

Curriculum Vitae

Thomas E. Jordan

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Profession: Research biogeochemist with expertise in ecosystem ecology, the flow of nitrogen and phosphorus through watersheds and estuaries, and the biogeochemistry of wetlands and riparian forests.

Positions:

- 1993-
Present Senior Staff Scientist at the Smithsonian Environmental Research Center, investigating transport and transformation of nitrogen and phosphorus in ecosystems.
- 1983-93 Research Scientist at the Smithsonian Environmental Research Center, investigating nutrient dynamics of the Rhode River watershed and estuary, nutrient discharges from watersheds of Chesapeake Bay, and denitrification in a riparian forest.
- 1982-83 Smithsonian Postdoctoral Fellow conducting research on the effects of plant litter on nutrient cycling in a tidal marsh.
- 1980-82 Postdoctoral Researcher at the Smithsonian Institution Chesapeake Bay Center for Environmental Studies investigating nutrient dynamics of the Rhode River watershed and estuary.

Professional Preparation:

- 1980-83 Postdoctoral Research at the Smithsonian Institution Chesapeake Bay Center for Environmental Studies.
- 1980 Ph.D. Biology, Boston University Marine Program, Woods Hole, Massachusetts.
- 1974 B.S. Biology, Cum Laude and with honors, Bucknell University, Lewisburg, PA.

Grants and Fellowships Received:

NOAA CSCOR: Predicting impacts of stressors at the land-water interface. (\$4,809,382 total, \$3,066,569 to SERC; 9/1/2009-8/31/2014) Principal Investigator: T. E. Jordan, Co-Investigators D. Breitburg, C. Gallegos, E. Johnson, K. Kettenring, X. Li, M. McCormick, P. Neale, G. Riedel, D. Weller, D. Whigham, M. Erwin, L. Karrh, E. Koch, R. Seitz, T. Targett, and D. Wardrop.

NSF DEB-0919181: Collaborative Research: The missing anthropogenic N—assessing denitrification at the watershed scale. (\$1,132,734; \$372,904 to SERC) Principal Investigator: T. E. Jordan, SERC; Principal Investigator: T. Fisher, UMCES.

NOAA Chesapeake Bay Office: Planning, facilitation, data collection, analysis, and synthesis for Chesapeake Bay Integrated Ecosystem Assessment pilot FY2008—Rhode-West Sub-estuary. (\$99,974; 1/1/2008-9/30/2008) Principal Investigator: D. Breitburg; Co-Investigators: D. Weller, T. Jordan, M. McCormick, and A. Hines.

National Fish and Wildlife Foundation: Innovative BMP implementation strategies to improve water quality within the Choptank River Watershed with a targeted effort in the Tuckahoe Sub-basin. (\$15,000 to SERC; 8/1/08-9/30/10) Project Co-Directors: L. McConnell and G. McCarty.

Smithsonian Institution Endowment: Sprague Fund: Sources and Fates of Nitrogen, Phosphorus, and Trace Elements Discharged from Watersheds (\$49,500; 9/1/2006-9/15/2008) Principal Investigator: T. E. Jordan, Co-Investigators: G. R. Riedel, M. L. Fogel.

NOAA CICEET: A strategic planning tool for targeted buffer restoration and enhanced coastal stewardship. (\$316,600; 9/01/06-8/31/09) Principal Investigator: M. Baker; Co-Investigators: D. E. Weller and T. E. Jordan.

USDA CSREES: Effects of agricultural conservation practices on nitrate losses from croplands of the Choptank River basin. (\$492,968; 9/15/05-9/14/09) Principal Investigator: T. R. Fisher, Co-Investigators: T. E. Jordan, K. W. Staver, M. L. Fogel, A. J. Sutton.

USDA CEAP: Assessment of natural resource conservation practice effectiveness within the Choptank River watershed. (\$299,708 total, \$5,000 to SERC; 9/2004-8/2007) Project Co-directors: L. McConnell, G. McCarty.

EPA 2002-STAR-B1: A watershed classification system for improved monitoring and restoration: Landscape indicators of watershed impairment. (\$856,819; 1/1/04-12/31/08) Principal Investigator: S. D. Prince, Co-Investigators: S. J. Goetz, D. E. Weller, T. E. Jordan.

EPA 2002-STAR-M1: A shallow-water coastal habitat model for regional scale evaluation of management decisions in the Virginian Province (\$748,749; 9/2003-9/2007) Principal

Investigator: C. L. Gallegos, Co-Investigators: T. E. Jordan, J. P. Megonigal, P. J. Neale, D. E. Weller.

NSF: DEB-0235884: Collaborative Research: Across the salinity transition—Changes in N and P biogeochemistry along an estuarine salinity gradient (\$478,092 to SERC, 9/2002-8/2006)
Principal Investigator: T. E. Jordan, Co-Investigators: W. R. Boynton, J. C. Cornwell.

NOAA Coastal Oceans Program: Data synthesis, model comparisons, and a risk-based decision support system for managing coastal systems exposed to multiple stressors. (\$215,678 to SERC, 1/03-12/06) SERC Co-Investigators: D. E. Weller and T. E. Jordan, Lead PI: D. L. Breitburg, Other Co-Investigators: S. M. Bartell, G. F. Riedel, W-S. Lung, D. King, L. Wainger

EPA: Ecological and Socioeconomic Indicators for Integrated Assessment of Aquatic Ecosystems of the Atlantic Slope (\$6,000,000; 3/01-2/05). Lead Principal Investigator: Robert P. Brooks (Pennsylvania State University), SERC Co-Investigators: D. F. Whigham, C. L. Gallegos, D. E. Weller, A. H. Hines, T. E. Jordan, P. P. Marra; plus a total of 11 Co-Investigators from these institutions: Pennsylvania State University, Virginia Institute of Marine Sciences, East Carolina University, Environmental Law Institute, FTN Associates.

EPA: Nanticoke Wetlands Assessment Study (\$224,994, 1/99-12/05). Principal Investigator: D. F. Whigham; Co-Principal Investigators: T. E. Jordan and D.E. Weller.

EPA: Rhode River CISNet: Estuarine Optical Properties as an Integrative Response to Natural and Anthropogenic Stressors (\$510,180, 10/98-9/02). Principal Investigator C. L. Gallegos; Co-Principal Investigators: T. E. Jordan, P. J. Neale, D. L. Correll.

Charles County, MD. Mattawoman Creek Watershed: Nutrient and Sediment Dynamics (\$310,000, 1997-2000) Principal Investigators D.L. Correll, T. E. Jordan, and D.E. Weller.

