

Megan Mallard, Physical Scientist, in EPA's National Exposure Research Laboratory

Systems Exposure Division

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Area of Expertise: Megan Mallard has expertise in regional climate modeling, meteorological modeling, hydrological modeling, and coupled and multi-media modeling.

Select Publications:

Spero, T. L., C. G. Nolte, J. H. Bowden, M. S. Mallard, J. A. Herwehe, 2016: The impact of incongruous lake temperatures on regional climate extremes downscaled from the CMIP5 archive using the WRF model. *J. Climate*, 29, 839-853, doi: 10.1175/JCLI-D-15-0233.1

Mallard, M. S., C. G. Nolte, T. Spero, O. R. Bullock, K. Alapaty, J. A. Herwehe, J. Gula, J. H. Bowden, 2014: Challenges and solutions in representing lakes when using WRF in a downscaling application. *Geosci. Model Dev.*, 8, 1085-1096, doi:10.5194/gmd-8-1085-2015.

Mallard, M. S., C. G. Nolte, O. R. Bullock, T. Spero, J. Gula, 2014: Using a coupled lake model with WRF for dynamical downscaling. *J. Geophys. Res.*, 119, 7193-7208.

Bullock, O., K. Alapaty, J. Herwehe, M. Mallard, T. Otte, R. Gilliam, and C. Nolte, 2013: An observation-based investigation of nudging in WRF for downscaling surface climate information to 12-km grid spacing. *J. Appl. Meteor. Climatol.*, 53, 20-33.

Mallard, M. S., G. M. Lackmann, A. Aiyyer, K. Hill, 2013: Atlantic hurricanes and climate change. Part I: Experimental design and isolation of thermodynamic effects. *J. Climate*. 26, 4876-4893.

Mallard, M. S., G. M. Lackmann, A. Aiyyer, 2013: Atlantic hurricanes and climate change. Part II: Role of thermodynamic changes in decreased hurricane frequency. *J. Climate*. 26, 8513-8528.

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Education:

- Ph.D. (Atmospheric Science), North Carolina State University, 2011
- M.S. (Atmospheric Science), North Carolina State University, 2007
- B.S. (Meteorology), North Carolina State University, 2005

Professional Experience:

- Physical Scientist, U.S. Environmental Protection Agency, Research Triangle Park, NC, Nov. 2015-present
- Environment Modeler & Software Developer, University of North Carolina at Chapel Hill, Institute for the Environment, Sept. 2014 – Oct. 2015
- ORISE Postdoctoral Fellow, U.S. Environmental Protection Agency, Research Triangle Park, NC, Oct. 2011-Aug. 2014

Honors and Awards:

- U.S. EPA/NERL/AMAD Blue Ribbon Paper Award (2014, 2012)
- Magna Cum Laude honors from North Carolina State University, 2005