implications for on-site wastewater system design specifications. North Carolina Public Health Association Annual Meeting. Wilmington, NC October 27-29.
- 2010 Humphrey, C., Deal, N., **O'Driscoll, M.**, and Lindbo, D. Characterization of on-site wastewater nitrogen plumes in shallow coastal aquifers, North Carolina. World Environmental & Water Resources Congress 2010, Providence, Rhode Island.
- 2010 Humphrey, C., **O'Driscoll, M.**, and Zarate, M. The influence of soil type and vertical separation distance on septic system wastewater treatment. National Environmental Health Association Conference, Albuquerque, New Mexico.
- 2010 *Thieme, S., Howard, R., Davis, J., **O'Driscoll, M.** and Miles, R. Urbanization effects on Coastal Plain hydrological processes: ECU campus as an outdoor field laboratory. North Carolina Water Resources Research Institute Annual Meeting. Raleigh, North Carolina.
- 2010 Humphrey, C., **O'Driscoll, M.**, and Armstrong, C. Septic system nitrogen loading to groundwater in the Newport River watershed, North Carolina. North Carolina Water Resources Research Institute Annual Meeting. Raleigh, North Carolina.
- 2009 *Humphrey, C., **O'Driscoll, M.**, and Zarate, M. Evaluating the effects of soil type and vertical separation distance on septic system wastewater treatment and groundwater quality in Coastal NC. NC Onsite Water Protection Conference. NCSU, Raleigh, NC April 29-May 1.
- 2008 *DeLoatch, J.P., **O'Driscoll, M.**, Brinson, M.M., and Hardison, E.C. Urban land-use effects on stream-groundwater interactions along Inner Coastal Plain Streams, NC. Geological Society of America National Meeting, Houston, TX.
- 2008 *Humphrey, C. **O'Driscoll, M.**, and Zarate, M. Controls on Septic System Wastewater Treatment and Groundwater Quality in Coastal NC. NC Onsite Water Protection Conference. NCSU, Raleigh, NC April 14-16, 2008.
- 2008 *Humphrey, C., **O'Driscoll, M.**, and Zarate, M. Geologic controls on septic system wastewater treatment and groundwater quality in Coastal NC. 2nd Annual Research & Creative Achievement Week, March 31-April 4, 2008. East Carolina University, Greenville, NC.
- 2008 *Harnsberger, D., **O'Driscoll, M.**, and Chadwick, J. The effects of urban land use on water table elevations and nitrate processing in groundwater discharging to Coastal-Plain streams of the Greenville Area. 2nd Annual Research & Creative Achievement Week, March 31-April 4, 2008. East Carolina University, Greenville, NC.
- 2008 *Harnsberger, D., **O'Driscoll, M.**, and Chadwick, J. The effects of urban land use on riparian water table levels and groundwater nutrient processing along low-order Coastal Plain tributaries, Greenville, NC. Riparian ecosystems and buffers: Working at the water's edge. American Water Resources Association Conference, Virginia Beach, VA. June 30-July 2.