USDA National Research Initiative Competitive Grants Program, Production of nitrogen gases in riparian forests receiving cropland discharges (\$246,000, 1995-1998) Principal Investigator: T. E. Jordan, Investigators: D. L. Correll, and D. E. Weller.

NOAA, Coastal Oceans Program, The importance of understanding ecological complexity to predicting effects of multiple stressors on coastal systems. (\$755,255 to SERC, 1995-2002) Principal Investigators: D. L. Breitburg and J. G. Sanders (ANSERC, Academy of Natural Sciences Estuarine Research Center); Investigators: R. W. Osman, C. C. Gilmour, K. G. Sellner, G. F. Riedel, G. R. Abbe (ANSERC); S. M. Bartell (SENES Oak Ridge, Inc.); I. Strand, D. Lipton (Univ. Maryland); R. E. Magnien (Maryland Dept. of Natural Resources); S. Brandt (SUNY Buffalo); S. Seitzinger (Rutgers Univ.); D. L. Correll, T. E. Jordan, D. E. Weller (SERC), W. Lung (Univ. Virginia), G. McManus (Univ. Connecticut).

Cooperative Grant from EPA/Chesapeake Bay Program, (\$150,000 1994-1997); and National Resources Conservation Service, (57,000 for 1995-1996 and \$25,000 for 1996-1997); Using constructed wetlands for control of agricultural runoff, Principal Investigators: D. L. Correll, T. E. Jordan, D. E. Weller, D. F. Whigham).

NSF Grant, DEB-93-17968, Relating nutrient discharges to geology and landscape pattern in the Chesapeake Bay watershed (\$1,000,000, 1994-1999) Principal Investigators: D. L. Correll, T. E. Jordan, D. E. Weller.

NSF Grant, DEB-92-06811, Factors controlling nutrient and sediment discharges from the watershed of Chesapeake Bay (\$199,902, 1992-1994) Principal Investigators: D. L. Correll, T. E. Jordan, D. E. Weller.

State of Maryland, Governor's Council on Chesapeake Bay Research Fund, Comparative study of nutrient and sediment interception in Chesapeake Bay riparian zones (\$247,263, 1990-1993), Principal Investigators: D. L. Correll, T. E. Jordan, D. E. Weller).

NSF Grant, BSR-89-17038, Denitrification and the fate of nitrogen inputs to a riparian forest receiving agricultural runoff (\$599,741, 1990-1994) Principal Investigators: D. L. Correll, T. E. Jordan, D. E. Weller.

NSF Grant, BSR-89-05219, Factors controlling nutrient and sediment discharges from the watershed of Chesapeake Bay (\$730,169, 1989-1992) Principal Investigators: D. L. Correll, T. E. Jordan, D. Thompson, D. E. Weller.

NSF Grant BSR-86-15902-01, Nutrient Transformations Along Hydrologic Gradients in a Watershed and Estuary (\$169,909, 1988-1989) Principal Investigators: D. L. Correll, T. E. Jordan, D. Thompson, D. E. Weller.

NSF Grant BSR-86-15902, Nutrient Dynamics of the Rhode River Watershed and Estuary (\$199,919, 1987-1988), Principal Investigators: D. L. Correll, A. H. Hines, T. E. Jordan, D. E. Weller, D. F. Whigham.

NSF Grant BSR-83-16948, Nutrient Dynamics of the Rhode River System (\$906,763, 1984-1987), Principal Investigators: D. L. Correll, A. H. Hines, T. E. Jordan, J. W. Pierce, R. Ulanowicz, D. F. Whigham.

Smithsonian Postdoctoral Fellowship (1982-1983).

NSF Grant DEB-82-07212, Nutrient Dynamics of the Rhode River Ecosystem (\$199,997, 1982-1984) Principal Investigators: D. L. Correll, T. E. Jordan, P. Rublee, and D. F. Whigham.

Friendship Fund Fellowship, Boston University (1977-1979).

Publications:

- Fisher, T. R., T. E. Jordan, K. W. Staver, A. B. Gustafson, A. I. Koskelo, R. J. Fox, A. J. Sutton, T. Kana, K. A. Beckert, J. P. Stone, G. McCarty, M. Lang. In press. The Choptank Basin in transition: Intensifying agriculture, slow urbanization, and estuarine eutrophication. In: Coastal Lagoons: Systems of Natural and Anthropogenic Change (M. J. Kennish and H. W. Pearl, eds.).
- Hartzell, J. L., T. E. Jordan, J. C. Cornwell. 2010. Phosphorus burial in sediments along the salinity gradient of the Patuxent River subestuary. *Estuaries and Coasts* 33:92-106. DOI 10.1007/s12237-009-9232-2.
- Li, X., D. E. Weller and T. E. Jordan. 2010. Watershed model calibration using multi-objective and multi-site averaging. *Journal of Hydrology* 380: 277-288.
- Gallegos, C. L., T. E. Jordan, and S. S. Hedrick. 2009. Long-term dynamics of phytoplankton in the Rhode River, Maryland (USA). *Estuaries and Coasts*. In press.
- McCarty, G. W., L.L. McConnell, C.J. Hapeman, A. Sadeghi, C. Graff, W.D. Hively, M.W. Lang, T.R. Fisher, T. Jordan, C.P. Rice, E.E. Codling, D. Whitall, A. Lynn, J. Keppler, and M.L. Fogel. 2008. Water quality and conservation practice effects in the Choptank River watershed. *Journal of Soil and Water Conservation* 63:461-474.
- Russell, M. J., D. E. Weller, T. E. Jordan, K. J. Sigwart, and K. J. Sullivan. 2008. Net anthropogenic phosphorus inputs: Spatial and temporal variation in the Chesapeake region. *Biogeochemistry* 88:285-304.
- Liu, Z. J., D. E. Weller, T. E. Jordan, D. L. Correll, and K. B. Boomer. 2008. Integrated modular modeling of water and nutrients from point and nonpoint sources in the Patuxent River watershed. *Journal of the American Water Resources Association* 44:700-723.
- Jordan, T. E., J. C. Cornwell, W. R. Boynton, and J. T. Anderson. 2008. Changes in phosphorus biogeochemistry along an estuarine salinity gradient: The iron conveyer belt. *Limnology and Oceanography* 53: 172-184.
- Boomer, K. B., D. E. Weller, T. E. Jordan. 2008. Universal Soil Loss Equation-Based Empirical Models Fail to Predict Sediment Discharges from Chesapeake Bay Catchments. *Journal of Environmental Quality* 37:79-89.
- Li, X., D. E. Weller, C. L. Gallegos, T. E. Jordan, H-C Kim. 2007. Effects of watershed and estuarine characteristics on the abundance of submerged aquatic vegetation in Chesapeake Bay subestuaries. *Estuaries and Coasts* 30(5), 840-854.

