Biographical Sketch

Jeffrey B. Basara
Associate Professor, School of Meteorology
Associate Professor, School of Civil Engineering and Environmental Science
Executive Associate Director, Hydrology and Water Security Program
Director, Kessler Atmospheric and Ecological Field Station
University of Oklahoma
120 David L. Boren Blvd., Suite 5900
Norman, OK 73072
Phone: (405) 325-1760,
jbasara@ou.edu

A. PROFESSIONAL PREPARATION

Purdue University	West Lafayette, IN	Atmospheric Science	B.S.	1994
University of Oklahoma Norman, OK		Meteorology	M.S.	1998
University of Oklahoma Norman, OK		Meteorology	Ph.D.	2001

B. APPOINTMENTS

2018-present	Executive Associate Director, Hydrology and Water Security Program, University of Oklahoma
2018-present	Associate Professor, School of Civil Engineering and Environmental Science, University of Oklahoma
2014-present	Director, Kessler Atmospheric and Ecological Station
2012-present	Associate Professor, School of Meteorology, University of Oklahoma
2002-2018	Director of Research, Oklahoma Climatological Survey, University of Oklahoma
2007-2012	Adjunct Associate Professor, School of Meteorology, University of Oklahoma
2001-2007	Adjunct Assistant Professor, School of Meteorology, University of Oklahoma
2001-2002	Research Scientist, Oklahoma Climatological Survey, University of Oklahoma

C. PRODUCTS

(i) Most Closely Related to the Proposed Project

1. **Basara, J. B.**, and J. I. Christian. 2018. Seasonal and Interannual Variability of Land–atmosphere Coupling across the Southern Great Plains of North America using the North American Regional Reanalysis. *International Journal of Climatology*. 10.1002/joc.5223.
2. Christian, J., K. Christian, and **J. B. Basara.** 2015. Drought and Pluvial Dipole Events within the Great Plains of the United States. *J. Appl. Meteor. Climatol.* 54:1886–1898.
3. Christian, J.**, Basara, J. B.**, Otkin, J., Hunt, E., Wakefield, R.**,** Flanagan, P.**,** Xiao, X. 2019. A Methodology for Flash Drought Identification: Application of Flash Drought Frequency across the United States. *Journal of Hydrometeor.* 20:833-846.
4. Flanagan, P.**, J. Basara**, J. Furtado, and X. Xiao. 2018. Primary Atmospheric Drivers of Pluvial Years in the United States Great Plains. *J. Hydrometeor.* 19*:*643–658.
5. Flanagan, P. X.**, J. B. Basara,** and X. Xiao. 2017. Long-term Analysis of the Asynchronicity between Temperature and Precipitation Maxima in the United States Great Plains. *International Journal of Climatology.* 37:3919-3933.

(ii) Other Significant Products

1. Bajgain, R., X. Xiao, **J. Basara**, P. Wagle, Y. Zhou, Y. Zhang, and H. Mahan. 2017. Assessing Agricultural Drought in Summer over Oklahoma Mesonet Sites using the Water-related Vegetation Index from MODIS. *International Journal of Biometeorology.* 61:377-390.
2. **Basara, J.B.**, and K.C. Crawford, 2002: Linear Relationships between Root-zone Soil Moisture and Atmospheric Processes in the Planetary Boundary Layer. *J. Geophys. Res.* 107 (ACL 10):1-18.
3. Otkin, J. A., M. C. Anderson, C. Hain, I. E. Mladenova, **J. B. Basara**, and M. Svoboda. 2013. Examining Rapid Onset Drought Development Using the Thermal Infrared-Based Evaporative Stress Index. *Journal of Hydrometeorology.* 14:1057-1074.
4. Otkin, J.A., M. Svoboda, E.D. Hunt, T.W. Ford, M.C. Anderson, C. Hain, and **J.B. Basara**. 2018. Flash Droughts: A Review and Assessment of the Challenges Imposed by Rapid Onset Droughts in the United States. *Bull. Amer. Mete. Soc.* 99:911-919.
5. Gu, Y., E. Hunt, B. Wardlow, **J. B. Basara**, J. F. Brown, and J. P. Verdin. 2008. Evaluation and Validation of MODIS NDVI and NDWI for Vegetation Drought Monitoring using Oklahoma Mesonet Soil Moisture Data. *Geophys. Res. Lett.* 35:L22401. doi:10.1029/2008GL035772.

D. SYNERGISTIC ACTIVITIES

- Research Group: Dr. Basara leads the Climate, Hydrology, Ecosystems, Weather (CHEWe) research group at the University of Oklahoma. His current work includes interdisciplinary research focused on precipitation extremes, land-atmosphere interactions, and developing observational and modeling strategies that increase the overall understanding of the complex interactions within the environmental column.
- Reviewer for journals, reports and books: Journal of Applied Meteorology and Climatology, Monthly Weather Review, Geophysical Research Letters, Environmental Research Letters, Journal of Geophysical Research – Atmospheres, International Journal of Climatology, Meteorological Applications, Journal of Atmospheric and Oceanic Technology, Advances in Water Resources, Boundary-Layer Meteorology, Journal of Hydrometeorology, Earth Interactions.
- The COMET Program*:* The COMET Program was established in 1989 by UCAR and NOAA's NWS to promote a better understanding of mesoscale meteorology among weather forecasters and to maximize the benefits of new weather technologies during the NWS's modernization program. I have served as the lead instructor for six offering of the Symposium on Processes in the PBL and currently serve on the COMET Advisory Panel.
- The Kessler Atmospheric and Ecological Field Station (KAEFS): The Kessler Atmospheric and Ecological Field Station is approximately 400 acres and core facility of the University of Oklahoma. The field station includes a wide array of instrumentation and projects dedicated to sampling and improving interdisciplinary research and education. Dr. Basara has served on the Executive Committee for KAEFS since 2004 and as Director since 2014.
- The WxChallenge: The WxChallenge is a collegiate focused meteorological forecast competition. Each year approximately 2000 forecasters from over 70 higher education institutions from across the United States and Canada predict the high and low temperature, maximum sustained wind speed, and total precipitation from select locations across the United States.