

Eugene S. Takle

1. Contact information:

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2. Education and Training

BA in Physics and Mathematics, Luther College, 1966
Ph.D. in Physics, Iowa State University, 1971

3. Current position

Director, ISU Climate Science Initiative, 2008-present
Professor of Atmospheric Science, Department of Geological and Atmospheric Sciences
Professor of Agricultural Meteorology, Department of Agronomy

4. Peer Reviewed Publications

- Lu, E., E. S. Takle, 2008: Contributions of Water Vapor and Temperature to the Interannual Variability of Precipitation in the North American Regional Reanalysis. *J. Climate*, submitted.
- Pryor, S. C., R. J. Barthelmie, D. T. Young, E. S. Takle, R. W. Arritt, D. Flory, W. J. Gutowski, Jr., A. Nunes, and J. Roads, 2008: Wind speed trends over the contiguous USA. *J. Geophys. Res.*, submitted.
- Singh, Ranvir, Matthew J. Helmers, Amy Kaleita, and Eugene S. Takle, 2009: Potential impact of climate change on subsurface drainage in Iowa's subsurface drained landscapes. *Journal of Irrigation and Drainage Engineering* (accepted)
- Lu, E., E. S. Takle, and M. Jha, 2008: Responses of the hydrological cycle to the climate variability and change in the Upper Mississippi River Basin: A multi-GCM study with SWAT. Submitted to *Journal of Climate*
- Gutowski, William J., Jr., Stephanie S. Willis, Jason C. Patton, Benjamin R. J. Schwedler, Raymond W. Arritt, and Eugene S. Takle, 2008: Changes in extreme, cold-season synoptic precipitation events under global warming. *Geophys. Res. Lett.*, **35**, L20710, doi:10.1029/2008GL035516.
- Carbone, R. E., J. Block, S. E. Boselly, G. R. Carmichael, F. H. Carr, V. Chandrasekar, E. Gruntfest, R. M. Hoff, W. F. Krajewski, M. A. Lemone, J. Purdom, T. W. Schlatter, E. S. Takle, J. Titlow, 2009: *Observing Weather and Climate from the Ground Up: A Nationwide Network of Networks*. National Academies Press. Washington, DC. 268 pp.
- Wang, S.-Y., R. R. Gillies, E. S. Takle, and W. J. Gutowski, Jr., 2009: Characteristics of the Intermountain rainfall climatology simulated by the NARCCAP regional climate models. Submitted to *Geophysical Research Letters*.
- Pan, Z., D. Andrade, J. Wimberley, N. McKinney, M. Segal, and E. S. Takle, 2009: Changes and uncertainty factors in soil carbon in the agricultural U. S. Midwest under climate change. Submitted to *Journal of Geophysical Research*
- Takle, E. S., M. Jha, and E. Lu, 2008: Climate change and streamflow in the Upper Mississippi River Basin. Chapter 12. *Climate variability, predictability and change in the Midwestern USA*. Indiana University Press. (in press)
- Takle, E. S., J. Roads, B. Rockel, W. J. Gutowski, Jr., R. W. Arritt, I. Meinke, C. G. Jones, and A. Zadra, 2007: Transferability intercomparison: An opportunity for new insight on the global water cycle and energy budget. *Bull. Amer. Meteor. Soc.*, **88**, 375-384.

- Gutowski, W. J., Jr., K. A. Kozak, R. W. Arritt, J. H. Christensen, J. C. Patton, and E. S. Takle, 2007: A possible constraint on regional precipitation intensity changes under global warming. *J. Hydromet.*, **8**, 1382-1412.
- Takle, E. S., C. Anderson, M. Jha, and P. W. Gassman, 2006: Upper Mississippi River Basin Modeling Systems Part 4: Climate change impacts on flow and water quality. Singh, V. P., and Y. J. Xu, (eds.), 2006: *Coastal Hydrology and Processes*, Water Resources Publications LLC, Highlands Ranch, CO. 509 pp.
- Takle, E. S., M. Jha, and C. J. Anderson, 2005: Hydrological cycle in the Upper Mississippi River Basin: 20th century simulations by multiple GCMs. *Geophys. Res. Lett.*, **32**, L18407 10.1029/2005GL023630 (28 September)
- Jha, M., Z. Pan, E. S. Takle, R. Gu, 2004: Impact of climate change on stream flow in the Upper Mississippi River Basin: A regional climate model perspective. *J. Geophys. Res.* **109**, D09105, doi:10.1029/2003JD003686
- Gutowski, W. J., F. Otieno, R. W. Arritt, E. S. Takle and Z. Pan, 2004: Diagnosis and attribution of a seasonal precipitation deficit in a U.S. regional climate simulation. *J. Hydrometeor.*, **5**, 230-242.
- Pan, Z., R. W. Arritt, E. S. Takle, W. J. Gutowski, Jr., C. J. Anderson, and M. Segal, 2004: Altered hydrologic feedback in a warming climate introduces a “warming hole”. *Geophys. Res. Lett.* **31**, L17109, doi:10.1029/2004GL020528.
- Anderson, C. J., R. W. Arritt, E. S. Takle, Z. Pan, W. J. Gutowski, Jr., F. O. Otieno, R. da Silva, D. Caya, J. H. Christensen, D. Luthi, M. A. Gaertner, C. Gallardo, F. Giorgi, S.-Y. Hong, C. Jones, H.-M. H. Juang, J. J. Katzfey, W. M. Lapenta, R. Laprise, J. W. Larson, G. E. Liston, J. L. McGregor, R. A. Pielke, Sr., J. O. Roads, and J. A. Taylor, 2003: Hydrological processes in regional climate model simulations of the central United States flood of June-July 1993. *J. Hydrometeor.*, **4**, 584-598.
- Takle, E. S., W. J. Gutowski, Jr., R. W. Arritt, Z. Pan, C. J. Anderson, R. Ramos da Silva, D. Caya, S.-C. Chen, J. Hesselbjerg Christensen, S.-Y. Hong, H. M. (Henry) Juang, J. Katzfey, W. M. Lapenta, R. Laprise, P. Lopez, J. Mc Gregor, and J. O. Roads, 1999: Project to intercompare regional climate simulations (PIRCS): Description and initial results. *J. Geophys. Res.* **104**, 19,443-19,462.

5. Synergistic activities

Atmospheric Science Editor, *Earth Science Reviews* (Elsevier)
 Associate Editor, *Journal of Applied Meteorology and Climatology* 2006-
 Member, National Research Council (NRC) study committee entitled *Developing Mesoscale Meteorological Observational Capabilities to Meet Multiple National Needs*, 2007-08
 Member, panel review team for US Climate Change Science Program Synthesis and Assessment Product 4.3, *The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity*. (2007)
 Commissioner, Education and Human Resources, American Meteorological Society, 2009-2012