- Weller, D. E., M. N. Snyder, D. Whigham, A. D. Jacobs, and T. E. Jordan. 2007. Landscape indicators of wetland condition in the Nanticoke River watershed. *Wetlands* 27:498-515.
- Whigham, D.F., A. D. Jacobs, D.E. Weller, T.E. Jordan, M.E. Kentula, S.F. Hornsby, and D.L. Stevens. 2007. Combining HGM and EMAP procedures to assess wetlands at the watershed scale – status of flats and non-tidal riverine wetlands in the Nanticoke River watershed, Maryland (USA). *Wetlands* 27: 416-432.
- Jordan, T. E., M. P. Andrews, R. P. Szuch, D. F. Whigham, D. E. Weller, and A. D. Jacobs. 2007. Comparing functional assessments of wetlands to measurements of soil characteristics and nitrogen processing. *Wetlands* 27:479-497.
- Baker, M. E., D. E. Weller, and T. E. Jordan. 2007. Effects of stream map resolution on measures of riparian buffer distribution and nutrient retention potential. *Landscape Ecology* 22:973-992.
- Baker, M. E., D. E. Weller, and T. E. Jordan. 2006. Mapping watershed boundaries using digital elevation data: implications for land cover analysis of nutrient discharge. *Photogrammetric Engineering and Remote Sensing* 72:159-168.
- Baker, M. E., D. E. Weller, and T. E. Jordan. 2006. Improved methods for quantifying patterns of riparian buffers. *Landscape Ecology* 21:1327-1345.
- Gallegos, C. L., T. E. Jordan, A. H. Hines, and D. E. Weller. 2005. Temporal variability of optical properties in a shallow eutrophic estuary: Seasonal and interannual variability. *Estuarine, Coastal and Shelf Science* 64:156-170.
- King, R. S., M. E. Baker, D. F. Whigham, D. E. Weller, T. E. Jordan, P. F. Kazyak, and M. K. Hurd. 2005. Spatial considerations for linking watershed land cover to ecological indicators in streams. *Ecological Applications* 15(1):137-153.
- Hogan, D. M., T. E. Jordan, and M. R. Walbridge. 2004. Phosphorus retention and soil organic carbon in restored and natural freshwater wetlands. *Wetlands* 24(3):573-585.
- Whigham, D. F., D. E. Weller, A. D. Jacobs, T. E. Jordan, and M. Kentula. 2003. Assessing the ecological condition of wetlands at the catchment scale. *Landscape* 20:99-111.
- Whigham, D. F. and T. E. Jordan. 2003. Isolated wetlands and water quality. *Wetlands* 23:540-548.
- Jordan, T. E., D. F. Whigham, K. H. Hofmockel, and M. A. Pittek. 2003. Nutrient and sediment removal by a restored wetland receiving agricultural runoff. *Journal of Environmental Quality* 32:1534-1547.

- Breitburg, D.L., T. E. Jordan and D. Lipton. (eds.) 2003. From Ecology to Economics: tracing human influence in the Patuxent River Estuary and its watershed. Special Issue of Estuaries. Vol 26 (2a). 229 pp.
- Breitburg, D.L., T.E. Jordan, and D. Lipton. 2003. Preface—From ecology to economics: Tracing human influence in the Patuxent River estuary and its watershed. Estuaries 26:167-170.
- Jordan, T. E., D. E. Weller, and D. L. Correll. 2003. Sources of nutrient inputs to the Patuxent River estuary. Estuaries 26:226-243.
- Weller, D. E., T. E. Jordan, D. L. Correll, and Z. J. Liu. 2003. Effects of land use change on nutrient discharges from the Patuxent River watershed. Estuaries 26:244-266.
- Castro, M.S., C.T. Driscoll, T.E. Jordan, W.G. Reay, W.R. Boynton. 2003. Sources of nitrogen to estuaries in the United States. Estuaries 26:803-814.
- Whigham, D. F., M. Pittek, K. H. Hofmockel, T. E. Jordan, and A. L. Pepin. 2002. Biomass and nutrient dynamics in restored wetlands on the outer coastal plain of Maryland. Wetlands 22:562-574.
- Gallegos, C. L. and T. E. Jordan. 2002. Impact of the Spring 2000 phytoplankton bloom in Chesapeake Bay on optical properties and light penetration in the Rhode River, Maryland. Estuaries 25:508-518.
- Castro, Mark S., C.T. Driscoll, T.E. Jordan, W.G. Reay, W.R. Boynton, S.P. Seitzinger, R.V. Styles and J.E. Cable, 2001. Contribution of atmospheric deposition to the total nitrogen loads to thirty-four estuaries on the Atlantic and Gulf Coasts of the United States. Pp. 77-106. In: Nitrogen Loading in Coastal Water Bodies: An Atmospheric Perspective. R.M. Valigura, R. B. Alexander, M.S. Castro, T. P. Meyers, H. W. Paerl, P. E. Stacey, and R. E. Turner (eds.). Coastal and Estuarine Studies Series 57, American Geophysical Union, Washington, D.C.
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- Correll, D. L., T. E. Jordan, D. E. Weller. 2000. Dissolved silicate dynamics of the Rhode River watershed and estuary. Estuaries 23:188-198.

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- Correll, D. L., T. E. Jordan, D. E. Weller. 2000. Beaver pond biogeochemical effects in the Maryland Coastal Plain. *Biogeochemistry* 49:217-239.
- Correll, D. L., T. E. Jordan, D. E. Weller. 2000. Transfer of phosphorus from the farm to the Bay. pp. 131-142. In: A. N. Sharpley (ed.) *Agriculture and Phosphorus Management: The Chesapeake Bay*. Lewis Publishers, Washington, D.C.
- Liu, Z. J., D. E. Weller, D. L. Correll, and T. E. Jordan. 2000. Effects of land cover and geology on stream chemistry in watersheds of Chesapeake Bay. *Journal of the American Water Resources Association* 36:1349-1365.
- Correll, D. L., T. E. Jordan, D. E. Weller. 1999. Precipitation effects on sediment and associated nutrient discharges from Rhode River watersheds. *Journal of Environmental Quality* 28:1897-1907.
- Correll, D. L., T. E. Jordan, D. E. Weller. 1999. Effects of precipitation and air temperature on nitrogen discharges from Rhode River watersheds. *Water, Air, and Soil Pollution* 115: 547-575.
- Jordan, T. E., D. F. Whigham, K. Hofmockel, and N. Gerber. 1999. Restored wetlands in crop fields control nutrient runoff. pp. 49-60. In: J. Vymazal (ed.) *Nutrient Cycling and Retention in Natural and Constructed Wetlands*. SPB Academic Publishing bv, Amsterdam, The Netherlands.
- Correll, D. L., T. E. Jordan, D. E. Weller. 1999. Transport of nitrogen and phosphorus from Rhode River watersheds during storm events. *Water Resources Research* 35:2513-2521.
- Correll, D. L., T. E. Jordan, D. E. Weller. 1999. Effects of precipitation and air temperature on phosphorus fluxes from Rhode River watersheds. *Journal of Environmental Quality* 28:144-154.
- Correll, D. L., T. E. Jordan, D. E. Weller. 1999. Effects of interannual variation of precipitation on stream discharge Rhode River subwatersheds. *Journal of the American Water Resources Association* 35:73-82.
- Weller, D. E., T. E. Jordan, and D. L. Correll. 1998. Heuristic models for material discharge from landscapes with riparian buffers. *Ecological Applications* 8:1156-1169.