- 2008 *Moore, C., Daniel, R., Seramur, K., Mallinson, D. and **O'Driscoll, M.** Geoaerchological investigations of stratified Holocene aeolian deposits along the Tar River in North Carolina. Geological Society of America SE Meeting, Charlotte, NC. April 10.
- 2008 *Harnsberger, D., **O'Driscoll, M.**, and Chadwick, J. The effects of urban land use on water table and nitrate levels in groundwater discharging to low-order Coastal Plain streams. Geological Society of America SE Meeting, Charlotte, NC. April 10.
- 2007 *DeLoatch, J.P., **O'Driscoll, M.A.**, Brinson, M.M., and *Hardison, E.C. Groundwater hydrology of low-order Coastal Plain streams across an urban land-use gradient. Geological Society of America National Meeting, Denver, CO.
- 2007 *Hardison, E., **O'Driscoll, M.**, Rheinhardt, R., and Brinson, M. Effects of urbanization on low-order riparian and stream systems in Coastal Plain North Carolina. Society of Wetland Scientists Annual Meeting, Sacramento, CA. June 10-15.
- 2007 *Hardison, E., Brinson, M, and **O'Driscoll, M.** A comparison of total versus effective impervious surface area for the prediction of water quality degradation in low-order coastal plain streams. North Carolina Academy of Sciences Annual Meeting. Greenville, NC. March 31.
- 2007 *Hardison, E., Brinson, M, and **O'Driscoll, M.** Effects of total and effective impervious surfaces on water quality in low-order Coastal Plain streams, North Carolina. ECU Research and Creative Achievement Symposium. Greenville, NC. March 26.
- 2006 *Humphrey, C., **O'Driscoll, M.A.**, Zarate, M., *Smith, C. Determining the effect of septic system separation distance on groundwater quality in Coastal North Carolina. On-Site Wastewater Treatment Conference. NCSU, Raleigh, NC. April 24-26.
- 2007 *Moore, C. Daniel, I., Seramur, K, **O'Driscoll, M.**, and Mallinson, D. Geoarchaeology and geochronology of relict dunes and alluvial terraces in the North Carolina Coastal Plain. ECU Research and Creative Achievement Symposium. Greenville, NC. March 26.
- 2007 *Moore, C., Daniel, I., Seramur, K, **O'Driscoll, M.**, and Mallinson, D. Geoarchaeology and geochronology of relict dunes and alluvial terraces in the North Carolina Coastal Plain. Geological Society of America SE Section Meeting. Savannah, GA. March 29.
- 2007 *Soban, J. and **O'Driscoll, M.** Stream channel response to urban land-use in the North Carolina Coastal Plain. Geological Society of America SE Section Meeting. Savannah, GA. March 29.
- 2006 *Johnson, P.K., **O'Driscoll, M.A.**, and Mallinson, D.J. Using ground penetrating radar in river channel and floodplain settings: implications for surface water/groundwater interactions. American Water Resources Association Annual Conference. Baltimore, MD. Nov. 6-9.
- 2006 *Moore, C., Daniel, I., Seramur, K, **O'Driscoll, M.**, and Mallinson, D. Geoaerchological investigations of relict sand dunes in the North Carolina Coastal Plain: New approaches for modeling Tar River fluvial history and paleoclimate. Geological Society of America Annual Meeting. Philadelphia, PA. Oct. 22-25.
- 2006 *Hardison, E., **O'Driscoll, M.**, Brinson, M, and Rheinhardt, R. Physical response of coastal plain streams to storm events across an urban land-use gradient. North Carolina Water Resources Research Institute Annual Meeting. Raleigh, NC. April 5.
- 2006 *Johnson, P.K., **O'Driscoll, M.A.**, and Mallinson, D.J. Characterization of surface water/ground water interactions along the Tar River, NC using ground penetrating radar. Geological Society of America SE Meeting. Knoxville, TN. March 23-24.
- 2005 DeWalle, D. R. and **O'Driscoll, M. A.** Hyporheic and riparian exchange of water and nitrogen in a first-order Appalachian headwater forest stream. American Geophys. Union, Spring Meeting, New Orleans, LA. May 23-27.
- 2005 DeWalle, D.R., Buda, A.R., Eismeier, J.A., Sharpe, W.E., Swistock, B.R., Craig, P.L., and **O'Driscoll, M.A.** Nitrogen cycling on five headwater forested catchments in mid-Appalachians of Pennsylvania. 7th International Association of Hydrological Sciences Assembly, Foz do Iguacu (Brazil). April 4-9.
- 2005 *Blackburn, J., and **O'Driscoll, M.** 2005. Streamflow and groundwater inputs along the Tar River. East Carolina University, Undergraduate Research and Creative Activities Symposium. Greenville, NC. April 8.
- 2004 Parizek, R.R., **O'Driscoll, M.A.**, and Llewellyn, G. Nourishment of wetlands adjacent to

Penn State's Living Filter Project: Importance of multiple lines of evidence. Geological Society of America National Meeting, Denver, CO. Nov. 7-10.

