

Erica Lee McCormick

Ericamcc [at] stanford [dot] edu | ericamccormick.com

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. <i>Nature</i> , 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. <i>Hydrology and Earth System Sciences</i> , 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. <i>HardwareX</i> , 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. <i>Forests</i> , 9(8), 446. (Cover Article).

PRESENTATIONS

Invited Talks

2025	<i>Rock moisture frequently contributes to daily ET.</i> American Geophysical Union Fall Meeting, San Francisco. Won "Outstanding Student Presentation Award."
2023	<i>Rock moisture and its implications for ecosystem resilience to precipitation variability.</i> Hydro90 Conference, China (Virtual).
2021	<i>Weathered bedrock commonly supplies water to woody plants.</i> American Geophysical Union Fall Meeting, New Orleans.

Selected Presentations and Workshops

2025	<i>Rock moisture frequently contributes to daily ET.</i> Missing links in drought research workshop, Monte Verita, Switzerland.
2024	<i>Rock moisture frequently contributes to daily ET.</i> Computational Methods in Water Research (CMWR), Tucson, Arizona.
2023	<i>Water scarcity and abundance: drought, extreme wet events, and bedrock water uptake.</i> 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 Eshleman

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.