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- Gallegos, C. L. and T. E. Jordan. 1997. Seasonal progression of factors limiting phytoplankton pigment biomass in the Rhode River estuary, Maryland (USA). II. Modeling N versus P limitation. *Marine Ecology Progress Series* 161:199-212.
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- Gallegos, C. L., T. E. Jordan, and D. L. Correll. 1997. Interannual variability in spring bloom timing and magnitude in the Rhode River, Maryland (USA): observations and modeling. *Marine Ecology Progress Series* 154:27-40.
- Correll D. L., T. E. Jordan and D. E. Weller. 1997. Failure of agricultural riparian buffers to protect surface waters from groundwater nitrate contamination. pp. 162-165, In: J. Gibert, J. Mathieu and F. Fournier (eds.), *Groundwater/Surface Water Ecotones: Biological and Hydrological Interactions and Management Options*. Cambridge University Press. Cambridge, UK.
- Jordan, T. E., D. L. Correll, and D. E. Weller. 1997. Relating nutrient discharges from watersheds to land use and stream flow variability. *Water Resources Research* 33:2579-2590.
- Jordan, T. E., D. L. Correll, and D. E. Weller. 1997. Effects of agriculture on discharges of nutrients from Coastal Plain watersheds of Chesapeake Bay. *Journal of Environmental Quality* 26:836-848.
- Jordan, T. E., D. L. Correll, and D. E. Weller. 1997. Nonpoint source discharges of nutrients from Piedmont watersheds of Chesapeake Bay. *Journal of the American Water Resources Association* 33:631-645.
- Howarth, R. W., G. Billen, D. Swaney, A. Townsend, N. Jaworski, K. Lajtha, J. A. Downing, R. Elmgren, N. Caraco, T. Jordan, F. Berendse, J. Freney, V. Kuderyarov, P. Murdoch, and Zhu Zhao-liang. 1996. Riverine inputs of nitrogen to the North Atlantic Ocean: Fluxes and human influences. *Biogeochemistry* 35:75-139.
- Jordan, T. E. and D. E. Weller. 1996. Human contributions to terrestrial nitrogen flux. *BioScience* 46:655-664.

- Jordan, T. E., D. L. Correll, D. E. Weller, and N. M. Goff. 1995. Temporal variation in precipitation chemistry on the shore of the Chesapeake Bay. *Water, Air and Soil Pollution*. 83:263-284.
- Correll, D. L., T. E. Jordan and D. E. Weller. 1995. Livestock and pasture land effects on the water quality of Chesapeake Bay watershed streams. p. 107-117 in K. Steele (ed.) *Animal Waste and the Land-Water Interface*, Lewis Publishers, New York.
- Correll, D. L., T. E. Jordan and D. E. Weller. 1994. Long-term nitrogen deposition on the Rhode River watershed. pp. 508-518 in P. Hill and S. Nelson (eds.) *Toward a Sustainable Watershed: The Chesapeake Experiment*, Proceedings of the 1994 Chesapeake Research Conference, Chesapeake Research Consortium Publication No. 149.
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- Correll, D. L., T. E. Jordan, and D. E. Weller. 1993. Coastal plain riparian forests: Their role in filtering agricultural drainage. pp. 67-72 in J. A. Kuster and C. Lassonde, eds. *Altered, artificial, and managed wetlands. Focus: agriculture and forestry*. Association of State Wetland Managers, Berne, NY.
- Jordan, T. E., D. L. Correll, and D. E. Weller. 1993. Nutrient interception by a riparian forest receiving cropland runoff. *J. Environ. Qual.* 22:467-473.
- Childers, D. L., F. H. Sklar, B. Drake, and T. Jordan. 1993. Seasonal measurements of sediment elevation in three mid-Atlantic estuaries. *Journal of Coastal Research* 9:986-1003.
- Correll, D. L., T. E. Jordan, and D. E. Weller. 1992. Cross media inputs to eastern U. S. watersheds and their significance to estuarine water quality. *Water Science and Technology* 26:2675-2683.
- Gallegos, C. L., T. E. Jordan, and D. L. Correll. 1992. Event-scale response of phytoplankton to watershed inputs in a subestuary: Timing, magnitude, and location of blooms. *Limnology and Oceanography* 37:813-828.