CAMPUS OR DEPARTMENTAL TALKS

- 2017 "Freshwater in the North Carolina Coastal Plain: Emerging Trends in Water Use" ECU Coastal Water Resources Center Seminar. April 26.
- 2015 "Onsite wastewater system nutrient inputs to coastal watersheds." ECU, Geol. Sciences Dept. Nov. 21.
- 2014 "Tracking previously used water in coastal watersheds." ECU, Geol. Sciences Dept. Nov. 21.
- 2013 "Sustainability of water resources in a changing Coastal Plain: The role of the Coastal Water Resources Center." Coastal Resources Management Seminar. Nov. 1.
- 2013 "What is percolating in the backyard? Wastewater nitrogen exports to coastal waters." ECU, Water Resources Seminar Series. Sept. 3.
- 2013 "Sustainability of water resources in a changing Coastal Plain: Challenges and opportunities for the Coastal Water Resources Center." ECU, Coastal Water Resources Center. Jan. 7.
- 2012 "Shallow aquifers and their connections to surface water: Implications for coastal water quality." ECU, Geography Dept. October 26.
- 2011 "Anthropocene hydrology in eastern North Carolina." ECU, Coastal Resources Management Seminar. Sept. 16.
- 2011 "Previously used water." ECU, Geol. Sciences Dept. Oct. 21.
- 2010 "Anthropocene hydrology in eastern North Carolina." ECU, Geol. Sciences Dept. Sept. 24.
- 2009 "Appalachian groundwater seeps are water treatment hotspots." ECU, Geol. Sciences Dept. Oct. 9.
- 2008 "Streams and sprawl: Effects of urbanization on Coastal Plain stream channels and riparian zones." ECU, Geol. Sciences Dept. Sept. 12.
- 2007 "Effects of urban land-use on Coastal Plain hydrology." ECU, Geol. Sciences Dept. Aug. 31.
- 2006 "Hydrological research." ECU, Geol. Sciences Dept. Aug. 31.
- 2005 "Surface water-groundwater interactions." ECU, Geol. Sciences Dept. Aug. 31.
- 2005 "Surface water and ground water as a single resource." ECU Geol. Alumni Council. May 6.
- 2005 "Coastal Plain freshwater resources" Interdisciplinary Coastal Research Workshop. ECU Coastal Maritime Council. Nov. 12.

SERVICE

Professional Activities

- 2018 Student Mentor North Carolina Water Resources Research Institute Annual Conference
- 2017 Moderator for the "Managing Surface-Groundwater Interactions in the South" 2017 Duke Water Symposium. Durham, NC. March 24.
- 2017-2018 Weatherstone Elementary School STEM Council Member
- 2017 Weatherstone Elementary -4th Grade STEM Visit- Water Resources. April 27.
- 2016 Session Organizer- Emerging Issues in Coastal Water Resources Management. 2016 UCOWR/NIWR Annual Conference. Pensacola Beach, Florida. June 21-23.
- 2015 Advisor, ECU- Student Chapter of the American Water Resources Association
- 2015 North Carolina Water Resources Research Institute. Proposal review panel.
- 2015 Conference Planning Committee: Freshwater in the North Carolina Coastal Plain: Understanding and Preparing for 21st Century Challenges. New Bern, NC. Feb. 16.
- 2015 Onsite Environmental Applications of Geophysical Surveys. Fieldtrip leader for the Onsite Water Protection Conference. ECU- West Research Campus. October 13.
- 2015-present North Carolina Nutrient Criteria Development Plan- Scientific Advisory Council.
- 2015-present Albemarle-Pamlico National Estuary Program Flows Committee.
- 2014 Conference Planning Committee: NC Onsite Water Protection Conference.
- 2014-present Chesapeake Bay Onsite Wastewater Nutrient Attenuation Expert Panel: US Environmental Protection Agency.
- 2013 STEM at Starlight. Moderator: Villains and Heroes in the Battle for Clean Water. Greenville, NC. Nov. 18.
- 2013-2014 Coastal Ecological Flows Work Group. North Carolina Ecological Flows Committee.

