MICHAEL A. CRIMMINS.

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Professional Preparation (Chronological Order)

Institution	Major	Degree	Year
University of Michigan, Ann Arbor, Michigan	Atmospheric Science	B.S.	1996
Western Michigan University, Kalamazoo, Mich	Geography/Climatology	M.A.	1998
University of Arizona, Tucson, Arizona	Geography/Climatology	Ph.D.	2004

Appointments (Reverse Chronological Order)

2005-present:	Associate Professor/Climate Science Extension Specialist, Dept. of Soil, Water,
_	& Environmental Science & Arizona Cooperative Extension, University of
	Arizona
1998-2001:	Environmental Scientist, Kieser & Associates Environmental Science and
	Engineering, Kalamazoo, Michigan

Honors and Awards

2014 Extension Faculty of the Year, College of Agriculture and Life Sciences, University of Arizona

2008 Early Career Leadership Award, Association of Natural Resource Extension Professionals

Publications (within the last three years)

- Crimmins, M.A., D. Ferguson, A. Meadow, and J. Weiss. 2017. Discerning "flavors" of drought using climate extremes indices. J. Appl. Meteor. Climatol., doi: 10.1175/JAMC-D-16-0270.1
- Herrmann, S.M., K. Didan, A. Barreto-Munoz and M.A. Crimmins, 2016: Divergent responses of vegetation cover in Southwestern US ecosystems to dry and wet years at different elevations. Environmental Research Letters, 11, 124005. http://dx.doi.org/10.1088/1748-9326/11/12/124005.
- Crimmins, M. A., and M. P. McClaran. 2016. Where Do Seasonal Climate Predictions Belong in the Drought Management Toolbox? Rangelands, doi:10.1016/j.rala.2016.06.004.
- Ferguson, D. B., A. Masayesva, A. M. Meadow, and M. A. Crimmins, 2016: Rain gauges to range conditions: Collaborative development of a drought information system to support local decision making. Wea. Climate Soc., doi:10.1175/WCAS-D-15-0060.1. http://dx.doi.org/10.1175/WCAS-D-15-0060.1.
- Stevenson, J., M. Crimmins, J. Whitehead, J. Brugger, and C. Fraisse. 2016. Connecting climate information with practical uses: Extension and the NOAA RISA program. In: Climate in Context: Science and Society Partnering for Adaptation, A. Parris, G. Garfin, K. Dow, R. Meyer, and S. Close, eds., Wiley, 75-98.
- Meadow, A., Z. Guido, M.A. Crimmins, J. McLeod. 2016. From principles to action: Applying the National Research Council's principles for evfective decision support to the Federal Emergency Management Agency's watch office, Climate Services, 1 (March 2016): 12– 23., doi: 10.1016/j.cliser.2016.02.002
- Springer, A.C., D.E. Swann, and M.A. Crimmins. 2015. Climate Change Impacts on High

Elevation Saguaro Range Expansion. *Journal of Arid Environments* 116, no. 0 (May 2015): 57–62. doi:10.1016/j.jaridenv.2015.02.004.

- Shepard, C., M. G. Schaap, M. A. Crimmins, W. J.D. van Leeuwen, and C. Rasmussen. 2015. Subsurface Soil Textural Control of Aboveground Productivity in the US Desert Southwest. *Geoderma Regional* 4, no. 0 (April 2015): 44–54. doi:10.1016/j.geodrs.2014.12.003.
- Brugger, J. and M. A. Crimmins. 2014. Designing Institutions to Support Local Level Climate Change Adaptation: Insights from a Case Study of the U.S. Cooperative Extension System. Weather, Climate, and Society, July 21, 2014. doi:10.1175/WCAS-D-13-00036.1.
- Williams, A., R. Seager, A. Macalady, M. Berkelhammer, M. Crimmins, T. Swetnam, A. Trugman, N. Buenning, D. Noone, N. McDowell, N. Hryniw, C. Mora, T. Rahn. 2014. Correlations between components of the water balance and burned area reveal new insights for predicting forest-fire area in the southwest United States. International Journal of Wildland Fire. 24(1) 14-26 http://dx.doi.org/10.1071/WF14023.
- Williams, A., R. Seager, A. Macalady, M. Berkelhammer, M. Crimmins, T. Swetnam, A. Trugman, N. Buenning, D. Noone, N. McDowell, N. Hryniw, C. Mora, T. Rahn. 2014. Causes and Implications of Extreme Atmospheric Moisture Demand During the Record-Breaking 2011 Wildfire Season in the Southwest United States. Journal of Applied Meteorology and Climatology, September 25, 2014. doi:10.1175/JAMC-D-14-0053.1.

Other Relevant Publications

- Brugger, J., Crimmins, M. 2013. The art of adaptation: Living with climate change in the rural American Southwest. Global Environ. Change, http://dx.doi.org/10.1016/j.gloenvcha.2013.07.012
- Meadow, A., M.A. Crimmins and D. Ferguson. 2013. Field of Dreams or Dream Team?: Assessing Two Models for the Drought Impact Reporting in the Semiarid Southwest. Bulletin of the American Meteorological Society, <u>http://dx.doi.org/10.1175/BAMS-D-11-00168.1</u>
- Guido, Z., D. Hill, M.A. Crimmins, and D. Ferguson. 2012. Informing decisions with a climate synthesis product: implications for regional climate services. Weather, Climate, and Society. DOI 10.1175/WCAS-D-12-00012.1.
- Diez, J. M., Ibáñez, I., Miller-Rushing, A. J., Mazer, S. J., Crimmins, T. M., Crimmins, M. A., Bertelsen, C. D. and Inouye, D. W. 2012. Forecasting phenology: from species variability to community patterns. *Ecology Letters*. doi: 10.1111/j.1461-0248.2012.01765.x
- Crimmins, T.M., M.A. Crimmins, D. Bertlesen. 2009. Flowering range changes across an elevation gradient in response to warming summer temperatures. Global Change Biology. 15:1141-1152 doi: 10.1111/j.1365-2486.2008.01831.x.

Synergistic Activities

- Lead of the University of Arizona Cooperative Extension Climate Science Applications Program: A program within Cooperative Extension that works to develop applied climate research projects and programs that assist in natural resource and agricultural management decision making. This includes the development of novel hydroclimate and drought monitoring products and decision support tools as well as outreach efforts to communities and decision makers.
- Member of the DroughtView development team, an online drought monitoring tool that utilizes remote sensing imagery to track changes in vegetation greenness as well as facilitates the collection and sharing of drought impact and status reports.