- Correll, D. L., T. E. Jordan, and D. E. Weller. 1992. Nutrient flux in a landscape: Effects of coastal land use and terrestrial community mosaic on nutrient transport to coastal waters. *Estuaries* 15:431-442.
- Jordan, T. E., D. L. Correll, J. Miklas and D. E. Weller. 1991. Long-term trends in estuarine nutrients and chlorophyll and short-term effects of variation in watershed discharge. *Marine Ecology Progress Series* 75:121-132.
- Jordan, T. E., D. L. Correll, J. Miklas, and D. E. Weller. 1991. Nutrients and chlorophyll at the interface of a watershed and an estuary. *Limnology and Oceanography* 36:251-267.
- Jordan, T. E., and D. L. Correll. 1991. Continuous automated sampling of tidal exchanges of nutrients by brackish marshes. *Estuarine, Coastal and Shelf Science* 32:527-545.
- Jordan, T. E., D. F. Whigham, and D. L. Correll. 1990. Effects of nutrient and litter manipulations on aboveground production, nutrient content, and herbivore infestation of the narrow leaved cattail, *Typha angustifolia* L. *Aquatic Botany*.
- Jordan, T. E., D. F. Whigham, and D. L. Correll. 1989. The role of litter in nutrient cycling in a brackish tidal marsh. *Ecology* 70:1906-1915.
- Whigham, D. F., T. E. Jordan, and J. Miklas. 1989. Biomass and resource allocation of *Typha angustifolia*: the effect of within and between year variations in salinity. *Bulletin of the Torrey Botanical Club* 116:364-370.
- Jordan, T. E. and D. F. Whigham. 1988. The importance of standing dead shoots of the narrow leaved cattail, *Typha angustifolia* L. *Aquatic Botany* 29:319-328.
- Jordan, T. E., J. W. Pierce, and D. L. Correll. 1986. Flux of particulate matter in the tidal marshes and subtidal shallows of the Rhode River Estuary. *Estuaries* 9: 310-319.
- Jordan, T. E., D. L. Correll, W. T. Peterjohn and D. E. Weller. 1986. Nutrient flux in a landscape: The Rhode River watershed and receiving waters. p. 57-76 in *Watershed Research Perspectives* (edited by D. L. Correll), Smithsonian Press, Washington, D.C.
- Jordan, T. E. and D. L. Correll. 1985. Nutrient chemistry and hydrology of interstitial water in brackish tidal marshes of Chesapeake Bay. *Estuarine Coastal and Shelf Science*, 21: 45-55.
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- Jordan, T. E. and I. Valiela. 1982. A nitrogen budget of the ribbed mussel, *Geukensia demissa*, and its significance in nitrogen flow in a New England salt marsh. *Limnology and Oceanography*, 27:75-90.
- Jordan, T. E. 1980. A nitrogen budget of the ribbed mussel, *Geukensia demissa*, and its significance in nitrogen flow in a New England salt marsh. Ph.D. thesis, Boston University. 109 pp.
- McDiffett, W. F. and T. E. Jordan. 1978. The effects of an aquatic detritivore on the release of inorganic N and P from decomposing leaf litter. *American Midland Naturalist*, 99:36-44.

Recent Conference Presentations:

- 2009 Boomer, K. B., D. E. Weller, T. E. Jordan, and M. E. Baker. Characterizing riparian and floodplain functions with high-resolution topographic data. Ecological Society of America, August 2009.
- Fox, R. J., A. B. Gustafson, T. R. Fisher, T. Kana, S. Ator, J. Denver, T. Jordan, M. Lang, G. McCarty. Denitrification in natural, restored, and constructed wetlands adjacent to crop fields on the Mid-Atlantic Coastal Plain. Society of Wetland Scientists Conference, Madison, Wisconsin, June 21-26, 2009.
- Baker, M. E., D. E. Weller, and T. E. Jordan. Empirical tests for effects of riparian buffers on whole watershed nitrate discharges. North American Benthological Society 57th Annual Meeting, Grand Rapids, Michigan, 17-22 May, 2009.
- Mitchell, C., C. Gilmour, A. Heyes, T. E. Jordan. Total mercury and methylmercury mass fluxes from three coastal plain mid-Atlantic watersheds with contrasting land use. Joint Assembly of the American Geophysical Union, Toronto, Canada, May 24-27, 2009.
- Weller, D. E., M. E. Baker, and T. E. Jordan. New spatial and statistical approaches quantify the effects of riparian buffers on nitrate discharges from whole catchments. United States Section –International Association for Landscape Ecology, Snowbird, Utah, April 12-16, 2009

- Baker, M. E., M. Van Appledorn, D. E. Weller, and T. E. Jordan. Strategic tools for targeted riparian buffer restoration: developing priorities and reasonable expectations for nutrient reductions. Chesapeake Research Consortium, Ecosystem-Based Management Conference, Baltimore, MD, March 6, 2009.
- Jordan, T. E., C. L. Gallegos, and D. E. Weller. Thirty-year variability of nutrients and chlorophyll in the Rhode River subestuary of Chesapeake Bay. Chesapeake Research Consortium, Ecosystem-Based Management Conference, Baltimore, MD, March 6, 2009
- Weller, D. E., M. E. Baker, and T. E. Jordan. Riparian buffer effects on whole watershed nitrate discharges: New statistical models and management implications. Chesapeake Research Consortium, Ecosystem-Based Management Conference, Baltimore, MD, March 6, 2009.
- Weller, D. E., X. Li, T. E. Jordan, and C. L. Gallegos. Effects of watershed and estuarine characteristics on abundance of submerged aquatic vegetation in Chesapeake Bay subestuaries. Smithsonian Institution Geographic Information Systems Conference, Washington, DC, January 2009.
- 2008 Hartzell, J. L., T. E. Jordan, and J. C. Cornwell. The role of Fe in regulating P bioavailability along the salinity gradient of three Chesapeake Bay subestuaries. Atlantic Estuarine Research Society Conference, Fairfax, VA, November 2008.
- D. E. Weller, M. E. Baker, and T. E. Jordan. Testing for riparian buffer effects on nutrient discharges from whole catchments. American Water Resources Association, Virginia Beach, VA, September 2008.
- K. Boomer, D. Weller, M. Baker, and T. Jordan, Mapping denitrification potential using high resolution topography data American Water Resources Association, Virginia Beach, VA, September 2008.
- Maloney, K. O., D. E. Weller, T. E. Jordan, M. J. Russell, M. E. Baker, S. D. Prince, and S. Goetz. Landscape indicators of watershed impairment: classification of conditions of the Chesapeake Bay Basin, U.S.A. Ecological Society of America, Milwaukee, WI, August 2008.
- Li, X., D. E. Weller and T. E. Jordan. Modeling water and nutrient discharges in Chesapeake coastal plain watersheds. Ecological Society of America, Milwaukee, August 2008.
- Li, X., D. E. Weller and T. E. Jordan. GWLF model automatic calibration and prediction of water and nutrient discharges from Coastal Plain Subwatersheds of Chesapeake Bay Chesapeake Community Modeling Program Symposium, Annapolis, MD, May 2008.

