

Michele Thornton

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EDUCATION

M.S., Biology (emphasis in Stream Ecology), Idaho State University, 1997

B.S., Biological Sciences, minor chemistry, Michigan State University, 1989
Certification: Secondary Education

INTERESTS

Geographic/Geospatial Information Systems with connections to multidimensional scientific datasets, model and remote sensing data products. Dataset curation including archive, documentation, metadata and interoperability standards. Data flow and distribution of large datasets. Characterizing user needs to data delivery.

PROFESSIONAL EXPERIENCE

2008 – current	Daymet Task Lead/GIS/Technical Professional, Oak Ridge National Lab DAAC, Oak Ridge, TN
2002 -2004	Curriculum Developer, AllPoints GIS, Denver, CO
1998 – 2001	Forestry Coordinator, EOS Training Center/NTSG, University of Montana, Missoula, MT
1996 – 1998	Image Analyst/GIS Technician, Wildlife Spatial Analysis Lab (WSL), University of Montana, Missoula, MT
1996	Biological Technician, Plum Creek Timber Company, L.P., Missoula, MT
1993 – 1996	Field and Laboratory Technician, Stream Ecology Center, Idaho State University, Pocatello, ID
1992 – 1993	Lead Instructor, Teton Science School, Kelly, Wyoming
1989- 1992	Teacher, Webber Junior High School, Saginaw, Michigan

AUTHORED EVENTS

Published Data Sets:

Thornton, P.E., M.M. Thornton, B.W. Mayer, Y. Wei, R. Devarakonda, R.S. Vose, and R.B. Cook. 2018. Daymet: Daily Surface Weather Data on a 1-km Grid for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1328>

Thornton, M.M., P.E. Thornton, Y. Wei, R.S. Vose, and A.G. Boyer. 2017. Daymet: Station-Level Inputs and Model Predicted Values for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1391>

Thornton, P.E., M.M. Thornton, and R.S. Vose. 2017. Daymet: Annual Tile Summary Cross-Validation Statistics for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1348>

Thornton, M.M., P.E. Thornton, Y. Wei, B.W. Mayer, R.B. Cook, and R.S. Vose. 2017. Daymet: Monthly Climate Summaries on a 1-km Grid for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1345>

Thornton, P.E., M.M. Thornton, B.W. Mayer, Y. Wei, R. Devarakonda, R.S. Vose, and R.B. Cook. 2017. Daymet: Daily Surface Weather Data on a 1-km Grid for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1328>

Thornton, P.E., M.M. Thornton, B.W. Mayer, N. Wilhelmi, Y. Wei, R. Devarakonda, and R.B. Cook. 2014. Daymet: Daily Surface Weather Data on a 1-km Grid for North America, Version 2. Data set. Available on-line [<http://daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, USA. Date accessed: YYYY/MM/DD. Temporal range: YYYY/MM/DD-YYYY/MM/DD. Spatial range: N=DD.DD, S=DD.DD, E=DDD.DD, W=DDD.DD. <http://dx.doi.org/10.3334/ORNLDAAC/1219>

Publications, Talks, and Posters:

“Web Services to Access the Daymet Datasets: Download Statistics and Insights into How Scientists Access Large, Complex Data for Their Research Needs” Author – Session Talk. Presented at Ecological Society of America Annual Conference. 2017

“Surface Weather Data with Uncertainty Quantifications for North America” Author – Poster. 5th Annual Principal Investigators Meeting. 2015

R. Devarakonda, Y. Wei, M. Thornton, B. Mayer, P. Thornton and B. Cook, “Preparing, Storing, and Distributing Multi-dimensional Scientific Data.” Proceedings of the IEEE International Conference on Big Data, DOI: 10.1109/BigData.2015.7364085, pgs. 2811 - 2813 (2015).

Liu, S., Wei, Y., Post, W. M., Cook, R. B., Schaefer, K., and Thornton, M. M.: The Unified North American Soil Map and its implication on the soil organic carbon stock in North America, Biogeosciences, 10, 2915-2930, doi:10.5194/bg-10-2915-2013, 2013.

“Daymet Gridded subdaily weather data for North America”. Author – Poster, presented at NASA Carbon Cycle and Ecosystems Joint Workshop, Alexandria, VA. 2011. http://cce.nasa.gov/meeting_2011/abs_and_discussions/mtg2011_ab_searchab_id173.html

“Modeling and Synthesis Thematic Data Center (MAST-DC) Support for North American Carbon Program Interim Syntheses” Co-author – Poster. Presented at NACP All- Investigators Meeting, San Diego, CA. 2009.

“Preliminary Results of the NACP Regional Interim Synthesis” Co-author – Talk. Presented at American Geophysical Union conference, San Francisco, 2009.

Redmond, R. L., et al. "The Montana gap analysis project: final report." *Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, Montana*. xiii (1998).

Educational Materials:

“NetCD-what? An Ecologist’s Guide to Working with Daymet and other NetCDF-formatted Data”. Presenter, NASA Earthdata Webinar. https://daac.ornl.gov/workshops/NetCDF_webinar_08302017.html

“Accessing Daymet Data Through Web-Based Tools and Services”. Presenter, NASA Earthdata
Webinar. https://daac.ornl.gov/workshops/DaymetThruWebServices_10232014.html

Developed methods for Exploring Climate Data using GIS now in use at the Earth Exploration Toolbook:
http://serc.carleton.edu/eet/ncardatagis/teaching_notes.html Highlighted by ESRI:
<http://www.esri.com/news/arcnews/winter0405/articles/ncar.html> . And also available at:
<http://gisclimatechange.ucar.edu/> under “Tutorial”.