Erica Lee McCormick

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EDUCATION

(2027)	**Stanford University** Ph.D. in Earth System Science (Expected)
2020	**University of Texas at Austin** B.S. Environmental Science, Geology

AWARDS, HONORS, AND FELLOWSHIPS

External Agencies

2024	American Geophysical Union Outstanding Student Presentation Award (OSPA)
2022	National Science Foundation Graduate Research Fellowship (GRFP)
2022	Oak Ridge National Lab ORISE Summer Research Fellowship
2019	Garden Club of America Fellowship in Urban Forestry

Stanford University

2025	Graduate Community-Engaged Teaching Fellowship, HASS Center
2024	Diversifying Academia, Recruiting Excellence (DARE) Doctoral Fellowship

University of Texas at Austin

2019	Plan II Skaaren Climate Fellowship
2018	Plan II Travel Grant for Undergraduate Research

PUBLICATIONS

Google Scholar (274 citations), * *denotes mentee*, ‡ *denotes co-first author*

In Progress	**E.L. McCormick**, Y.F. Reinfelder, D.M. Rempe, A.G. Konings. Rock moisture frequently contributes to daily ET for forests underlain by shallow bedrock across the US Southwest.
In Progress	D. M. Rempe‡, **E. L. McCormick**‡, W. J. Hahm, G. Persad, C. Cummins, D. A. Lapides, K. D. Chadwick, D. Dralle. Resilience of woody ecosystems to precipitation variability. Pre-print: 10.31223/X5XW7D.
Submitted	**E. L. McCormick**, L. E. Sanders*, K. A. McColl, A. G. Konings. Triple collocation validates CONUS-wide evapotranspiration inferred from atmospheric conditions. *Hydrology and Earth System Sciences.*
2025	**E.L. McCormick**, C. Famiglietti, D. Feng, A.M. Michelak, A.G. Konings. Susceptibility to Photosynthesis Suppression From Extreme Storms Is Highly Site-Dependent. *Global Change Biology, 31*(5), e70257.
2025	M. Zhao, **E.L. McCormick**, G. A, A.G. Konings, B. Li. Substantial root-zone water storage capacity observed by GRACE and GRACE/FO. *Hydrology and Earth System Sciences*, 29(10), 2293–2307.
2024	A.G. Konings, K. Rao, **E.L. McCormick**, A.T. Trugman, A.P. Williams, N.S. Diffenbaugh, M. Yebra, M. Zhao. Species cover explains only half of spatial variability in plant water sensitivity. *Global Change Biology*, 30(7), e17425.
2022	W.J. Hahm, D.A. Lapides, D.M. Rempe, **E.L. McCormick**, D.N. Dralle. The age of evapotranspiration: lower-bound constraints from distributed water fluxes across the continental United States. *Water Resources Research*, 58(10), e2022WR032961.

2021 **E.L. McCormick,** D.N. Dralle, W.J. Hahm, A.K. Tune, L. Schmidt, K.D. Chadwick, D.M. Rempe. Evidence for widespread woody plant use of water stored in bedrock. *Nature*, 597 (7875), 225-229.

2021 D.N. Dralle, W.J. Hahm, K.D. Chadwick, **E.L. McCormick**, D. M. Rempe. Accounting for snow in the estimation of root-zone water storage capacity from precipitation and evapotranspiration fluxes. *Hydrology and Earth System Sciences*, 25(5), 2861-2867.

2019 Matheny, A.M., P. Marchetto, J. Powell, A. Rechner, J.Y. Chuah, **E. L. McCormick**, S. Pierce. LEAF: Logger for Ecological and Atmospheric Factors. *HardwareX*, 6, e00079.

2018 Mursinna, A.R., **E.L. McCormick**, K. Van Horn, L. Sartin, A. Matheny (2018) Plant hydraulic trait covariation: a global meta-analysis to reduce degrees of freedom in trait-based hydrologic models. *Forests*, 9(8), 446. (Cover Article).

PRESENTATIONS

Invited Talks

2025 *Rock moisture frequently contributes to daily ET*. American Geophysical Union Fall Meeting, San Francisco. Won "Outstanding Student Presentation Award."

2023 *Rock moisture and its implications for ecosystem resilience to precipitation variability.* Hydro90 Conference, China (Virtual).

