

MICHAEL D. HALBLEIB

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PRISM Climate Group

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EDUCATION

Oregon State University	M.S. (Soil Science/Geography Minor)	2001
Oregon State University	B.S. (Liberal Studies)	1988

PROFESSIONAL EXPERIENCE

2003- Faculty Research Assistant, Northwest Alliance for Computational Science and Engineering

2000-2003 GIS/GPS Specialist and Instructor, Department of Horticulture, Oregon State University

1998-1999 GIS Sales and Product Development, United Agri Products, Aurora, OR

PROFESSIONAL ACTIVITIES

Mike Halbleib serves as a GIS specialist, creating cartographic maps and performing spatial analyses derived from the PRISM spatial climate datasets. He also has interests in agricultural geography, and played a key role in developing suitability maps for potential biofuel feedstocks as part of the Sun Grant Initiative. He is currently working to develop crop insurance yield screening tools for the USDA Risk Management Agency.

Mike has been a Geospatial Researcher in Oregon State University's PRISM Climate Group, Northwest Alliance for Computational Science and Engineering, since 2003. The PRISM Climate Group is a recognized world leader in spatial climate analysis. The group developed and continues to update digital maps of long-term normals and daily and monthly time series for the conterminous US, downloaded approximately 750,000 times per month from the PRISM Web site. They developed the first-ever detailed climate and species suitability maps for the People's Republic of China, aiding Oregon grass seed growers in creating a multi-million dollar market for their seeds in China. They have also been updating official NOAA extreme precipitation maps that provide guidance used by states, counties, and municipalities to determine building codes and regulations. They released the first digital USDA Plant Hardiness Zone Map, the key plant selection guide for horticulturalists, nurserymen, and gardeners; this map received 20 million online accesses in the first two weeks of release. The group has an ongoing relationship with the USDA Risk Management Agency, which oversees the federal crop insurance program. In an effort to improve the integrity and efficiency of the claims process, the RMA asked the group to provide high-quality spatial weather and climate data on a daily basis for every farm in the lower 48 states. In addition, PRISM long-term climate datasets are being used in conjunction with soils data and a water balance model to establish zones of crop suitability to provide greater accuracy and spatial detail in crop insurance underwriting.

HONORS & AWARDS

- 2012 ARS Excellence in Information Award: Presented to the OSU PRISM Climate Group and selected USDA/ARS employees for contribution to the successful design, development, and implementation of the 2012 USDA Plant Hardiness Zone Map.
- 2012 Environmental Systems Research Institute international award: Special Achievement in GIS, presented to the OSU PRISM Climate Group and the USDA/ARS Office of National Programs for outstanding work in developing and communicating the 2012 USDA Plant Hardiness Zone Map for the United States and Puerto Rico

PUBLICATIONS

- Daly, C., Doggett, M.K., Smith, J.I., Olson, K.V., **Halbleib, M.D.**, Dimcovic, Z., Loiselle, R.A., Ryan, A.D., Pancake, C.M., Kaspar, E.M. 2021. Challenges in observation-based mapping of daily precipitation across the conterminous United States. *Journal of Atmospheric and Oceanic Technology*. Accepted.
- Daly, C., **Halbleib, M.**, Hannaway, D.B., Eaton, L. M. 2017. Environmental limitation mapping of potential biomass resources across the conterminous United States. *Global Change Biology: Bioenergy*, <https://doi.org/10.1111/gcbb.12496>.
- Volk, T.A., Berguson, B., Daly, C., **Halbleib, M.**, Miller, R., Rials, R. + others. 2017. Poplar and shrub willow energy crops in the United States: field trial results from the multiyear Regional Feedstock Partnership and yield potential maps based on the PRISM-ELM model. *Global Change Biology: Bioenergy*, <https://doi.org/10.1111/gcbb.12498>.
- Preston B.L., Langholtz, M., Eaton, L., Daly, C., and **M. Halbleib**. 2016. Climate sensitivity of agricultural energy crop productivity. In: 2016 Billion-Ton Report: Advancing Domestic Resources for a Thriving Bioeconomy, Volume 2: Environmental Sustainability Effects of Select Scenarios from Volume 1, Chapter: 13, U.S. Department of Energy and Oak Ridge National Laboratory, Editors: R. A. Efroymsen, M. H. Langholtz, K.E. Johnson, B.J. Stokes, pp.519-553.
- Daly, C., M.P. Widrlechner, **M.D. Halbleib**, J.I. Smith, and W.P. Gibson. 2012. Development of a new USDA Plant Hardiness Zone Map for the United States. *Journal of Applied Meteorology and Climatology*, 51: 242-264.
- Hannaway, D.B., C. Daly, **M.D. Halbleib**, D. James, C. West, J. Volenec, D. Chapman, X. Li, W. Cao, J. Shen, and S. Johnson. 2009. Tall Fescue Adaptation and Suitability Zones. In: Fribourgh, H., D. Hannaway, and C. West, Eds. Tall Fescue for the 21st Century. Tri-Societies: American Society of Agronomy, Crop Science Society of America, Soil Science Society of America Monograph 53.
- Daly, C., **Halbleib, M.**, Smith, J.I., Gibson, W.P., Doggett, M.K., Taylor, G.H., Curtis, J., and Pasteris, P.A. 2008. Physiographically-sensitive mapping of temperature and precipitation across the conterminous United States. *International Journal of Climatology*, 28: 2031-2064.