- Boomer, K. B., D. E. Weller, T. E. Jordan. Comparison of Patuxent River watershed discharge models. Chesapeake Community Modeling Program Symposium, Annapolis, MD, May 2008.
- Boomer, K. B., D. E. Weller, M. E. Baker, and T. E. Jordan. Using fine-resolution topography data to infer denitrification potential in riparian wetlands in the Chesapeake Bay watershed. Society of Wetland Scientists, Washington, DC, May 2008.
- Russell, M. J., D. E. Weller, and T. E. Jordan. Landscape indicators of watershed impairment- nutrients. American Society of Limnology and Oceanography, Orlando FL, March 2008.
- 2007 Jordan, T. E., M. L. Fogel, T. R. Fisher, A. J. Sutton. Nitrogen budgets for agricultural watersheds and the nitrogen and oxygen isotope abundance in discharged nitrate. 19th Biennial Conference of the Estuarine Research Federation, Providence, Rhode Island, November 2007.
- Russell, M., D. E. Weller, and T. E. Jordan. Nitrogen to Phosphorus Ratios in Anthropogenic Inputs and Watershed Discharges to Chesapeake Bay. 19th Biennial Conference of the Estuarine Research Federation, Providence, Rhode Island, November 2007.
- Gallegos, C. L., T. E. Jordan, and D. E. Weller. Long-term Phytoplankton Dynamics in the Rhode River, Maryland (USA), Chapman Conference, Croatia, October 2007.
- Weller, D. E., M. E. Baker, R. S. King, and T. E. Jordan. Progress and challenges in demonstrating riparian buffer effects on nutrient discharges from whole catchments. 7th Quadrennial World Congress of the International Association for Landscape Ecology, Wageningen, The Netherlands, July 2007.
- Jordan, T. E. and D. E. Weller. Nutrient removal by restored wetlands in agricultural watersheds. 10th International Symposium on Wetland Biogeochemistry, Annapolis, MD, April 2007.
- Fisher, T. R., Gustafson, A. B., Sutton, A. J., Kana, T., Jordan, T. E., Staver, K. W., and Fogel, M. L. Reduction of NO₃ losses from crop fields associated with controlled drainage structures in the Choptank River basin. National Center for Environmental Research 2nd National Conference on Ecosystem Restoration, Kansas City, Missouri, April 2007.
- Fisher, T. R., A. B. Gustafson, A. Sutton, T. Kana, G. McCarty, K. Staver, T. E. Jordan, M. Fogel. Groundwater denitrification of agricultural nitrate. American Society of Limnology and Oceanography Aquatic Sciences Meeting, Santa Fe, NM, February 2007.

- Kim, H., X. Li, C. L. Gallegos, D. E. Weller, T. E. Jordan. A regional comparison study on the ecological response of subestuarine ecosystems to different watershed loadings in the Chesapeake Bay: A modeling study. American Society of Limnology and Oceanography Aquatic Sciences Meeting, Santa Fe, NM, February 2007.
- Fisher, T. R., T. E. Jordan, K. W. Staver, M. L. Fogel, A. J. Sutton, and A. B. Gustafson. Assessment of conservation practices for control of agricultural nitrate losses in the Choptank basin. USDA-CSREES National Water Conference, Savannah, GA, January 2007.
- 2006 Russell, M., T. E. Jordan, and D. E. Weller. Net anthropogenic nitrogen and phosphorus inputs in the Chesapeake Bay drainage: Landscape indicators of watershed impairment. American Water Resources Association Annual Conference, Baltimore, Maryland, November 2006.
- Fisher, T., T. E. Jordan, K. W. Staver, M. L. Fogel. Assessment of conservation practices for control of agricultural NO₃ losses in the Choptank Basin. American Water Resources Association Annual Conference, Baltimore, Maryland, November 2006.
- Boomer, K., D. E. Weller, T. E. Jordan. Developing TMDLs: Evaluation of event-based stream sediment loads predicted from USLE-based watershed models. American Water Resources Association Annual Conference, Baltimore, Maryland, November 2006.
- Weller, D. E., M. N. Snyder, D. F. Whigham, A. D. Jacobs, and T. E. Jordan. Landscape indicators of wetland condition in the Nanticoke River watershed of Maryland and Delaware. American Water Resources Association Annual Conference, Baltimore, Maryland, November 2006.
- Russell, M., T. E. Jordan, and D. E. Weller. Net anthropogenic nitrogen and phosphorus inputs in the Chesapeake Bay drainage. Atlantic Estuarine Research Society, Baltimore, MD, October 2006.
- Hartzell, J. L. and T. E. Jordan. The role of iron minerals in sequestering phosphorus along an estuarine salinity gradient. American Society of Limnology and Oceanography, Victoria British Columbia, Canada, June 2006.
- Jordan, T. E., M. L. Fogel, A. D. Standbridge, T. R. Fisher, A. J. Sutton. Using stable isotopes of N and O in nitrate as indicators of denitrification in agricultural watersheds. American Geophysical Union, Joint Assembly, Baltimore, Maryland, May 2006.
- Baker, M. E., D. E. Weller, and T. E. Jordan. Effects of stream map resolution on measures of riparian buffer distribution and nutrient retention potential. American Geophysical Union, Joint Assembly, Baltimore, Maryland, May 2006.

- Boomer, K. B., D. E. Weller, and T. E. Jordan. Assessment of modeling tools for TMDL development. American Geophysical Union, Joint Assembly, Baltimore, Maryland, May 2006.
- Hartzell, J. L. and T. E. Jordan. Alteration in solid state phosphorus with depth in sediments along the salinity transition zone of a major Chesapeake Bay tributary. American Geophysical Union, 2006 Joint Assembly, Baltimore, MD, May 2006.
- Li, X., D. E. Weller, C. L. Gallegos, T. E. Jordan, and H. Kim. Effects of watershed and estuary characteristics on the abundance of submerged aquatic vegetation. American Geophysical Union, Joint Assembly, Baltimore, Maryland, May 2006.
- Russell, M. J., D. E. Weller, and T. E. Jordan. Net anthropogenic phosphorus inputs in the Chesapeake Bay region. American Geophysical Union, Joint Assembly, Baltimore, Maryland, May 2006.
- Hartzell, J. L. and T. E. Jordan. Phosphorus distribution patterns across a salinity gradient of a Chesapeake Bay subestuary. Atlantic Estuarine Research Society, Philadelphia, PA, March 2006.
- M. E. Baker, D.E. Weller, and T.E. Jordan. Watershed-scale thresholds in the potential effectiveness of riparian buffers. International Association for Landscape Ecology, San Diego, CA, March 2006.
- 2005 Breitburg, D., A. Adamack, R. Fulford, T. Jordan, D. Weller, D. Lipton, A. Nice, W. Lung, and K. Rose. The importance of scale and location to the ecological and economic benefits of restoration. Society of Environmental Toxicology and Chemistry, Baltimore, MD, November 2005.
- Jordan, T. E., J. C. Cornwell, J. T. Anderson, and W. R. Boynton. Do sea salts or sulfate mobilize iron-bound phosphate from estuarine sediments? 18th Biennial Conference of the Estuarine Research Federation, Norfolk, Virginia, October 2005.
- Anderson, J. T., W. R. Boynton, T. E. Jordan, and J. C. Cornwell. Phosphorus fluxes and transport in the middle Patuxent Estuary, Maryland. 18th Biennial Conference of the Estuarine Research Federation, Norfolk, Virginia, October 2005.
- Breitburg, D., A. Adamack, R. Fulford, T. Jordan, D. Weller, D. Lipton, A. Nice, W. Lung, and K. Rose. The importance of scale and location to the ecological and economic benefits of restoration. 18th Biennial Conference of the Estuarine Research Federation, Norfolk, Virginia, October 2005.

