

Denice Heller Wardrop

Webpage: <http://www.wetlands.psu.edu>

Professional Preparation

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|---|------------------------|-----------|
| 1. University of Virginia | Systems Engineering | B.S. 1979 |
| 2. University of Virginia | Environmental Sciences | M.S. 1987 |
| 3. Penn State University | Ecology | PhD. 1997 |
| 4. Licensed Professional Engineer, Commonwealths of Pennsylvania and Virginia | | |

Academic and Professional Appointments:

Senior Scientist, 2010 – present
Assistant Director, Environment, Penn State Institutes of Energy and Environment, 2009-present
Senior Research Associate, 2005 - 2010
Associate Director, Penn State Cooperative Wetlands Center, 2003 - present
Assistant Director, Penn State Cooperative Wetland Center, 2000 - 2003
Research Associate, Penn State University, 1997 - 2005
Research Assistant, Penn State University, 1993 - 1997
Risk Assessment Specialist, Environmental Standards Inc., Valley Forge, PA, 1991 - 1993
Project Manager, Nittany Geoscience, State College, PA, 1988 - 1991
Senior Project Manager, Environmental Resources Management, Inc., Exton, PA, 1985 - 1988
Research/Teaching Assistant, University of Virginia, 1982 - 1984
Systems Engineer, Satellite Business Systems, Mclean, VA, 1979 - 1980

Selected Publications

Wardrop, D.H., A. K. Glasmeier, J. Peterson-Smith, D. Eckles, H. Ingram, and R. P. Brooks. 2010. Wetland ecosystem services and coupled socioeconomic benefits through conservation practices in the Appalachian Region. *Ecological Applications*, in press.

Peterson-Smith, J. D. H. Wardrop, C.A. Cole, C.P. Cirimo, and R.P. Brooks. 2009. Hydrogeomorphology, environment, and vegetation associations across a latitudinal gradient in highland wetlands of the northeastern USA. *Plant Ecology* 203(2): 155-172.

Cole CA, Cirimo CP, Wardrop DH, Brooks RP, Peterson-Smith J (2008) Transferability of an HGM wetland classification scheme to a longitudinal gradient of the central Appalachian Mountains: Initial hydrological results. *Wetlands* 28:439–449.

Wardrop, D.H., M. E. Kentula, D. L. Stevens, Jr., S. F. Jensen, and R. P. Brooks. 2007. Regional Assessments of Wetland Condition: An Example from the Upper Juniata Watershed in Pennsylvania, U.S.A. *Wetlands* 27(3): 416-431.

Wardrop, D.H., M. E. Kentula, D. L. Stevens, Jr., S.F. Jensen, D.L. Stevens, K. Hychka, and R. P. Brooks. 2007. Assessment of Wetlands in the Upper Juniata Watershed in Pennsylvania, USA Using the Hydrogeomorphic Approach. *Wetlands* 27(3): 432-445.

Wardrop, D.H., C. Herschner, K. Havens, K. Thornton, and D. Bilkovic. 2007. Developing and Communicating a Taxonomy of Ecological Indicators: A Case Study from the Mid-Atlantic. *Ecohealth* 4:179-186

C. Herschner, K. Havens, D. Bilkovic, and D.H. Wardrop. 2007. Assessment of Chesapeake Bay Program Selection and Use of Indicators. *Ecohealth* 4:187-193.

Miller, S.J., D.H. Wardrop, W.M. Mahaney, and R.P. Brooks. 2006. A plant-based index of biological integrity (IBI) for headwater wetlands in central Pennsylvania. *Ecological Indicators* 6:290-312.

Wardrop, D.H., J.A. Bishop, M. Easterling, K. Hychka, W.L. Myers, G.P. Patil, and C. Taille. 2005. Use of landscape and land use parameters for classification and characterization of watersheds in the Mid-Atlantic across five physiographic provinces. *Environmental and Ecological Statistics* 12, 209-223.

Patil, G. P., J. Bishop, W.L. Myers, C. Taillie, R. Vraney, and D. H. Wardrop. 2004. Detection and delineation of critical areas using echelons and spatial scan statistics with synoptic cellular data. *Environmental and Ecological Statistics: Special Issue on Multiscale Advanced Raster Map Analysis*.

Brooks, R.P., D.H. Wardrop, and J.A. Bishop. (2004) Assessing wetland condition on a watershed basis in the mid-Atlantic region using synoptic land cover maps. *Environmental Monitoring and Assessment*, Vol 94(1), pp. 9-22.

Niemi, G., D.H. Wardrop, R.P. Brooks, S. Anderson, V. Brady, H. Paerl, C. Rakocinski, M. Brouwer, B. Levinson, M. McDonald. 2004. Rationale for a new generation of ecological indicators for coastal waters. *Environmental Health Perspectives*, Vol 112, No. 9, pp. 979-986.

Mahaney, W.M., D.H. Wardrop, and R.P. Brooks. 2004 Impacts of stressors on the emergence and growth of wetland plant species in Pennsylvania, USA. *Wetlands*, Vol 24 No. 3, pp. 538-549.

Selected Teaching

ECOL 597, Advances in Ecology. Fall 2004, 2005, 2006, 2007.

GEOG 497, 21st Century Environmental Challenges: Movies That Matter. Fall 2005, 2006, 2007.

GEOG 497, Environmental Issues Across the Americas: Field Experience in the Peruvian Amazon Rainforest. Spring 2006, 2007, 2008. 2009.

Selected Service

Current Chair and Pennsylvania Governor's Representative, Chesapeake Bay Program Scientific and Technical Advisory Committee

Director, Mid-Atlantic Regional Wetland Working Group, USEPA/Pennsylvania Department of Environmental Protection

Member, National Biological Assessment of Wetlands Working Group, US EPA Office of Wetlands, Oceans, and Watersheds

Member, National Tiered Aquatic Life Use Working Group, US EPA Office of Wetlands, Oceans, and Watersheds

Past-President, Society of Wetland Scientist Professional Certification Program

Faculty Senator, representing College of Earth and Mineral Sciences, Penn State University, elected 2007

Selected Research Projects

PI and Project Director, Hydrologic Forecasting for Characterization of Non-linear Response of Freshwater Wetlands to Climatic and Land Use Change in the Susquehanna River Basin. EPA-STAR. \$899,000; 2007-2010.

PI and Project Director, Understanding ecological thresholds in aquatic systems through retrospective analysis. EPA-STAR. \$300,000; 2005-2007.

Co-PI and Project Manager, Ecological and socioeconomic indicators for integrated assessment of aquatic ecosystems of the Atlantic Slope. USEPA-STAR Grant. Atlantic Slope Consortium – Penn State, Smithsonian Environmental Research Center, Virginia Institute of Marine Science, East Carolina University, Environmental Law Institute. \$6 million, 2001-2005.