Graham P. Taylor

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Research Interests

Climate Change, Extreme Weather, Downscaling, Atmospheric Circulation, Science Communication

Academic Employment

Research Associate, Cornell University, 2025-present
Postdoctoral Researcher, University Corporation for Atmospheric Research/NOAA Geophysical Fluid Dynamics Laboratory 2024-2025
Graduate Research Assistant, Department of Geography, Portland State University, 2019-2024
Student Intern, Uncertainty Quantification and Statistical Analysis, NASA Jet Propulsion Laboratory, 2023

Education

Ph.D. 2024 Earth, Environment, and Society, Portland State University, Portland, Oregon
M.S. 2021 Geography, Portland State University, Portland, Oregon
B.S. 2013 Physics, St. Olaf College, Northfield, Minnesota

Peer-Reviewed Publications

Taylor, G.P., K. Dixon, L. Sun, N. Zenes , S. Hartke, F. Lehner, A. Newman, E. Guttman, R. McCrary, 2025: *How Observation-Based Data Influence Uncertainty in Local Climate Projections*. Journal of Applied Meteorology and Climatology. In Review.

Taylor, G. P., P. C. Loikith, H. Lee, S. Rahimi, and A. Hall, 2025: *Historical and Future Autumn Rain and Wind Onset Over Western North America Using Regional Climate Models*. Journal of Geophysical Research: Atmospheres, 130, https://doi.org/10.1029/2025JD044267.

Taylor, G. P., P. C. Loikith, H. Lee, B. Lintner, and C. M. Aragon, 2023: *Projections of Large-Scale Atmospheric Circulation Patterns and Associated Temperature and Precipitation over the Pacific Northwest Using CMIP6 Models*. Journal of Climate, 36, 7257–7275, https://doi.org/10.1175/JCLI-D-23-0108.1

Taylor, G. P., P. C. Loikith, C. M. Aragon, H. Lee, and D. E. Waliser, 2022: *CMIP6 model fidelity at simulating large-scale atmospheric circulation patterns and associated temperature and precipitation over the Pacific Northwest*. Climate Dynamics, 60, 2199–2218, https://doi.org/10.1007/s00382-022-06410-1

Loikith, P. C., Singh, D., and **Taylor, G. P.**, 2022: *Projected Changes in Atmospheric Ridges over the Pacific–North American Region Using CMIP6 Models*. Journal of Climate, 35, 5151–5171, https://doi.org/10.1175/JCLI-D-21-0794.1

Conference Presentations

Uncertainty Propagation from Observation-Based Data to Statistically Downscaled Climate Projections, Graham P. Taylor**,** Keith Dixon, Liqiang Sun, Nicole Zenes , Samantha Hartke, Flavio Lehner, Andrew Newman, Ethan Gutmann, Rachel McCrary, Fall Meeting of the American Geophysical Union, New Orleans, Louisiana, 2025 (poster)

Projections of Change in the Timing of Fall Rain and Wind Over the Western United States, Graham P. Taylor, Paul C. Loikith, and Hugo K. Lee. Winter Meeting of the American Meteorological Society, New Orleans, Louisiana, 2024 (poster)

Projections of Change in the Timing of Fall Rain and Wind Over the Western United States, Graham P. Taylor, Paul C. Loikith, and Hugo K. Lee. Fall Meeting of the American Geophysical Union, San Francisco, California, 2023 (talk)

Future conditions of wind and rain associated with fall wildfire conditions in CMIP6 models over western North America, Graham P. Taylor, Paul C. Loikith, and Hugo K. Lee. International Conference on Regional Climate ICRC-CORDEX, Trieste, Italy, 2023. (poster)

Projections of Large-Scale Atmospheric Circulation Patterns and Associated Temperature and Precipitation Anomalies over the Pacific Northwest using CMIP6 Models, Graham P. Taylor, Paul C. Loikith, and Christina Aragon. Fall Meeting of the American Geophysical Union, Chicago, Illinois, 2022. (poster)

Projections of Large-Scale Atmospheric Circulation Patterns and Associated Temperature and Precipitation Anomalies over the Pacific Northwest using CMIP6 Models, Graham P. Taylor, Paul C. Loikith, and Christina Aragon. Fall Meeting of the American Geophysical Union, New Orleans, Louisiana, December, 2021. (talk)

Projections of Large-Scale Meteorological Patterns, Temperature, and Precipitation over the Pacific Northwest using CMIP6 Models, Graham P. Taylor, Paul Loikith, and Christina Aragon. 11th Northwest Climate Conference, 2021 (talk).

Projections of Future Large-Scale Meteorological Patterns, Temperature, and Precipitation over the Pacific Northwest, Graham P. Taylor, Paul C. Loikith, and Christina Aragon. Virtual Fall Meeting of the American Geophysical Union, 2020 (poster).

Assessing Climate Change Impacts on Precipitation Over Bull Run Watershed, Graham P. Taylor, Paul C. Loikith, Christina M. Aragon, Kavita Heyn, Kristin Anderson, and Benjamin Beal. Northwest Climate Conference, Portland, Oregon, 2019 (poster).

Invited Talks

2025 UCAR, *CPAESS Discovery Seminar - The Role of Observation-Based Data in Local Climate Projection Uncertainty*
2025 Rutgers, *Department of Environmental Science Seminar Series*
2024 Center for Western Weather and Water Extremes, Scripps Institution of Oceanography at University of California San Diego, *Science Friday Speaker Series*
2023 Portland State University, *Geography Department Speaker Series*

Other Presentations

2023 Jet Propulsion Laboratory, *Uncertainty Quantification and Statistical Analysis Seminar Series*
2022 Portland State University, *Student Research Symposium*
2022 Portland State University, *Three Minute Thesis*

Awards

Travel Award to the International Conference on Regional Climate ICRC-CORDEX 2023 and
11th Workshop on the Theory and Use of Regional Climate Models in Trieste, Italy, 2023.

Professional Affiliations

American Geophysical Union, 2020-present
American Meteorological Society, 2020-present

Science Communication and Outreach

Early Career Climate Network. *What do climate models tell us about the future of ridges over the pacific northwest? 2022 https://earlycareerclimate.wordpress.com/2022/09/27/what-do-climate-models-tell-us-about-the-future-of-ridges-over-the-pacific-northwest/*

Interviewee - KOIN Podcast Special: Climate in Crisis. 2021

Skills

Python, MATLAB, R, unix/linux OS and scripting, high-performance computing, machine learning

Journal reviewer: *Climate Dynamics, International Journal of Climatology*