Weller, D. E., M. E. Baker, R. S. King, and T. E. Jordan. Effects of land cover on aquatic systems: Does spatial arrangement matter? 18th Biennial Conference of the Estuarine Research Federation, Norfolk, Virginia, October 2005.

Breitburg, D., A. Adamack, R. Fulford, T. Jordan, D. Weller, D. Lipton, A. Nice, W. Lung, and K. Rose. The importance of scale and location to the ecological and economic benefits of restoration. Ecological Society of America, Montreal, Canada, August 2005.

M. E. Baker, D.E. Weller, and T.E. Jordan. Transport-distance effects in regional predictions of nitrate discharge: implications for nitrogen transformation. North American Benthological Society and American Geophysical Union, New Orleans, LA, June 2005.

Liu, Z-J., D. E. Weller, T. E. Jordan, and D. L. Correll. A simple modular watershed model and its application in the Patuxent River watershed. American Association of Geographers, Denver, CO, April 2005.

Weller, D. E., M. E. Baker, R. S. King, and T. E. Jordan. Improved distance-weighting methods for predicting stream responses from watershed land cover. International Association for Landscape Ecology, Syracuse, NY, March 2005.

M. E. Baker, D.E. Weller, and T.E. Jordan. Quantifying regional patterns of riparian buffers: New landscape metrics and effects of stream map resolution. International Association for Landscape Ecology, Syracuse, NY, March 2005.

Recent Workshop Participation:

2009 Chesapeake Bay Program Scientific and Technical Advisory Committee Workshop: Selecting promising small watersheds for assessing water quality response of accelerated agricultural conservation implementation, U. S. Geological Survey, Baltimore, MD, May 2009.

Chesapeake Bay Program Scientific and Technical Advisory Committee Workshop: Technical workshop on small watershed monitoring designs. U. S. Geological Survey, Baltimore, MD, April 2009.

NSF Long Term Ecological Research Network Workshop: Disturbance legacies in material fluxes, University of New Hampshire, Durham, NH, February 2009.

2008 USDA Agricultural Research Service and Natural Resource Conservation Service, Conservation Effects Assessment Program, Wetlands of the Mid-Atlantic Region Workshop 2. Beltsville, MD, June 2008.

NSF National Ecological Observatory Network, Mid-Atlantic Region Observatory, Site Visit Workshop. Smithsonian Conservation and Research Center, Front Royal, VA, April 2008.

- 2007 USDA Agricultural Research Service and Natural Resource Conservation Service, Conservation Effects Assessment Program: Wetlands of the Mid-Atlantic Region Workshop 1. Presentation: Multi-Scale Assessment of Wetland Ecosystem Services in Agricultural Landscapes, Beltsville, MD, December 2007.

Chesapeake Bay Program, Quantifying the Role of Wetlands in Achieving Nutrient and Sediment Reductions in Chesapeake Bay, Presentation: Nutrient removal by restored wetlands in agricultural watersheds, Annapolis, MD, April 2007.

NOAA Chesapeake Bay Office-Smithsonian Environmental Research Center Workshop, Presentation: Land-sea connections and thresholds, Edgewater, MD, March 2007.

- 2006 Planning Workshop: Comparative Forest Ecology by Long-Term Monitoring of Large-Scale Plots, SERC, Edgewater, MD, December 2006.

Research at the Jug Bay National Estuarine Research Reserve, Lothian, MD, September 21, 2006.

Chesapeake Bay Program's Scientific and Technical Advisory Committee workshop: Modeling in the Chesapeake Bay Program: 2010 and Beyond, Annapolis, January 17-18, 2006.

- 2005 NSF-Sponsored Workshop on Managing Global Rivers and Estuaries: A Framework for Designing a Hudson River Monitoring System, Presentation: Monitoring the Chesapeake Land-Sea Connection, Palisades, NY, June 2005.

University of Maryland Baltimore County-Smithsonian Environmental Research Center Workshop, Edgewater, MD, January 2005.

Recent Seminars:

- 2009 University of Maryland Baltimore County, Baltimore, MD, October 2009. Nutrient discharges from watersheds of the Chesapeake Bay and the search for the missing nitrogen.

Chesapeake Biological Laboratory, Solomons, MD, June 2009. Nutrient discharges from watersheds of the Chesapeake Bay and the search for the missing nitrogen.

- University of Virginia class at SERC, Edgewater, MD, January 2009. Nutrient discharges from watersheds of the Chesapeake Bay: Effects of land use and physiographic province.
- 2008 Chesapeake Bay Program Non-Tidal Working Group Meeting, September 2008, USGS Baltimore. Factors affecting nutrient discharges from Chesapeake watersheds.
- Baltimore Ecosystem Study LTER, April 2008, UMBC Baltimore. Factors affecting watershed discharges of organic carbon.
- 2007 George Mason University, Fairfax, VA, March 2007. Transport and transformation of phosphorus from land to sea.
- 2005 NSF Sponsored Workshop on Managing Global Rivers and Estuaries: A Framework for Designing a Hudson River Monitoring System, Palisades, NY, June 2005. Monitoring the Chesapeake land-sea connection.
- Maryland Department of Agriculture course for nutrient management consultants, Smithsonian Environmental Research Center, Edgewater, MD, April 2005. Effects of agricultural and developed lands on nutrient discharges from watersheds.
- George Mason University, Fairfax, VA, February 2005. Nutrient discharges from watersheds of Chesapeake Bay: Effects of land use and physiographic province.
- University of Maryland Baltimore County-Smithsonian Environmental Research Center Workshop, Edgewater, MD, January 2005, Nutrient discharges from watersheds of Chesapeake Bay: Effects of land use and physiographic province.

Service to the Smithsonian Environmental Research Center (SERC):

- 2009- Present Member of SERC strategic planning sub-committee.
- 2009- Present Member of design team for new laboratory at SERC.
- 2009- Present Member long-term research planning sub-committee
- 2009 Drafted a proposal to potential private donors to support production of videos to inform the public about SERC.
- 2009 Helped develop and draft a strategic plan for education programs at SERC

2007- Present	Compiled requests to the Smithsonian Institution for major research equipment
2004- Present	Member of SERC Land Use Planning Committee
2003-04	Head of committee to revise SERC strategic plan and lead editor of the new SERC strategic plan.
2003-04	SERC representative in workshops to develop a new strategic plan for science at the Smithsonian Institution.
2002- Present	Director of SERC Analytical Services
1998	Lead editor and author of a general brochure on SERC
1997- Present	Member of review committee for Smithsonian Institution Seidell Fund
1997-02	Prepared SERC annual contributions to Smithsonian Year and the Annals of the Smithsonian Institution
1997- Present	Chair of the SERC Science Committee
1997- Present	Member of the SERC Education Committee
1994-96	Delegate to the Smithsonian Congress of Scholars, research advocacy group.