- 2013 AP Environmental Science Exam Reader. Cincinnati, OH. June 1- 9.
- 2012 Session convener/moderator. Advances in Hydrology and Sustainable Water Management in Coastal Areas. Geol. Society of America Meeting, Charlotte, NC. Nov. 4-7.
- 2012 North Carolina Water Resources Research Institute. Proposal review panel.
- 2011 Session moderator. Coastal Groundwater Issues. Aquifer Management in the Mid-Atlantic States. American Ground Water Trust, Greenville, NC. Oct. 3-4.
- 2010 Panel member. Water, water everywhere, but do we have enough here in eastern North Carolina? The Cypress Group- North Carolina Chapter of the Sierra Club, and the Pamlico-Tar River Foundation. Feb. 8.
- 2010 North Carolina Water Resources Research Institute. Proposal review panel.
- 2009 North Carolina Water Resources Research Institute. Proposal review panel.
- 2008 Conference planning committee and session moderator. Emerging Issues in Coastal Water Quality. North Carolina Water Resources Research Institute Annual Meeting, Raleigh, NC. Oct. 8-9.
- 2007 Session moderator. Land-use effects on water resources. U.S./Central Asia Environmental Science Conference, Almaty, Kazakhstan. Nov. 14-16.
- 2007 Student presentation judge. Society of Wetland Scientists Annual Conference.
- 2006 Session moderator. River-Groundwater Interactions. American Water Resources Association Annual Conference, Baltimore, MD. Nov. 6-9.
- 2006 Mentor. American Water Resources Association-Student Career Night. American Water Resources Association Annual Conference, Baltimore, MD. Nov. 6-9.
- 2005-2009 Annual grant review committee. Southeastern Section- Geol. Society of America.
- 2004-2009 American Water Resources Association Technical Committee. Hydrology and Watershed Management.
- 2000-2003 President of the PSU Student Chapter-American Water Resources Association.

EDITORIAL SERVICE

- Book Chapter Review: Soil-Based Wastewater Treatment (Soil Science Society of America)
- Guest Editor, Special Issue “Advances in On-Site Wastewater Treatment and Technologies” for journal Water (2014-2015)
- Associate Editor for the journal “Water” (2013-2014)

MANUSCRIPT REVIEWER

- Estuaries and Coasts (2017-present)
- Journal of Contemporary Water Resources and Education (2016-present)
- Journal of Floodplain Management (2015-present)
- Journal of American Water Resources Association (2003-present)
- Journal of Hydrology (2008-present)
- Wetlands (2010-present)
- Journal of Environmental Quality (2009-present)
- Environmental Management (2012-present)
- Earth Interactions (2013-present)
- International Journal of Climatology (2009-present)
- Hydrogeology Journal (2011-present)
- Hydrological Processes (2008-present)
- Southeastern Geographer (2010-present)
- Nature Geosciences (2011-present)
- Physical Geography (2017-present)
- Water Resources Research (2011-present)

PROMOTION AND TENURE REVIEWER (2)

PROPOSAL REVIEWER

- National Sciences Foundation (Hydrologic Sciences, Major Research Instrumentation) (2007-present)

Water Resources Research Institutes (North Carolina, Virginia, and Pennsylvania) (2006-present)
Geological Society of America Student Research Grants (2005-2009)
U.S. Civilian Research and Development Foundation (2009)
US Environmental Protection Agency (2012)
Oak Ridge Institute for Science and Education (2013)

DEPARTMENTAL/UNIVERSITY SERVICE

Member, ECU-UNC-W Joint Coastal PhD Program Development Committee (2014-2016)
Director, Coastal Water Resources Research Associate Search Committee (2015)
Chair, Departmental Strategic Plan Committee (2014-2015)
Member, Coastal Maritime Council (2013-2016)
Chair, ECU Water Resources Seminar Series (2013)
Member, Institute for Coastal Science and Policy (2012-present)
Director, Coastal Water Resources Center (March 2013-June 2016)
Deputy Director, Coastal Water Resources Center (Oct. 2012-March 2013)
Member, Geological Sciences Department Post-tenure Review Committee (2013)
Member, Geological Sciences Personnel Committee (2011-present)
Member, Environmental Health Faculty Search Committee (2011)
Director, Graduate Certificate in Hydrogeology and Environmental Geology (2010-2014)
Assistant to the Undergraduate Studies Director (Undergraduate Advisor) (2010-2013)
Member, Education Sub-Committee of the ECU Strategic Planning Committee (2010)
Member, University Environment Committee (2009-2012)
Member, ICSP Water Resources Faculty Search Committee (2009)
Instructor, ECU ReachUp Science Camp for minority middle school students (2009)
Reviewer, Departmental Thesis Review and Assessment (2008-2009)
Graduate student recruitment booth, Geological Society of America Meeting (2004, 2006, 2007, 20011)
Chair, Geological Sciences Department Seminar Series (2005, 2007)
Member, ECU Natural Areas Committee (2004-2009)
Departmental representative to Faculty Senate (Alternate) (2006-2009)
Geological Sciences representative for Spring Open House and Majors Fair (2005-present)
Contributor, Departmental Annual Newsletter (2005-present)
Judge-Natural Sciences Section: ECU Research and Creative Achievements Symposium (Mar. 26, 2007)