2021 *Weathered bedrock commonly supplies water to woody plants.* American Geophysical Union Fall Meeting, New Orleans.

Selected Presentations and Workshops

2025 *Rock moisture frequently contributes to daily ET.* Missing links in drought research workshop, Monte Verita, Switzerland.

2024 *Rock moisture frequently contributes to daily ET*. Computational Methods in Water Research (CMWR), Tucson, Arizona.

2023 *Water scarcity and abundance: drought, extreme wet events, and bedrock water uptake.* Joint-Hydrology Seminar, Stanford University.

TEACHING ASSISTANSHIPS

Stanford University

2025 Jumpstart Your Academic Job Search
Led session and assisted with organization of week-long intensive graduate course.

2023 Biosphere-Atmosphere Interactions
Held office hours and assisted with grading of graduate and undergraduate seminar.

University of Texas at Austin

2025 Vadose Zone Hydrology
Assisted with grading and assignment design for graduate and undergraduate seminar.

2024 Law and Ethics of Climate Change
Delivered guest lecture, assisted with assignment development, and organization

MENTORSHIP

2023-25	Lillian Sanders, Undergraduate, Stanford University
2023	Bhu Kongtaveelert, Undergraduate, Stanford University

SERVICE

Stanford University

2025	Student Committee Member for Departmental Faculty Search
2024-25	Department Wellness Liaison. Relay student needs to departmental leaders and administration; plan events to link students to campus mental health resources.
2024-25	Mentor for 'Science Small Groups,' a weekly mentorship program for local community college students exploring careers in science.
2025	Residential Community Associate for Stanford graduate housing.

External

2022-23-24	Volunteer Pen-Pal, Letters to a Pre-Scientist organization, correspond with middle school student in low-income community throughout one year about scientific careers.
2023	Invited Panelist, "Developing Effective Mentoring Relationships" webinar for the Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI).
2021-22	Invited Panelist, "Professional Development for Environmental Scientists" course, University of Texas at Austin.

RESEARCH EXPERIENCE

2022-Present	Graduate Researcher, Stanford University Advisor: Alexandra Konings
2021-22	Research Engineering/Scientist Assistant (Full Time), University of Texas at Austin Vadose Zone Ecohydrology Lab, Jackson School of Geoscience Advisor: Daniella Rempe
2020	Summer Research Intern, US Forest Service Supervisor: David Dralle
2018-20	Undergraduate Researcher, University of Texas at Austin Ecohydrology Lab, Jackson School of Geoscience Supervisor: Ashley Matheny
2017-20	Undergraduate Researcher, University of Texas at Austin Geoarchaeology and Soil Lab, Department of Geography Supervisors: Timothy Beach and Sara Eshlelman

PRESS

2021	**Scientific American** [link] "Trees Drill Into Deep Bedrock for Water Surprisingly Often" by Tess Joosse
2021	**Science and Vie Magazine, France** "Les Arbres Bolvent De L'eau Dans Les Roches"

2021	**Eos Magazine** [link] “Thirsty Plants Pull Water from Bedrock” by Katherine Kornei
2021	**University of Texas News** [link] “Water in Bedrock is Sustaining Trees Across the Country” by Monica Kortsha
2021	**Simon Fraser University News** [link] “Could the Water in Bedrock Save our Forest Ecosystems from Climate Change?”
2021	**American Geophysical Union** “Meet a Leaf” Profile

DATASETS, PACKAGES, AND CODE

2024	**WaterPyk**, Python package for downloading and analysis of hydrological timeseries at the site, polygon, or USGS watershed level. Leverages Google Earth Engine cloud computing platform.
2021	**E.L. McCormick**, D. Dralle, W.J. Hahm, A. Tune, L. Schmidt, K.D. Chadwick, D.M. Rempe. Dataset for "Evidence for widespread woody plant use of water stored in bedrock." CUAHSI HydroShare. 10.4211/hs.a2f0d5fd10f14cd189a3465f72cba6f3.
2021	**E.L. McCormick**, D. Dralle, W.J. Hahm, A. Tune, L. Schmidt, K.D. Chadwick, D.M. Rempe. [link] Code for manuscript: "Evidence for widespread woody plant use of water stored in bedrock." (v1). Zenodo. 10.1038/s41586-021-03761-3.