Recent Service to Professional Organizations:

2008- Present	Past President, Association of Ecosystem Research Centers
2007	Member of organizing committee for 10 th International Symposium on Wetland Biogeochemistry, held in Annapolis MD, April 2007.
2006-08	President, Association of Ecosystem Research Centers, organized and ran annual symposia and congressional briefings
2005-06	President Elect, Association of Ecosystem Research Centers

- 2004- Present SERC representative to the Consortium of Universities for the Advancement of Hydrologic Science, Incorporated
- 2002-04 Member at Large, Board of Directors, Association of Ecosystem Research Centers

Service on Proposal Review Panels:

- 2009 EPA-USDA joint grant program for research on ecosystem services of agro-ecosystems
- 2008 USDA Hispanic-Serving Institutions Education Grants Program
- 2004 US Environmental Protection Agency STAR Fellowships
- 2002 National Science Foundation Ecosystems Program
- 2000 Agency for International Development
- 1987 National Undersea Research Program
- 1987 Agency for International Development

Recent Scientific Advisory Activities:

- 2009 Steering Committee for the Chesapeake Bay Program Science and Technical Advisory Committee to design watershed monitoring to assess the effects of agricultural conservation practices.
- 2008- Present Scientific Advisory Panel to Maryland's Chesapeake and Atlantic Coastal Bays 2010 Trust Fund
- 2006 Expert panel for evaluation of the National Fish and Wildlife Foundation's Chesapeake Bay Small Watershed Grants Program
- 2006 Advisor to Army Corps of Engineers' Chesapeake Bay Marshlands Restoration Project, Water Quality Subcommittee
- 2004-05 Scientific advisory board EPA-STAR funded Consortium of Estuarine Ecoinicator Research – Gulf of Mexico Program, Ocean Springs, Mississippi.

Recent Reviewing:

Grant proposals for: Israel Science Foundation, National Environment Research Council, National Estuarine Research Reserve, National Institutes for Water Resources, National Oceanic and Atmospheric Administration, National Science Foundation, New York Sea Grant, U. S. Agency for International Development, and U. S. Department of Agriculture.

Journal articles for: Biogeochemistry; Biogeosciences, Biological Bulletin; Canadian Journal of Fisheries and Aquatic Science; Ecosystems; Environmental Geochemistry and Health; Environmental Management; Environmental Monitoring and Assessment; Environmental Science & Technology; Estuaries; Estuaries and Coasts; Estuarine, Coastal and Shelf Science; Hydrobiologia; Journal of Coastal Research; Journal of Geophysical Research; Journal of Hydrology; Journal of the American Water Resources Association; Limnology and Oceanography; Marine Environmental Research; Plant and Soil; Trends in Ecology and Evolution; Water Resources Research; Wetlands; and Wetlands Ecology and Management.

Received the Journal of Environmental Quality citation for excellence in manuscript review 2009.

Book for: Smithsonian Institution, 2009 (America's Forested Wetlands by Jeffery Stine).

Teaching:

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| 2009 | Hosted University of Virginia environmental science class visit to SERC, including leading a tour of research sites and presenting a seminar on the Chesapeake watershed. |
| 2009 | Examiner of PhD thesis of P. Purushothaman for the Indian Institute of Technology Roorkee. |
| 2006-
Present | Special Member of Graduate Faculty, University of Maryland, College Park, MD. |
| 2005-
Present | Affiliate Professor, Department of Environmental Science and Policy, George Mason University, Fairfax, VA 22030. |
| 2005 | Assisted with teaching and coordination of a continuing education course for nutrient management consultants, sponsored by the Maryland Department of Agriculture |
| 2004-09 | Co-advisor of doctoral student, Jeanne Hartzell, George Mason University, Department of Environmental Science and Policy. |

- 2001-
Present Member of master's and doctoral thesis committees, University of Maryland Center for Environmental Science
- 1997-00 Member of master's committee, George Mason University, Dept. of Biology.
- 1996-01 Advisor for Smithsonian Postdoctoral Fellows, Dr. William Parsons and Dr. Kelly Smith, and Dr. Vladimir Samarkin, Smithsonian Environmental Research Center.
- 1996-99 Member of master's committee, Towson State University, Dept. of Biology.
- 1986 Member of doctoral thesis committee, University of Maryland, Dept. of Geography.
- 1982-
Present Advisor for 40 Smithsonian Work/Learn Interns, Smithsonian Environmental Research Center.

Recent Outreach Activities:

- 2009 Conducted a training session for high school science teachers In conjunction with the SERC education department. This included leading visits to forested, agricultural, and urban watersheds and presenting findings of SERC watershed research.
- Video interview for Public Broadcasting System online education, October 2009.
- Video interview for Voice of America, December 2009.
- Provided expert review of life science related questions for the Harvard University MOSART-LS assessment project designed to assess the knowledge of beginning fifth grade students.
- Developed and ran research exhibit and demonstration as a featured lab at SERC Open House.
- Led a tour of SERC research labs and field sites for possible donors (March 2009) and assisted with other tours of SERC field sites to present SERC research.
- 2008 Participated on the committee to organize the celebration of SERC's acquisition of the Contee Farm. Organized the SERC research exhibit for the Contee Farm celebration and helped present the exhibit to the celebration participants.

Assisted with tours of SERC field sites and presentation of SERC research for reporters (June 2008), members of the James Smithson Society (June 2008), and congressional staff associated with the Chesapeake Bay Program (August 2008).

- 2007 Participated in conducting two tours, including discussions of my research, for non-scientists. One of these tours was for Smithsonian Magazine writers and the other was for science writers and public information officers from STRI.

Developed and ran research exhibit and demonstration as a featured lab at SERC Open House.

- 2006 Short courses on environmental science topics for teachers, SERC, April 28 and June 28

Wetlands ecology tour and discussion for Congressional Staffers, August 24

- 2005 Assisted with teaching and coordination of a continuing education course for nutrient management consultants, sponsored by the Maryland Department of Agriculture

Interviewed by National Public Radio about the ecosystem services of riparian forests for a story on the UN Millennium Ecosystem Assessment.