MEDIA COVERAGE

- “Grant-funded project aids Raleigh-area watershed.” Greenville Daily Reflector. August 20, 2017.
- “Cleaner by nature: Project slows, filters stormwater before it reaches stream.” ECU News Services. Oct. 1, 2015
- “ECU gets stormwater remediation.” Greenville Daily Reflector. April 23, 2015
- “Symposium helps educate local students.” Greenville Daily Reflector. April 22, 2015
- “ECU professors serve on water quality council.” ECU News Services. March 6, 2015.
- “ECU re-certifies as StormReady.” WNCT News. Jan. 22, 2015.
- “Scientists study septic systems for chemical traces.” ECU News Services. Jan. 20, 2015.
- “ECU faculty team with community partners on issues.” ECU News Services. Dec. 12, 2014.
- “High nitrate levels at a Martin Co. school reduce due to ECU study.” WNCT News. Sept. 3, 2014.
- “ECU researchers design barrier to improve groundwater quality.” ECU News Service. Aug. 5, 2014.
- “Quality of Groundwater.” Daily Reflector. Aug. 10, 2014
- “Coastal Water Resources Center.” ECU Exploration and Discovery Newsletter. Fall 2013.
- “Legislation is modified to ensure riparians stay in place.” The Daily Reflector. May 6, 2013.
- “Camp helps students learn science.” Edge Magazine. Summer 2010.
- “Groundwater seeps regulate stream nitrogen concentrations.” Crops, Soils, and Agronomy News 55(2): 9-11. 2010.
- “Water, water everywhere, but do we have enough here in eastern North Carolina?” Cypress News. February 2010.

- “ECU camp helps students reach up in science.” The Daily Reflector. July 19, 2009.
- “ECU summer camp helps local students reach up in science.” ECU News Service. April 6, 2009.
- “Researchers delve below ground for clues- East Carolina uses latest technology to locate Bath graves. The Washington Daily News. July 1, 2008.
- Televised interview-drought and water conservation. WITN. February 28, 2008.
- Televised interview-drought and rainfall. WITN. October 25, 2007.
- “University works to conserve water.” The East Carolinian. November 8, 2007.
- “ECU working to conserve water; faculty experts available to discuss drought.” ECU News Service. October 22, 2007.

OUTREACH

- 2017 Greenville- Town Creek Restoration Meeting: Project Team Meeting- Feb. 2
- 2015 Greenville- Town Creek Restoration Meeting: Project Team Meeting- June 8
- 2015 Greenville Watershed Master Plan Results: Stakeholder Meetings- Nov.17.
- 2014 Greenville Watershed Master Plan Community Meetings- Nov.3 and 5.
- 2104 ECU Engagement and Outreach Scholars Academy
- 2013 ECU Coastal Water Resources Center co-sponsored the workshop “Advancing Low Impact Development in Northeastern North Carolina.” Nov. 18, 2013. with the NC Coastal Federation and the Pamlico-Tar River Foundation. Greenville, NC.
- 2013 Presentation to ECU Faculty Senate to support resolution for improved campus stormwater management. Greenville, NC. April 16.
- 2012 Urban stormwater presentation and field tour for Greenville City Council. Greenville, NC. Oct. 24.
- 2011 Water resources presentation to St. Paul’s Journey to Adulthood group. Nov. 13.
- 2010 Presenter and panel member, Water, water everywhere, but do we have enough here in eastern North Carolina? The Cypress Group- North Carolina Chapter of the Sierra Club, and the Pamlico-Tar River Foundation. Feb. 8.
- 2009 Instructor for 3-week field summer hydrology course at ECU campus for 22 African-American middle school students from Pitt County as part of the ReachUp Science Enrichment Program.

PROFESSIONAL MEMBERSHIPS

- American Geophysical Union
- American Water Resources Association
- North Carolina Water Resources Association
- Geological Society of America
- Universities Council on Water Resources